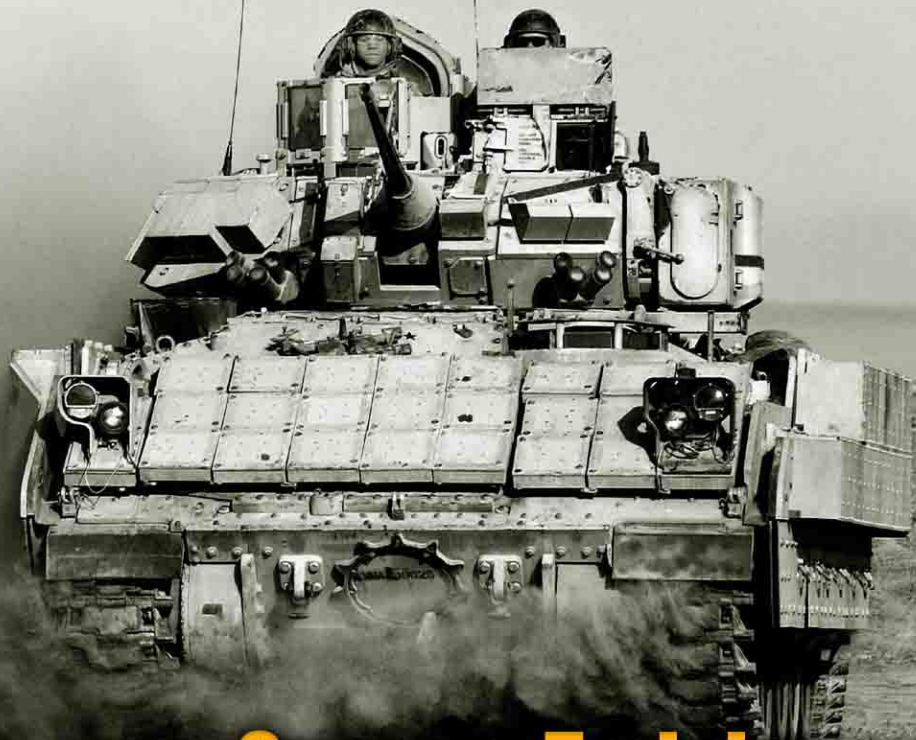


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Infantry

November-December 2006



Gunnery Training

The Key to Total Weapon System Proficiency

MG WALTER WOJDAKOWSKI
Commandant, The Infantry School

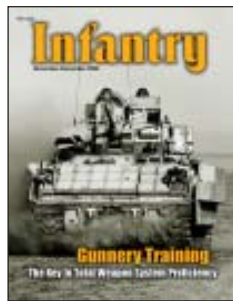
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FRONT COVER:

Soldiers from the 2nd Squadron, 9th Cavalry Regiment head to a fighting position during a gunnery range in Iraq. (Photo by Staff Sergeant Russell Klika)



BACK COVER:

Soldiers from the 2nd Battalion, 35th Infantry Regiment, 25th Infantry Division watch for suspicious activity during an operation in Iraq. (Photo by Staff Sergeant Samuel Bendet, USAF)

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

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Commandant's Note

MAJOR GENERAL WALTER WOJDAKOWSKI

GUNNERY TRAINING: THE KEY TO TOTAL WEAPON SYSTEM PROFICIENCY

Today's contemporary operational environment (COE) is fast-paced and unforgiving. As a brigade combat team closes with the enemy and brings its firepower to bear, leaders must focus on hitting enemy targets while avoiding fratricide and limiting unnecessary collateral damage. The techniques of fire distribution and knowledge of combat identification that our Soldiers learn and apply are useful in doing this successfully. The gunnery proficiency and the tactical skills Soldiers learn in our service schools and reinforce at home station, ensure we can better destroy the enemy's will to resist while they shoot, maneuver, and survive in the COE. Based on the dynamic changes on the battlefield and after coordination with the Chief of Armor, we are changing our approach to Heavy Brigade Combat Team (HBCT) gunnery. In this Commandant's Note I will discuss some of the measures we have undertaken to improve gunnery, and which are outlined in the new Draft FM 3-20.21, *Combined Arms Weapons Proficiency for the Heavy Brigade Combat Team*.

The U.S. Army Infantry School (USAIS) focuses on supporting the Army's and the Infantry's training requirements. Weapons training and proficiency remain top priorities as we prepare to stand up the Maneuver Center of Excellence at Fort Benning. We are working closely with the Armor Center to make sure our tankers and infantrymen receive the best training possible. One initiative in that direction is the formation of an HBCT working group staffed by the Stryker/Bradley Proponent Office at Fort Benning and the Gunnery Doctrine Branch at Fort Knox. One of their products is a set of comprehensive FMs for the gunnery training of all Soldiers within a BCT. One of these, FM 3-20.21, builds upon the gunnery manuals for crews of Abrams tanks, as well as those for gunners in Bradley and Cavalry Fighting Vehicles. This is designed to standardize training and evaluation standards for all elements within a BCT. This FM discusses in detail vehicle and ammunition characteristics, training devices, gunnery training programs, range operations, and the engagement process. It also deals extensively with squad and crew gunnery and evaluation, advanced collective gunnery training, and Abrams and Bradley Fighting Vehicle live-fire preparation. The HBCT gunnery manual will provide a comprehensive training strategy for commanders and complements the training received by Soldiers and crew members who are returning to their units from training, or who are joining the unit for the first time.

Our functional weapons training is conducted by experienced instructors, many of whom are recent combat veterans. We have

modified the resident courses, in some cases shortening them by refining tasks to be accomplished and conducting evening and weekend training wherever possible. This means that

Soldiers are still trained to standard, but with a shorter time away from home station. All USAIS weapons training courses — from small arms to Stryker and Bradley gunnery — are now exportable to units. The Infantry School has trained and staffed mobile training teams (MTT) to deliver training to units when and where they need it. While it may be difficult to replicate the experience, environment, and resources of institutional training, the MTT offers units an option with greater flexibility to support their training needs. MTT scheduling takes place six months prior to execution, with initial coordination through USAIS G-3 and a formal request through FORSCOM to TRADOC. Commanders may also schedule Soldier and leader training through the Army Training Requirement and Resource System or coordinate to schedule or block a functional course to provide focused and resourced instruction for units. The Infantry School also offers weapons training on a menu basis, depending on a unit's training requirements. USAIS will work with units to support their training needs. In the more technically demanding courses such as Master Gunner, units may coordinate for USAIS master gunner training support to develop home station master gunner training and unit Sabot academy training. Our goal is to help units train Soldiers to succeed in training, and in combat. We are actively working with TRADOC and FORSCOM to prioritize the demands and resources needed for infantry weapons training. The fundamental changes we have made to our functional training courses allows the Infantry School to better support unit weapons training. This is essential if we are going to meet Army Force Generation unit training standards.

We are a nation at war, and our Army must be able to strike swiftly, deliver the decisive blow at the right time and place, and redeploy safely. The best gift we can offer our Soldiers is tough, realistic training that addresses the demands and challenges they will face in combat. We owe them no less, and we will give them no less.

Follow me!





USAMU LOOKING FOR PISTOL SHOOTERS

The U.S. Army Marksmanship Unit is looking for a few good shooters. The highly competitive unit is putting out its annual call for Soldiers who are interested in competing in pistol competitions in the summer of 2007.

"We do this every year," said Sergeant First Class Jason M. St. John, NCOIC of the USAMU Service Pistol Team. "Soldiers who wish to represent the U.S. Army in pistol competition, marksmanship instruction and recruiting assistance are welcome to apply. This is a highly visible, fast-paced mission."

Formed in 1956 by President Dwight D. Eisenhower to raise the standards of marksmanship throughout the U.S. Army, the Army Marksmanship Unit is assigned to the Accessions Support Brigade of Fort Knox, Kentucky, which is under the U.S. Army Accessions Command.

The Marksmanship Unit trains its Soldiers to win competitions and enhances combat readiness through train-the-trainer clinics, research, and development. The world-class Soldier-athletes of the USAMU also promote the Army and assist recruiters in attracting young Americans to enlist in the Army.

The Army Pistol Team is always looking for active Army soldiers who are highly motivated, disciplined and competitive by nature, St. John said, adding that no previous competitive shooting experience is required.

Soldiers in the rank of staff sergeant and below with fewer than 15 years of service who obtain approval from their commanders can travel to Fort Benning in April at the expense of USAMU to participate in the initial training. The Soldiers are trained in advanced marksmanship skills.

Once that is complete, pistol team officials will select shooters to participate in the Interservice Championships in June and the National Matches in July.

After the three-month tour, Soldiers return to their units with invaluable marksmanship training that can be harvested by unit trainers to improve the marksmanship skills of their Soldiers, St. John said.

Soldiers who are interested in the developmental pistol shooter program can contact St. John at (706) 545-7022 or 545-3893 or DSN 835-7022 or e-mail Jason.StJohn@usaac.army.mil.



Doctrine Corner

Here is the latest list of newly published U.S. Army field manuals (July-October 2006):

- FM 4-02.51- Combat and Operational Stress Control
- FM 4-30.51 - Unexploded Ordnance Procedures
- FM 3-04.104 - Tactics, Techniques and Procedures for Forward Arming and Refueling Points
- FM-I 4-30.50 - Modular Explosive Ordnance Disposal Operations
- FM 3-19.50 - Police Intelligence Operations
- FM 4-20.197 - Helicopter Sling Load
- FM 3-04.300 - Flight Operations Procedures
- FM 4-20.105-1 - Air Drop of Supplies and Equipment: Volume I
- FM 4-20.105-2 - Air Drop of Supplies and Equipment: Volume II
- FM 3-04.500 - Army Aviation Maintenance
- FM 3-09.8 - Field Artillery Gunnery
- FM 3-05.160 - Army Special Operations Forces Communications Systems Support
- FM 5-19 - Composite Risk Management
- FM 7-15 - The Army Universal Task List, change 2
- FM 3-05.40 - Civil Affairs Operations
- FM 4-30.31 - Recovery and Battle Damage Assessment/Repair
- FM 1-06 - Financial Management Operations
- FM 3-05 - Army Special Operations Forces
- FM-I 6-02.70 - Army Electromagnetic Spectrum Management Operations
- FM 2-22.3 - Human Intelligence Collector Operations
- FM-I 6-02.60 - TTP for Joint Network Node - Network
- FM 3-20.96 - Reconnaissance Squadron
- FM 3-06 - Urban Operations
- FM 6-22 - Army Leadership

INFANTRY SCHOOL:

- FM 3-90.6 - The Brigade Combat Team
- FM 3-21.10 - The Infantry Rifle Company FM 3-22.9 - Rifle Marksmanship, change 4
- FM 3-22.27 - MK 19, 40mm Grenade Machine Gun, MOD 3, Change 1
- FM 3-25.26 - Map Reading & Land Navigation, Change 1

These publications can be viewed on AKO at <https://www.us.army.mil/suite/page/136361> which will direct you to "TRADOC - Doctrine New/Revised Announcements" site.

29TH INFANTRY REGIMENT OFFERS MTTs

The following mobile training teams (MTTs) are currently available through the 1st and 2nd Battalions of the 29th Infantry Regiment

1/29

- Master Gunner M2A2
- Master Gunner M2A3
- Mechanized Leader M2A2
- Mechanized Leader M2A3
- Stryker Leader
- Stryker Transition



2/29

- Sniper
- Sniper Employment Leader
- Long Range Marksmanship
- Small Arms Weapon Expert
- Advanced Infantry Marksmanship Standards and Strategies
- Combatives Level III & IV
- Infantry Mortar Leader
- Javelin
- Anti-Armor Leader

Timeline/Process:

- Unit checks MTT POI fact sheet/POI to determine ability to meet minimum support requirements
- May be able to tailor some courses to meet needs such as LRM with 5.56mm only or SNIPER shooting, ballistics, and no stalking; ***note ASI may not be awarded***
- NLT 90 days out: Contact 29th Infantry Regiment S3 for possible open dates and more information concerning MTTs; priority goes to deploying units
- Send official request thru FORSCOM G3 for TRAP (Training Resource Arbitration Panel)
- FORSCOM G3 forwards to DA G3 and monthly TRAP Council
- If TRAPed, resources allocated; unit informed thru FORSCOM; 29th IN informed thru TRADOC to USAIS who inputs into ATTRS (700 series [on site] or 500 series [resident - Fort Benning])
- If not TRAPed and unit still wishes to conduct, all resources (funds/ammo/etc...) will come from unit; CDR 29th IN GO/NO GO for course on case-by-case basis
- During 90-day period, 29th will provide POI and requirements and conduct concurrent planning; to include a recon visit ~1 month out to ensure facilities meet requirements

<u>COURSE/UNIT</u>	<u>NAME</u>	<u>PHONE</u> (DSN 835-XXXX)	<u>E-MAIL</u>
29th IN REGT S3	LTC Kevin Holt	(706) 545-8660	kevin.holt@benning.army.mil
2/29th IN S3	CPT Tim Ungaro	(706) 545-8449	charles.hallman@benning.army.mil
Sniper, LRM, SAWE, AIMSS, Sniper Employment Leader	2LT Ariel Correa-Betancourt	(706) 545-2138	ariel.ivan.correabetancourt@us.army.mil
IMLC	CPT Dan Hines	(706) 545-9729	dan.hines1@benning.army.mil
Anti-Armor Leader, Javelin	CPT Dan Rogne	(706) 545-7529	daniel.rogne@benning.army.mil
Combatives	SFC David Barron	(706) 545-2811	david.j.barron1@benning.army.mil
1/29 IN S3	CPT Shawn Seffernick	(706) 544-6436	seffernick@benning.army.mil
Master Gunner	SFC Matthew Hinkley	(706) 544-7321	matthew.hinkley@benning.army.mil
Mechanized Leader	SFC Brian Lalley	(706) 544-6950	brian.lalley@benning.army.mil
Stryker Leader/Transition	SFC James Cantrell	(706) 544-6529	james.w.cantrell@benning.army.mil

Army Seeks Recommendations for MCOE Patch, Crest, Motto

The Army is accepting design ideas through March 31 for the shoulder sleeve insignia, distinctive unit insignia and motto for the Maneuver Center of Excellence (MCOE).

The Infantry and Armor schools will collocate and become the MCOE at Fort Benning, Georgia, during the next five years. The center will be responsible for all Army land-based maneuver training development, doctrine, and capabilities development for armor and infantry pronencies.

“Throughout the history of modern warfare, Infantry and Armor have fought side-by-side as brothers in arms,” said Major General Walter Wojdakowski, Chief of Infantry. “With the creation of the Maneuver Center of Excellence, Infantry and Armor will now train together forging an Army Strong partnership which produces America’s best Soldiers, more capable than ever. The selected patch, crest and motto must reflect the historic strength of this partnership and the future strength of our Army.”

Personnel assigned to the Infantry and Armor Schools will continue wearing current shoulder sleeve and distinctive unit insignias that reflect the contributions, sacrifices and spirit of each branch.

Soldiers assigned directly to the MCOE will wear the new insignia.

“The challenge in designing the new insignia will be to capture the historic essence of each branch and their collective embodiment of maneuver as a principle of war,” said Major General Robert M. Williams, Chief of Armor. “We’re looking for innovative ideas to capture the significance of both Armor and the Infantry lineage.”

Current and retired military personnel and Department of the Army civilians may provide input for just one or all of the items.

Submission guidelines:

Requirements

A clear, hand-drawn or electronic sketch of the shoulder sleeve insignia, distinctive unit insignia, and a short, succinct motto. The motto must be written in English and is limited to 26 characters (letters and spaces). Individuals may provide a suggestion for just one or two of the desired items if they prefer.

Format

Designs should be drawn on paper or provided as electronic files. Electronic files should be in JPG or BMP format, and may be sent on diskette or CD-ROM via normal mail or as an e-mail attachment. All submissions must include the name, phone

number, e-mail address, and mailing address of the individual submitting the designs and motto.

Submissions

Submissions will be accepted through March 31, 2007, and may be sent via e-mail (no larger than 3 megabytes) to: ***MCOE_Insignia_Suggestions@knox.army.mil***

Alternatively, input may be sent via normal mail to either:

ARMOR Magazine

ATTN: ATZK-DAS-A (MCOE Patch)

201 6th Ave., Ste. 373, Building 1109A

Fort Knox, KY 40121-5721,

OR

Headquarters, U.S. Army Infantry Center

ATTN: ATSH-ATH

Building 4, Room 451

Fort Benning, GA 31905-5000

Selection process

Submissions will be screened by the Maneuver Center of Excellence Board of Directors, which is chaired jointly by the Chief of Armor and the Chief of Infantry. The most suitable and acceptable concepts will be considered for forwarding to the Institute of Heraldry for final production of the patch and crest.

Acknowledgement

The individuals who submit the shoulder sleeve insignia, distinctive unit insignia, and motto design that are selected by the board of directors will receive a framed final patch, while the top entries in each category will also receive an MCOE coin with certificate of recognition for top entries. These acknowledgements will be issued in the fall of 2008.

Disclaimer: *The Department of the Army (Army) will acquire ownership of all entries, and each submitter agrees that submission of a design constitutes (1) assignment to the Army of any and all rights in the design, including copyright, and (2) a disclaimer of any trademark rights. All entries become the property of the Army, and the Army will have the sole right, at its discretion, to alter or modify any submitted design. By submitting a design, the submitter warrants that the design is original; that it has not been previously published; and that it does not infringe upon the copyright of any other person or entity.*

Did you know *Infantry Magazine* is online?

All of our issues dating back to 1982 are posted at <https://www.infantry.army.mil/magazine> (AKO login required). There is also an index where articles are listed by topic and author.

NEWS BRIEFS

Center Announces Writing Competition — The Army Center of Military History invites Army officers in the rank of major or below (including warrant officers) to take part in the 2007 James Lawton Collins Jr. Special Topics Writing Competition.

Participants can submit original, unclassified essays that describe the actions of a small U.S. Army unit or team, no larger than a company, engaged in the Global War on Terrorism. The essay should focus on a discrete action, such as a single patrol, firefight, battle, convoy, air support mission, advisory team operation, medical mission, or engineer support action, but the effort discussed need not involve combat. Papers should generally not exceed 5,000 words and may not have been published or submitted for publication elsewhere. Submissions from multiple authors will be accepted.

The essays will be evaluated by a panel at the center. The first prize winner will be awarded \$500 and the winner of the second prize will receive \$250. Submissions must be received by April 1, 2007. Competition enrollment forms and further information about the competition are posted at www.army.mil/cmh-pg/2007Contest.htm.

2007 Best Sapper Competition set — The Sapper Leader Course will host the Best Sapper Competition May 1-3 at Fort Leonard Wood, Missouri. The competition's events will include MOUT breach missions, weapons and grenade ranges, and a demolition calculation written exam among other events.

For more information, visit www.wood.army.mil/sapper.

Registration open for 2007 Bataan Memorial Death March — Registration is now open for the 2007 Bataan Memorial Death March, to be held March 25 at White Sands Missile Range, New Mexico.

Participants may choose either the 26.2-mile route or the 15-mile route. For information, call (505) 678-1256 or visit the march's website at www.bataanmarch.com. Questions and comments may be e-mailed to bataan@wsmr.army.mil.

SOLDIER WHO SACRIFICED HIMSELF FOR CREW RECOMMENDED FOR MOH

STAFF SERGEANT W. WAYNE MARLOW

FORWARD OPERATING BASE LIBERTY, Iraq — Specialist Ross McGinnis could become the third U.S. servicemember to be awarded the Medal of Honor for heroism in Operation Iraqi Freedom.

Officials at the 2nd Brigade Combat Team, 1st Infantry Division, and McGinnis's battalion, 1st Battalion, 26th Infantry, confirmed that a recommendation has been forwarded to posthumously award McGinnis America's highest honor for heroism in battle.

McGinnis, a private first class at the time of his death in Baghdad Dec. 4, has already been awarded a Silver Star for the deed that cost him his life, and was posthumously promoted to the rank of specialist.

McGinnis and his team were on a mission in the Iraqi capital's Adhamiyah section when an insurgent tossed a grenade from a nearby rooftop. McGinnis, who was manning the gunner's hatch of the squad's high mobility multipurpose wheeled vehicle (HMMWV), tried in vain to deflect the deadly missile, which passed through the hatch and into the vehicle, lodging near the radio mount.

Platoon sergeant Sergeant First Class Cedric Thomas recounted what happened next.

"PFC McGinnis yelled, 'Grenade! ... It's in the truck,'" Thomas said. "I looked out of the corner of my eye as I was crouching down and I saw him pin it down."

McGinnis did so even though he could have escaped.

"He had time to jump out of the truck," Thomas said. "He chose not to."

"He gave his life to save his crew and his platoon sergeant," Thomas said. "He's a hero. He's a professional. He was just an awesome guy."

Lieutenant Colonel Eric O. Schacht, commander of the 1-26th, spoke during the memorial, and had high praise for



McGinnis

McGinnis's courage.

"Specialist McGinnis did what I consider the most selfless act of any man I have known," Schacht said. "He willingly sacrificed his life to save the lives of the rest of his crew. What an absolutely incredible, selfless act to protect his comrades. There is no doubt in my mind about the personal courage displayed by Ross McGinnis."

The award of the Silver Star puts McGinnis in the ranks of an elite group of Soldiers. According to records kept by the U.S. Army Human Resources Command, of the quarter million-plus wartime awards presented in the Army for OIF through July 2006, only 201 have been Silver Stars.

If McGinnis is awarded the Medal of Honor, he would join an even more elite group. U.S. Army Center of Military History records list more than 3,400 Americans honored with the medal since the Civil War, but McGinnis would be just the third servicemember to earn it for combat action in Iraq. All are posthumous awards.

Sergeant First Class Paul Ray Smith of the 3rd Infantry Division was awarded the honor in April 2005 for his actions during combat in the opening weeks of OIF, and President George W. Bush announced last month that Marine Cpl. Jason L. Dunham will be awarded the medal for saving the lives of fellow Marines by covering a grenade with his body in April 2004.

Because the recommendation process involves strict accuracy and intense scrutiny, it could be months or even years before such an announcement could be made for McGinnis. Smith's Medal of Honor was awarded two years after the action for which he earned it; the announcement of Dunham's came two and a half years after the Marine's death.

(Bill Roche of the V Corps Public Affairs Office also contributed to this story.)



TSM STRYKER/BRADLEY CORNER

THE NEED FOR A STRYKER MASTER TRAINER IN THE SBCT

SERGEANT FIRST CLASS MICHAEL HERTIG AND MAJOR MARK S. LESLIE

STRYKER MASTER TRAINER COURSE. This course is designed to train selected NCOs who assist unit leaders in planning and implementation of Stryker weapon, gunnery, and vehicle maintenance training. The Stryker Master Trainer Course trains basic and advanced marksmanship and training management techniques required for SBCT in the following areas: remote weapons station (RWS); advanced infantry marksmanship strategies and skills (AIMSS); Javelin; Stryker family of vehicle weapons system training; SBCT weapons training; preliminary gunnery; and target engagement.

— FM 3-22.3, *Stryker Gunnery*, Chapter 3

The operational demand for a Stryker master trainer in the Stryker brigade combat team (SBCT) is a demand that must be met. Almost every Stryker unit in the Army has identified and tasked an NCO, usually one with master gunner experience in a mechanized or armor unit, as their Stryker master trainer or master gunner. The need for a Stryker master trainer is clearly apparent with the Stryker units. As an Army, we must be willing to embrace this requirement from the units in the field as it needs to be immediately addressed. Stryker units, by the modified table of organization (MTOE), have no allocation for a Stryker master trainer. This is in stark contrast to mechanized infantry units and armor units. Both types of units have master gunners at the corps, division, brigade, battalion, company, and some at the platoon level. They are a critical part of ensuring quality training, sustainment, and proficiency for the commander. They are the subject matter experts on every gunnery-related issue not just at the individual and crew levels, but more importantly and often overlooked, at the collective level as well. Both the Infantry and Armor Schools have recognized the need for formal training of these individuals to ensure a safe, even plane of training across the Army. Master gunner schools were developed long ago, and it is required attendance for an NCO in order to fill these MTOE positions. Yet no formal master gunner or master trainer school has been required for Stryker units, as of yet. To underscore, most units are filling this void with Bradley or Abrams master gunners from within their unit.

One issue that many have with the establishment of a master gunner course for the Stryker is the fear that the focus would shift away from the primary focus or real weapon of Stryker units, which is of course, the infantryman. There are several ways to approach this argument. The attitude of the Army in relation to Stryker units, the platform, and the weapon itself is captured in Chapter 3 of FM 3-22.3: *“A Stryker platoon’s strength comes from the skill, courage, and discipline of the individual Soldier. Each infantryman’s capabilities are enhanced by teamwork and cohesion in squads, crews, teams, and platoons. This group dynamic is an essential ingredient to a platoon’s success in close combat. Platoon training must therefore focus on developing tough, combat-ready platoons. The individual Soldier must have the skill and will to not just participate in a close fight — but to dominate it. Training events that require subordinate leaders’ use of initiative to take independent actions are essential when preparing for the decentralized operations of the modern battlefield.”*

Many light infantry units have adopted the master gunner in respect to small arms and are using it effectively. It is essentially the same mission as a mechanized or armor MG, just without the big bullets. One counterargument is that the units have already identified the need and are filling the void with other master gunners. This validates the fact that the weapons system itself is not the focus or the bulk of knowledge that the master gunner is able to contribute; it is his knowledge of gunnery, gunnery-related skills, knowledge of individual and collective training at all levels and how to form all of this into a streamlined, efficient gunnery program that focuses on all training from 9mm to MK-19 and M2. Or, what is essentially the Merriam Webster’s definition of gunnery, *“[the] branch of military science that comprehends the theory of projectiles, and the manner of constructing and using ordnance.”* To avoid the “system-focused mindset” we simply do not call the position a master gunner — though as defined as, *“the art of shaping Soldiers into cohesive teams with the ability to systematically destroy everything in sight”* — the position could be designated as Stryker master trainer. A simple efficient Stryker master trainer mission statement would resemble something like the following:

“To train select NCOs to design and implement weapon systems

gunnery and maintenance training programs. A trained Stryker master trainer can:

- Establish and conduct individual and crew gunnery training;
- Develop a short-range training program (SRTP) for a battalion-sized unit from preliminary gunnery through platoon gunnery;
- Execute maintenance, maintenance training and maintenance management of organic weapons systems and components;
- Establish and execute range operations; and
- Be knowledgeable in the use and training of all Stryker-related training aids, devices, simulators, and simulations (TADSS).

The Stryker master trainer is the NCO a commander or S3 turns to and says “I need more gunners for my ICVs,” to which he replies, “the whole company sir, or did you have a smaller number in mind?”

The Stryker master trainer’s abilities are built from the foundation of an NCO’s core competency to train individuals, crews, and teams. Stryker master trainers can be your subject matter experts in Stryker training

to include: vehicle operation, maintenance, weapons training, gunnery, ammunition management, building and fully utilizing ranges, live-fire development, training device use and implementation, and training management. Stryker master trainers, like their master gunner brethren, are able to contribute more than just vehicle knowledge and how to run gunnery.

A Stryker master trainer is the Stryker commander’s walking continuity book for each company, battalion, and/or brigade staff. Working from that NCO core competency, the master trainer can take an individual and shape him into a gunner or part of a crew. He is also ever mindful of the need to get Soldiers and crews ready for collective live-fire training with minimal impact on the ever decreasing white space on a calendar. Each commander’s master trainer knows what resources are needed and how to request and use them. He knows the necessary training devices and how to train others in their use. He can run a program to always have ready a pool of available gunners or crewman. He can be that NCO who conducts the initial training a new Soldier receives upon arrival to an SBCT. With his

expertise and training management skills, he can develop the plan for individual through crew weapons and vehicle training (9mm-105mm and ICV-MGS) and present it to the commander for approval. He then can help execute the training, constantly advising the commander thus allowing him time to prepare his collective training plan.

The need in the operational Army for a master trainer brings to light the possible need for an additional skill identifier (ASI) for those that have completed the Stryker Master Trainer Course. This in no way would limit the commanders on the ground or require that it would be mandatory for one to be Stryker master trainer certified; it would simply assist the Army in ensuring control and management over those trained and assist them in the assignment of “the right man for the right job assignment criteria.”

The Stryker master trainer is not finished when the unit transitions into collective training. He continues to advise the commander on areas of resources, ranges, and live-fire training. While the unit has moved on from individual to collective training, he continues to monitor the status of individual and crew qualifications. He is prepared to plug a hole where needed either by establishing a qualification range or recommending a



replacement from the pool of trained Soldiers he helped develop in the individual/crew training phase. Home station or deployed commanders can turn to their Stryker master trainer and say, “I need more gunners,” and he can make it happen.

Ideally, commanders would want every NCO in their unit to have these skill sets, but this is not realistic or possible with today’s operational tempo (OPTEMPO). The question that rises now is how many master trainers are needed and at what level. In mechanized infantry, the master gunner position goes down as far as platoon level. The complexity of BFV systems necessitates a need for smaller ratio of master gunners to Soldiers to be trained.

Stryker systems — while complex — allow first line NCOs to execute the majority of individual training and maintenance supervision with a Stryker master trainer acting as the right guide. At company level, the Stryker master trainer can be the one who helps develop the plan for training and helps conduct the training; his focus is to develop the Soldiers behind the triggers and the operators of the systems.

Stryker master trainers at battalion would focus more on the management of training. They would work very closely with the S3 and commander to develop the plan and preparing for platoon live-fire training. They ensure that the resources are available to the companies to execute their individual and crew training. He would conduct training on new devices or doctrine and certify evaluators. The battalion Stryker master trainers would mentor the company Stryker master trainer and help develop future Stryker master trainers.

At brigade, the Stryker master trainer would be more a training/resource manager. This Stryker master trainer would work with the SBCT S3 to ensure that the commander’s training guidance is fully supported with the right resources and would advise the commander on weapons training within the SBCT. He would develop and execute new Stryker warrior training for recent arrivals into an SBCT. He would be a supporter and not a supervisor for battalion Stryker master trainers. He keeps them up-to-date on new doctrine and guidance and conducts train-the-trainers as needed for new devices.

It is necessary that we fulfill the need of one Stryker master trainer at company, battalion, and brigade levels. This will only enhance the level of proficiency and execution of weapons and vehicle training in an SBCT. Commanders and operations officers will only benefit from having a highly trained NCO next to them that can advise and support a critical piece in the training strategy.

MODULES	DESCRIPTION
1. Small Arms Integration Module	Training in optics and devices for small arms and crew served weapons
2. Force XXI Battle Command Brigade and Below (FBCB2) Training	FBCB2 systems and integration training
3. Remote Weapon Station Training (RWS)	Hands-on maintenance and operational training to include live-fire exercises with the RWS for both MK-19 and M2.
4. Training Management	Integrated training strategy for an SBCT, individual soldier weapons training strategy; crew served weapons training strategy; mounted soldier training strategy; cross training; squad, platoon and company training strategies; combined arms training; and long, short and near term planning.
5. Variant Characteristics	Capabilities, limitations, and training strategies of each Stryker variant. Hands-on training with available variants.
6. Range Operations	Establish a range, construct a surface danger area diagram, develop firing and non-firing data, conduct training area/range recon, develop a LFX scenario, execute range operations, train key range personnel, supervise range operations and conduct formal after action reviews.
7. SBCT Employment	How an SBCT fights, MGS employment, ATGM employment, SBCT in urban operations, SBCT in stability operations.
8. Training Aids, Devices, Simulators, and Simulations (TADSS)	Training in the use of EST, MILES XXI, LMTS, Drivers Training, Javelin BST/FTT, ATGM BST/FTT, ONESAF and MGS COFT
9. Short Range Training Plan	Students will prepare a short range training plan encompassing all weapons and vehicle specific training from individual through platoon LFX training.

Dissemination of information and mentoring of the company's Stryker master trainers from brigade and battalion will be essential to success. A similar effort would be required at the company level down to the platoon-level Stryker master trainer. The purpose is threefold:

- Ensures that the standards are known and complied with;

- Ensures professional development of all Stryker master trainers and builds depth in our relatively new Stryker master trainer program to ensure continued excellence; and

- Ensures that the most relevant doctrine, TTPs (tactics, techniques and procedures) and best practices, common to the threat faced by Stryker units are trained on throughout the force.

A program of instruction (POI) exists for the Stryker Master Trainer Course and was developed between the 29th Infantry Regiment and U.S. Army Infantry School Directorate of Operations and Training. The table on page 8 is a snapshot of the key areas of training.

"It seems to me that a common standard set might be useful in a modular organization to preclude confusion. It also seems to me that we need to get serious about defining how we train mixed platoons and teams since it seems like that is the manner in which the field intends to use our Soldiers and systems."

— **General William S. Wallace**
Commander, TRADOC

The above quote by General Wallace, although referring to the need for some type of clear standards in gunnery, clearly defines the need for the Stryker master trainer in the Stryker community. The Stryker master trainer would be the common thread of

The SBCT's lethality is derived from its ability to focus overmatching combined arms support to the infantry assault at identified decisive points. Its array of direct and indirect fire systems allows the SBCT to shape the AO and achieve decisive outcomes using the MGS; TOW IIA/B antiarmor missiles; Javelin antiarmor missiles; 120-mm, 81-mm, and 60-mm mortars; and 155-mm artillery. Direct fire systems focus on destroying hardened and or fortified positions in support of infantry assaults.

— **Chapter 1, FM 3-21-31,**
The Stryker Brigade Combat Team



Specialist Jeremy Crisp

A Soldier with the 4th Battalion, 23rd Infantry Regiment, 172nd Stryker Brigade Combat Team, watches for suspicious activity during a patrol in Mosul, Iraq in November 2005.

standards in the Stryker community in regards to "gunnery." It also gives some left and right limits in how a Stryker master trainer would be useful to the commanders at the tactical level in developing more lethal units and what his duties would be.

The need for a Stryker master trainer has been clearly identified, both academically and by the units that employ the Stryker. Stryker master trainers can be a key asset to the commander in shaping the elements of an SBCT into a formidable and lethal combined arms team that has and will continue to be successful in combat.

We encourage commanders to assist in developing this requirement and ask them to contact the Stryker/Bradley Proponent Office with recommendations. The point of contact is Sergeant First Class Michael Hertig, the Infantry Center's lead for the Combined Arms Weapons Proficiency for the Stryker Brigade Combat Team, Draft FM 3-22.3. He can be reached at (706) 544-6201 or Michael.Hertig@us.army.mil.

Sergeant First Class Michael Hertig is the Stryker doctrine and systems lead for the Stryker/Bradley Proponent Office. He has served for 17 years in the Army and is a combat veteran; his previous assignments include serving as a squad leader, section leader, platoon sergeant, and battalion and brigade Bradley master gunner. He is a graduate of the U.S. Army Sniper School, the BFV Master Gunner Course, and the Battle Staff NCO Course.

Major Mark S. Leslie is the deputy chief of Training and Organization for the Stryker Transformation Team at Fort Benning. Leslie is a veteran of Operations Just Cause, Desert Shield/Desert Storm, and Iraqi Freedom. He has served as a Long Range Surveillance team leader, Ranger instructor and commander of A Company and HHC, 2nd Squadron, 7th Cavalry, 1st Cavalry Division, and as the Senior Iraqi Army Advisor for 2-7 CAV, 1CD. He can be contacted at (706) 545-1651 or mark.s.leslie@benning.army.mil



COMBINED ARMS WEAPONS PROFICIENCY FOR THE HBCT

SERGEANT FIRST CLASS TOMMY HOWARD

As the Army transforms itself into a modular configuration, it is imperative that we look at the way we train gunnery to ensure that we provide the commanders of the brigade combat teams (BCTs) the tools necessary to train and evaluate their Soldiers, crews, and platoons. To that end, a heavy BCT workgroup was formed composed primarily of the Stryker/Bradley Proponent Office (S/BPO) from Fort Benning, Georgia, and the gunnery doctrine branch at Fort Knox, Kentucky. The determined end result is a four volume set of manuals with a different Volume 2 for the respective heavy, Stryker, and infantry BCTs.

This set will provide a comprehensive document for training gunnery to all Soldiers within a BCT. In this article, I concentrate on the HBCT gunnery manual (Draft FM 3-20.21) and provide a general overview of the changes in gunnery strategy that Soldiers and commanders will use. Additionally, a series of accompanying articles have been provided in this issue of *Infantry Magazine* to discuss in greater detail important aspects of this manual. It is noteworthy to point out that the Combined Arms Weapons Proficiency for the HBCT will provide a blueprint for subsequent BCT manuals.

HBCT Manual Overview

The HBCT gunnery manual is designed to provide a comprehensive training strategy for commanders and training managers that encompasses all Soldiers operating in combined arms battalions (CABs) and reconnaissance squadrons. Current gunnery doctrine is split among three different gunnery manuals. There is a manual for the Abrams tank, Bradley Fighting Vehicle (BFV), and Scouts. Each manual has its own organization, training strategy, and even evaluation procedures for the elements that use each particular manual. The HBCT manual will bring all three manuals under one document and standardize training and evaluations for all elements within a BCT. Yes, Abrams tanks and Bradleys will use the same overall gunnery methodology. Keeping in mind that each platform has its own characteristics, the primary differences between current BFV and Abrams gunnery are flexibility versus prescription in table development and points versus TPU (trained, needs practice, untrained) evaluation criteria. Draft FM 3-20.21 will address these differences placing all members of the BCT under the same gunnery methodology. At the end of the day, the HBCT commander will be able to

look across his brigade and have standard terminology, methodology, evaluation, and training tables. However, commanders will also have the ability to personalize the training their units receive.

Flexibility vs Prescription

The current Bradley gunnery manual (FM 3-22.1) contains a very flexible type of gunnery model. For each gunnery event, there are some guidelines for table development, but the tables can look very different from unit to unit based on commanders' guidance and intent. Conversely, current armor and scout gunnery are much more prescriptive. As an example, range bands and target types are spelled out for the unit; there is very little room for command guidance and the implementation of a unit's contemporary operational environment (COE) into its gunnery program. With BCTs being developed as "plug-and-play" type organizations deployable with any one of the division headquarters and into any type of environment, it is important to empower the HBCT commander and his CAB and squadron commanders with the flexibility to develop their gunnery programs for their impending missions. With this in mind, the HBCT gunnery manual has implemented a flexible gunnery methodology. This will allow the commanders to implement their own elements such as range bands, target types, vehicle posture and even environments (such as urban operations) into all levels of gunnery.

Although flexibility is important, the gunnery doctrine teams from both Fort Benning and Fort Knox agreed that one of the most important aspects of gunnery is to maintain a minimum proficiency level

WEAPON PROFICIENCY FOR BCTS

Volume 1	Small Arms Proficiency	Published TBD
Volume 2	Weapon Proficiency Strategy for the BCT	
FM 3-20.21	Heavy Brigade Combat Team	Published 1OCT07
FM 3-22.X	Stryker Brigade Combat Team	Published QTR 4 FY07
FM 3-22.X	Infantry Brigade Combat Team	Published QTR 1 FY08
Volume 3	CS/CSS Weapons Proficiency	Published TBD
Volume 4	Field Artillery Weapons Proficiency	Published TBD



MSG Johancharles Van Boers

(MPL) within gunnery in order to sustain the critical skill requirements across the fleet. As an example, the manual states that on each gunnery table, a crew must fire a minimum of one offensive engagement, one defensive engagement, and one short halt engagement for each day and night. The remaining engagements can be fired from whatever posture the commander wants to train. If his upcoming mission will include a large number of cordon and search-type missions, then he may want to train on more short halt engagements. A commander in Korea may want to emphasize defensive engagements, etc. The correct answer will always be what the commanders in the field know they need to train on, and it is the HBCT gunnery manual that provides them that framework using minimum proficiency levels as a guide.

Points vs TPU

The other area of gunnery that had to be mediated was scoring and evaluations for all three phases of gunnery as Abrams uses a 1,000 point system to evaluate while Bradleys use the TPU methodology. While both have their pros and cons, the decision was made to use the points system with the addition of flexibility. A staple of BFV gunnery has always been that regardless of crew errors (with the exception of safety violations) the crew would pass the engagement if it killed the target before exceeding the threat time. We have incorporated this mentality into the new points system, only reducing engagement scores due to safety violations and/or failure to kill all targets within the designated threat time. Crew cuts, such as fire commands and response terms, will be deducted at the end of the phase (day/night). This reduces the crew's overall score and if enough mistakes are made, it can cause the crew to fail the table. It will not, however, cause the crew to fail any single engagement within the table as long as the crew killed the targets within the allowable threat time. For a more detailed explanation on crew gunnery, see Staff Sergeant

Philip Mandile's article "Preliminary and Basic Gunnery for the HBCT" on page 13.

Evaluating collective gunnery was another issue that was refined. Each platform in the BCT had its own scoring model. What was important for the gunnery doctrine team was that commanders would assess their platoons in accordance with applicable training and evaluation outlines (TE&O) and with what was important to the commander. Additionally, it was decided that the regimented mathematical system used by the armor community was dated and was not advantageous to the flexibility and MPL precepts established in the earlier chapters. Therefore, collective tables will be scored using a TPU model with both gunnery and mission training plan (MTP) scoring standards. For a detailed explanation on advanced gunnery, see Sergeant First Class William Simons' article "Advanced Gunnery for the HBCT" on page 22.

Threat Timing

One of the pillars that forms the foundation for evaluating the HBCT is threat-based timing matrices. The time a crew has to engage and destroy a target on the range is tied to a threat model. This model is based off the time it takes for the threat to get first burst on the friendly vehicle. This makes the worst case assumption that when a vehicle gets hit first it begins to do other things (such as survivability moves) besides the direct fire engagement process. With data supplied by the Army Materiel Systems Analysis Activity (AMSAA) and the Army Research Laboratory, threat matrices for all platforms in the HBCT have been developed. These times have been altered to make them unclassified and are based off a threat crew that is as well trained as U.S. Army Soldiers. Factors that went into the development of the times were acquisition, ranges to target, capabilities of the threat vehicle, and in the case of the TOW missile, flight time of the round. Each target presented has

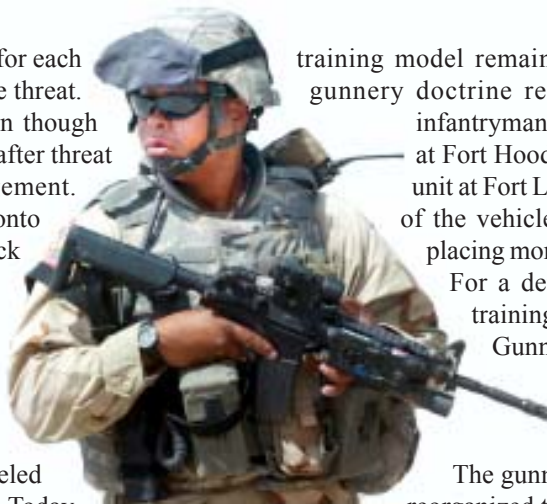
its own threat time, meaning the clock is ticking for each target as the friendly vehicle exposes itself to the threat. A basic tenant of this evaluation system is even though you can receive partial credit for killing a target after threat time has expired, you cannot pass the engagement. Again, it's threat based — who got first burst onto target, the threat or the Bradley, Abrams, or truck crew?

Non-Standard Missions

For at least the last 12 years, since the operational tempo greatly increased as a result of the Balkans and now Operation Iraqi Freedom, HBCT Soldiers have conducted missions in wheeled vehicles instead of their Abrams tanks and BFVs. Today, this also includes engineers and artillerymen, who are also conducting infantry-style missions. The HBCT gunnery manual recognizes this and includes examples on how any type of unit can use the rifle squad strategy as well as the HMMWV strategy to train their Soldiers to perform missions in their COE. There are also examples for use by combat support (CS) and combat service support (CSS) units until Volume 3 (CS/CSS gunnery) is completed. For a more detailed explanation on truck gunnery, see the related article on page 16.

The Infantry Rifle Squad

For too long rifle squad training has suffered within the mechanized community. Squads are often an afterthought because manpower shortages require the manning of the four Bradleys within an infantry platoon, leaving squads short of personnel. While the HBCT gunnery manual cannot ease manpower shortfalls, it has placed more emphasis on the training of rifle squads. This process began by simply moving the squad into a chapter as opposed to an appendix. By having the squad as an appendix, the thought process is already in place that they are a leftover element. The rifle squad is the reason Bradleys exist in the first place. With this in mind, the squad gunnery model was reorganized. The overarching idea is that as the SBCT and IBCT gunnery manuals come on line, the squad basic model used in the HBCT manual will be a common thread throughout the Volume 2 series. Although each type of BCT will have its own mission essential task list (METL), commander's intent and different delivery systems (airborne, air assault, etc.), the terminology and



training model remain consistent. This also keeps the gunnery doctrine relevant and familiar to the new infantryman who is stationed in a Bradley unit at Fort Hood today and reassigned to a Stryker unit at Fort Lewis tomorrow. The reorganization of the vehicle tables will also be beneficial in placing more of an emphasis on the rifle squad.

For a detailed explanation on rifle squad training, see the article titled "Rifle Squad Gunnery" on page 19.

Table Organization and Advanced Gunnery

The gunnery tables in the HBCT have been reorganized to place emphasis on the collective rather than the individual or crew. The strategy contains a total of 12 tables with the first six being crew tables. When a crew has completed Table VI, they are qualified. However, they are only half way done with gunnery and have six collective tables left to negotiate. Tables VII-IX are section tables. The feedback that we have received from the workgroups conducted with operational units is that Table IX must be a qualification table for all weapon system platforms. Additionally, to meet the demands from the field, commanders can task organize however they choose, whether it is one BFV, one Abrams, and a rifle squad or a more pure organization. Again, the commander decides what his unit needs to train. Based on COE, level of proficiency (ARFORGEN cycle) and commander's intent, the collective gunnery starting at the section level is inherently flexible. Tables X-XII are platoon tables leading up to platoon qualification. Commanders develop their platoon qualification and have the flexibility to include all elements from engineers to CS/CSS, mortars, etc., into their tables.

In summary, the HBCT gunnery manual will be a flexible, comprehensive document that provides commanders, master gunners, and training managers with a framework to train squads, crews, and platoons. It also provides examples and MPLs to assist commanders in training all elements of the BCT for both missions within and outside their typical scope.

We encourage commanders, master gunners, and training managers to read the coordinating draft of FM 3-20.21 and ask them to contact the Stryker/Bradley Proponent Office with their recommendations for the gunnery manual. The point of contact is SFC Simons, the Infantry Center's lead for Combined Arms Weapons Proficiency for the Heavy Brigade Combat Team (Draft FM 3-20.21). He can be reached at (706) 544-6201 or william.f.simons@us.army.mil.

CHAPTER OUTLINE

- Chapter 1** - Introduction
- Chapter 2** - Platform Capabilities and Characteristics
- Chapter 3** - Training Devices and Simulators
- Chapter 4** - Training Management Strategies
- Chapter 5** - Range Operations
- Chapter 6** - Engagement Process
- Chapter 7** - Rifle Squad Training
- Chapter 8** - Crew Gunnery Evaluations
- Chapter 9** - Preliminary Gunnery Training
- Chapter 10** - Basic Gunnery Training
- Chapter 11** - Advanced Gunnery Training

Sergeant First Class Tommy Howard has been the chief of the Stryker/Bradley Proponent Office for three years and will soon retire from active duty after 20 years of service to the Army and BFV communities. He is a combat veteran; his previous assignments include serving as a squad leader, platoon sergeant, battalion master gunner, and division master gunner. He is a graduate of the BFV Master Gunner Course, the Battle Staff NCO Course, the Advanced NCO Course and holds a bachelor's degree in Social Science.

PRELIMINARY AND BASIC GUNNERY FOR THE HBCT

STAFF SERGEANT PHILIP MANDILE



Shane E. Cuomo

Soldiers in an M2A2 Bradley Fighting Vehicle from the 1st Infantry Division search for insurgents in Iraq.

Field Manual (FM) 3-20.21 was written to standardize the evaluation process for all weapon system platforms including Abrams tanks, Bradley Fighting Vehicles (BFVs), and armored high-mobility multipurpose wheeled vehicles (HMMWVs). Moreover, it ensures a progressive training methodology for each type of unit's weapons proficiency strategy. Bradley gunnery, originally conceived from FM 23-1 and later FM 3-22.1, was designed to train BFV crews. During the crawl phase, individually assigned and crew-served weapons use Volume I (*Small Arms Weapons Training Strategy*) and the appropriate 3-22.X series manuals for qualification. The walk and run phases of qualification for the weapon system platform crews are covered in the heavy brigade combat team (HBCT) gunnery manual. The walk phase is for crew gunnery, and the run phase is collective gunnery.

BFV crew gunnery trains the crew members throughout the process, culminating in an evaluated event which tests their ability to take knowledge and skills learned during preliminary gunnery and apply it to the basic gunnery tables. Bradley crews exercise the weapon systems in both fully operational and degraded modes.

Inherent flexibility in FM 3-20.21 allows the commanders to tailor the engagements to support their anticipated contemporary operational environment (COE). For example, a unit deploying to an urban area with a threat of infantry and unarmored vehicles might focus on short range engagements with targetry placed in and around urban facades. In the event a unit may not have a contingent area of operation, commanders may opt to design scenarios to support a variety of threats at all range bands in any environment. In this article, I discuss the preliminary and basic crew gunnery concepts as they apply to the BFV.

Heavy Crew Gunnery Concept

Heavy crew gunnery is transforming. As the Army stands up HBCTs with their inherent modularity and task organization, there is a need for a common scoring system. Currently, armor units score using a 1,000-point system, while Bradley units score using

a TPU (trained, needs practice, untrained) system. Armor commanders have limited latitude to modify their ranges to accommodate their individual and sometimes unique missions, whereas Bradley commanders have substantial latitude.

In an HBCT, the BCT, CAB, and squadron commanders will be able to assess all heavy fighting vehicle assets on a very similar scoring system with an extensive degree of flexibility to tailor gunnery to suit the unit's COE or area of responsibility (AOR).

The goal of crew gunnery is to train and certify a crew's ability to operate effectively using the direct fire engagement process. Crew gunnery leads to section and platoon qualification. This training consists of progressive tables to develop crew gunnery skills, which include engaging and destroying single and multiple targets from a stationary or moving BFV in a wide variety of conditions and environments. The tables and their evaluations focus on the individual crew's collective ability to operate the BFV in all of its configurations, that is, with all of its common and specialized systems and capabilities. Commanders can tailor the events based on their anticipated COE. Their options extend to target type and target engagement ranges.

The Engagement Process: DIDEA

The engagement process is a series of deliberate steps which aid in detecting, identifying, engaging and assessing targets on the battlefield to ensure their rapid destruction. The detect, identify, decide, engage, and assess (DIDEA) process provides an iterative, standardized, and systematic approach to target engagement activities across the user spectrum, from the individual infantryman to indirect fire controllers. The individual actions of the DIDEA process are summarized below:

Detect – The acquisition and location of an object in the operational environment.

Identify – A systematic process supporting the characterization of detected objects as friend, enemy, or neutral.

Decide – Determination of appropriate application of military options and weapons resources on identified objects.

Engage – Specific application of military options/weapons resources.

Assess – Did the applied weapons

resources bring about the desired effect?

Chapter 6 of FM 3-20.21 outlines the techniques used in the engagement process for all crews. The chapter is divided into six main sections with the first two sections being common to all weapons systems platforms. Section I discusses in broad detail the DIDEA process. Section II focuses on the combat identification process encompassing the detect, identify, and decide processes of DIDEA. Section III is divided into three subsections referencing specific weapon system platforms and specifically discussing the direct fire engagement techniques for each combat platform. Section IV discusses the engagement process for fire support while Section V outlines the final step in the DIDEA process of assessment. Though the latter sections of Chapter 6 are used throughout gunnery, the last section (Section VI) completely details fire control and distribution.

Table Design and Development

Outlined below is the new table layout for crew gunnery.

To underscore, FM 3.20-21 uses

CREW GUNNERY TABLES
Table I — Preliminary Crew Practice
Table II — Preliminary Crew Proficiency Course
Table III — Crew Practice I
Table IV — Crew Practice II
Table V — Crew Practice III
Table VI — Crew Qualification

minimum proficiency levels (MPLs) to maintain the critical skill requirements during crew gunnery. The following are the MPLs that must be conducted, at a minimum, from the crew proficiency course through the crew qualification tables during table development:

- 1 friendly or 1 neutral target - day and night
- 1 defensive engagement - day and night
- 1 offensive engagement - day and night
- 1 short halt engagement - day and night
- 1 CBRN (chemical, biological, radiological, and nuclear) engagement - day and night

- 1 25mm point target 800m or less - day and night
- 1 COAX target 300m or less - day and night
- 1 25mm point target (BFV ODS [Operation Desert Storm]) 1,400m or greater - day and night
- 1 25mm point target (BFV A3) 1,600m or greater - day and night
- 1 call for fire engagement (CFV and BFIST) - day or night
- 1 lateral dispersion target greater than 1.5 WFOV - day and night

Preliminary Crew Gunnery

Preliminary crew gunnery tables are primarily device-based tables, designed to be used by the commander to either indoctrinate new crews into the first steps of Bradley gunnery or to train assessed strengths and/or weaknesses in established stabilized crews. These tables are used extensively in new equipment training (NET) and are cost effective in that they place crews into Bradleys and train fundamental skill requirements without the reoccurring and potentially prohibitive costs of ammunition, range time, materials and staff, and vehicle operational tempo costs, thus saving full-caliber ammunition to train high payoff critical skill requirements. However, recent developments have made it evident that those conventional devices used through today to train device-based precision gunnery are soon to be gone. The life cycle support (WCLS) for the precision gunnery system (PGS) has been terminated, and the devices will rapidly erode until pulled from service. These tables will be resourced for sub-caliber ammunition with the use of a sub-caliber device. They can also be fired using the PGS until the systems are no longer functional but should not be fired using current MILES (Multiple Integrated Laser Engagement System) or dry fire. If the weapons and visual effects and ballistic solution become a threshold requirement for the future MILES system (currently an objective requirement maintaining its inadequacies as a gunnery trainer), that system will replace the use of sub-caliber ammunition.

Preliminary crew gunnery training tests the crewmembers' ability to take knowledge

and skills learned during classroom instruction, simulation training, and hands-on training and apply it to device-based gunnery tables that exercise the fire control and weapon systems in both fully operational and degraded modes.

Table I introduces crews to engaging stationary and moving targets (placed in a tactical array) from a stationary Bradley under normal and degraded conditions. Each engagement is designed to train crew duties and engagement techniques against stationary or moving targets, with each type of ammunition and sight. MPL conditions are implemented for both day and night engagements to evaluate the crew's ability to operate the weapons and fire-control systems. Friendly targets should be included to give the crew practice in combat identification.

Table II is designated as a gate-to-live-fire (GTLF) event. It evaluates the crew's ability to engage stationary and moving targets that are placed in a tactical array, from a stationary and moving Bradley under normal and degraded conditions. Each engagement is designed to test crew duties and engagement techniques against stationary or moving targets, with each type of ammunition and sight.

Basic Crew Gunnery

Basic crew gunnery training tests the crewmembers' ability to take knowledge and skills learned during preliminary gunnery and apply it to basic gunnery tables that exercise the fire control and weapon systems in both fully operational and degraded modes. Crewmembers, to include the platoon leader's backup, must complete the following prerequisite training events prior to conducting full-caliber, live-fire gunnery training:

- Vehicle commanders, gunners, loaders, and drivers must pass all GSTs (gunnery skills tasks).
- A crew must pass Table II, Crew Proficiency Course.

Table III trains Bradley crews to engage stationary and moving targets using the coaxial machine gun. Various tasks are presented using single and multiple machine gun targets requiring the gunner or commander to employ point target engagement techniques. Table III is a newly designed table in BFV gunnery in which sub-caliber ammunition is replaced with 7.62mm 4:1 ammunition and crews are given the table authorization in order to train on machine gun engagement techniques. As is the case for all basic crew tables, MPL conditions are implemented for both day and night engagements to train and evaluate the crew's ability to operate the weapons and fire-control systems.

Table IV trains crews on firing all weapons for their platform system. This table measures the crew's ability to engage stationary and moving targets, placed in tactical arrays, from a stationary and moving combat vehicle under normal and degraded conditions. Friendly targets will be included to give the crew practice in combat identification.

Table V trains crews to engage stationary and moving targets, placed in tactical arrays, from a stationary and moving BFV. Table V consists of five day and four night tasks with single and multiple weapon system engagements. Various tasks require the crew to use precision or degraded-mode gunnery techniques against main gun and machine gun target arrays. Crews on digitally-equipped vehicles will complete the minimum requirements for digital gunnery stated in Chapter 8. One day and one night engagement

will be fired in a CBRN environment. Crews will fire the two CBRN tasks with protective masks on. Friendly targets will be included to give the crew practice in combat identification.

Table VI is the culminating event for crew gunnery. Table VI is a single-vehicle qualification table. It evaluates the crew on the entire engagement process in various firing conditions. Table VI evaluates the crew's ability to put steel on target quickly, while ensuring proper combat identification on a course that presents friendly, neutral, and threat target arrays at realistic ranges. The Bradley crew engages single and multiple weapon systems, and delayed target presentations from a moving and stationary BFV. Table VI consists of five day and five night firing tasks. Various tasks will be presented requiring precision or degraded-mode gunnery techniques against main gun and machine gun targets. Crews on digitally-equipped vehicles will complete the minimum requirements for digital gunnery stated in Chapter 8. One day and one night engagement will be fired in a CBRN environment. Crews will fire the two CBRN tasks with protective masks on. Friendly targets will be included to give the crew practice in combat identification.

Evaluating Heavy Crew Gunnery

Bradley crews will be held to threat-based timing (except during use of the TOW [tube-launched, optically tracked, wire-guided] family of missiles). They will have to meet the established target threat times to receive a 70 percent, which will be considered as the minimum score for passing an engagement. The 100-point score line is based on the mechanical operating rate of the platform/weapon plus time of flight of specific rounds fired, to include sensing and killing bursts. This assumes the worst case scenario on the crew's behalf with regards to ammo change for 25mm. There is also a one second allowance at each 100-point line for non-crew induced variables. This is to account for a wide variety of inconsistencies, including but not limited to turret slew rates and gun/cannon cycle rates.

A crew earning only 70 points based on time can still pass the engagement if all tasks, conditions, and standards are met. Any point deductions resulting from crew cuts, such as fire command and engagement techniques, will be applied at the end of the table phase.

Scoring for Crew Qualification Table is as follows:

CREW QUALIFICATION RATINGS	
Distinguished	Crew scored at least 70 points on at least 9 of 10 engagements. Crew scored 900 to 1,000 points overall.
Superior	Crew scored at least 70 points on at least 8 of 10 engagements. Crew scored 800 to 899 points overall.
Qualified	Crew scored at least 70 points on at least 7 of 10 engagements. Crew scored 700 to 799 points overall.

The modern battlefield is not always as convenient as we would like; therefore, the result is that not all engagements must be fired from an own vehicle posture of a dug-in defensive position or on

the offensive. A new own vehicle posture is being instituted; it is the short halt. In the short halt, the BFV crew must engage and destroy vehicles faster than ever before as the BFV is fully exposed as in the offense, but no additional time is allowed.

In an effort to maximize the commander's flexibility, engagements within the tables are no longer defined by prescribed offensive, defensive or CBRN definitions. The commander may opt to vary the number of offensive, defensive, short halt or CBRN events within his gunnery to tailor it to their COE/AOR.

TOW scoring is being revised. In keeping with TOW missile design specifications and Bradley operational requirement documents, a BFV must have an uninterrupted 30 inches of clearance from the bottom of the missile tube to impact at the target. In order to achieve this, a Bradley in a dug-to-standard, proofed two or three tier fighting position must move into and remain in the hull down position to fire and track a TOW missile. For more on this, refer to the staffed and published white paper on Warrior University under Stryker/Bradley Proponent Office (pending). To reinforce this training, a crew cut will be assessed a zero-point engagement for disregarding to follow the task, conditions, and standards.

Delayed targetry is also being added. This had been the purview of the A3 community but is being brought to the ODS and A2 community as well. Delayed targetry, known as a "Hunter Killer" task in A3 circles, keeps the BFV ODS and below variants in the fight beyond their previous simultaneous exposure of multiple targets.

As the Bradley community continues to mature, the determination has been made to eliminate single target engagements where possible. TOW engagements are the exception, as they are based on missile flight times. The focus in basic gunnery will be on multiple target engagements as they are a higher payoff skill set. Single target engagements are a building block towards this goal and are addressed in simulations, preliminary gunnery and Crew Practice I. All engagements in Crew Practice II, III, and Crew Qualification will be multiple engagements.

In summary, crew gunnery is, as it has always been, the foundation of a successful gunnery program, but it is only the precursor to section and platoon gunnery. As crew gunnery continues to be refined and migrates into its final form for this iteration, the need for feedback from the field is a valuable tool to the training developer.

Commanders, master gunners, and training managers are encouraged to read the coordinating draft of FM 3-20.21 and ask that them to contact the Stryker/Bradley Proponent Office with recommendations for the gunnery manual. The point of contact is Sergeant First Class William Simons. He can be reached at (706) 544-6201 or william.f.simons@us.army.mil.

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Truck Crew Gunnery

SERGEANT FIRST CLASS WILLIAM SIMONS

Truck gunnery, originally conceived from FM 17-12-8 and later FM 3-20.8, was designed to train reconnaissance elements in the same crawl-walk-run methodology as other weapon system platforms. During the crawl phase, MK-19, .50 caliber, and M240B gunners fire using Volume I, *Small Arms Weapons Training Strategy*, and the appropriate 3-22.X series manuals through tripod-mounted qualification. The walk and run phases of qualification for the gunners are covered in the HBCT gunnery manual. The walk phase is crew gunnery, and the run phase is advanced gunnery.

Truck crew gunnery trains the crew to take the knowledge and skills learned during preliminary gunnery and apply it to the basic gunnery tables exercising the crew and the weapon systems in both fully operational and degraded modes. Truck crew gunnery tables should also be utilized by all combat support (CS) and combat service support (CSS) elements within the HBCT until Volume III, *Combat Support/Combat Service Support Gunnery*, is released. The culmination of truck crew gunnery is Table VI, crew qualification.

The inherent flexibility built into FM 3-20.21 allows the commanders to tailor the engagements to support their anticipated contemporary operational environment (COE). For example, units deploying to an urban area with a threat of infantry and unarmored vehicles could focus on short range engagements with targets placed in and around urban facades. Some units may not have a contingent area of operation. In this case, commanders may opt to design scenarios to support a variety of threats at all range bands in any environment.

Truck Crew Engagement Process: DIDEA

The engagement process is the process of detecting, identifying, engaging and assessing targets on the battlefield to ensure their rapid destruction. The detect, identify, decide, engage, and assess (DIDEA) process provides an iterative, standardized, and systematic approach to target engagement activities across the user spectrum, from the individual



infantryman to indirect fire controllers. The individual actions of the DIDEA process are summarized below:

Detect – The acquisition and location of an object in the operational environment.

Identify – A systematic process supporting the characterization of detected objects as friend, enemy, or neutral.

Decide – Determination of appropriate application of military options and weapons resources on identified objects.

Engage – Specific application of military options/weapons resources.

Assess – Did the applied weapons resources bring about the desired effect?

Chapter 6 of FM 3-20.21 outlines the techniques used in the engagement process or DIDEA for all truck crews.

Truck Crew Gunnery Concept

Throughout FM 3-20.21 there is an inherent flexibility for the commander to train for his anticipated COE. In the development of FM 3-20.21, the gunnery doctrine team from both the Armor and Infantry Centers removed all task prescription from the gunnery manual and established only minimum proficiency levels (MPL) to maintain critical skill requirements and to have a standard evaluation methodology for every weapon system platform in the HBCT; therefore, regardless of unit type (combat arms, CS, CSS), every truck crew will be evaluated in the same manner for both preliminary and basic gunnery.

Though truck crew gunnery was specifically designed for scout/reconnaissance units in the combined arms battalions (CAB) and reconnaissance squadrons, the tables have two further purposes. First, these tables should be used throughout the brigade for both CS and CSS units. Elements such as distribution platoons, transportation companies, and military police platoons, for example, now share a common evaluation process with their combat arms counterparts. Commanders should tailor truck crew gunnery with similar engagements that the latter units can expect while in combat; for example, transportation units traveling at actual rate of march speeds engaging close range targetry.

Second, these tables are also used for units that will deploy in nontraditional roles. For example, artillerymen can be organized as dismounted rifle squads or

armor and infantrymen deployed to an AOR where they will have two vehicle sets or will be on HMMWVs exclusively. It is noteworthy that these truck crew tables will be replicated in the two subsequent weapons proficiency manuals: SBCT and IBCT.

Table Design and Development

In order for truck crews to conduct crew gunnery, the crew members must complete the following prerequisite training prior to conducting full-caliber, live-fire exercises:

□ Crewmembers must pass all gunnery skills tests (GST) tasks; and

□ A crew must pass Table II — crew proficiency course.

Outlined below is the new table layout for truck crews during basic gunnery.

Truck Crew Tables: Chapter 10

Table III — Section Proficiency Exercise

Table IV — Section Practice

Table V — Section Qualification

Table VI — Platoon Proficiency Exercise

Table III trains crews to proficiency using the assigned weapon system on a stationary vehicle against stationary single targets. The inherent flexibility of FM 3-20.21 allows commanders and master gunners to arrange targets in a realistic array. The crews will fire four day and three night engagements. As a common theme throughout crew gunnery, friendly targets are included in all crew tables to give the crew practice in combat identification.

Table IV trains crews to employ direct fire to destroy threat targets from a stationary or moving vehicle. The crews engage stationary area and point targets during day and night conditions. Table IV is a building block toward Table V. The unit commander can modify Table IV to train weak gunnery areas or to sustain or improve the crew's strengths or weaknesses.

Table V trains the truck crew to engage moving and stationary targets with the platform weapon systems. It requires the crew to call on all the knowledge gained and lessons learned during Tables I through IV and employ those skills against various targets during day and night operations. Table V prepares the truck crew for Table VI, crew qualification, by presenting

engagements with task conditions similar to those on Table VI.

Table VI is a single-vehicle qualification table. It evaluates the crew on the entire engagement process outlined in Chapter 6 in various firing conditions. Table VI is designed to evaluate the crew's ability to put steel on target quickly, while ensuring proper combat identification on a course that presents friendly, neutral, and threat target arrays at realistic ranges. The firing vehicle crew engages single, multiple, and delayed target presentations from a moving and stationary combat vehicle. Table VI consists of five day and five night firing tasks.

To underscore FM 3-20.21 uses MPLs to maintain the critical skill requirements during truck crew gunnery. Below are the MPLs that must be conducted, as a minimum, on both the crew proficiency course and crew qualification tables:

- 1 friendly or 1 neutral target during the day and night for all tables;
- 1 defensive engagement during the day and night for all tables;
- 1 offensive engagement during the day and night for all tables;
- 1 short halt engagement during the day and night for all tables;
- 1 CBRN (chemical, biological, radiological, nuclear) engagement during the day and night for all tables;
- 1 call-for-fire target during the day and night for all tables (Cavalry units);
- .50 cal./MK-19/M240B:
 - 1 point target 900m or greater during the day and night for all tables;
 - 1 point target 200m or less during the day and night for all tables; and
- MK-19:
 - 1 area target 1,500m or greater during the day and night for all tables.

Truck Crew Evaluations

For the development of FM 3-20.21, both the Armor and Infantry Schools came together to develop one standard for evaluating gunnery within the HBCT for all of its weapon system platforms. The greatest change that the reader will discover is the decade long reversal from the TPU (trained, needs practice, untrained) system

of scoring to point scoring. For readers that understand both mechanized infantry systems of scoring (past and present), it is important to note that the future point scoring system is similar to the TPU in that the MPL for the future crew gunnery is directly tied to the 70-point line on the timing matrixes. Just as the former point scoring system and current tank point system are evaluated, crew-duty penalties are imposed to ensure that crews practice proper engagement techniques and system procedures. There are five categories of crew-duty penalties:

- *Applied immediately to each engagement

- o Immediate disqualification — Crew operates with hazardous conduct.

- o Automatic zero point — Crew disregards a requirement for an announced task, conditions, and standards.

- o 30-point penalty — Crew fails to adhere to basic safety or force protection precepts.

- *Applied as a total at the end of each phase (day/night)

- o 10-point penalty — Crew fails to perform fundamental leader/crew tasks.

- o 5-point penalty — Crew fails to employ correct engagement techniques or respond properly to fire commands.

Essentially, crews receive a numerical score based on their exposure to the threat matrix. Once the score is obtained from an engagement, the crew receives 100 points if there were no crew-duty penalties to assess. The crew will receive a lesser score for the engagement if an immediate crew-duty penalty is assessed. For example, immediate disqualification penalties are assessed for the negligent discharge of the weapon system and firing outside the range fans; an automatic zero applies when a crew engages a friendly target or fails to fire a CBRN engagement in MOPP; or a 30-point penalty occurs when crews fail to destroy both targets in accordance with the threat timing matrix. Ten and five-point crew cuts are cumulative for a table phase. For example, a 10-point penalty is assessed against the crew for fundamental leader and crew-type tasks, such as improper fire command, using improper ammunition, etc. Five-point penalties are assessed if the crew uses improper engagement techniques, responds improperly to fire commands, etc.

The table above shows the truck crew ratings that will be received by the crew after completing Table VI, crew qualification.

Truck crew gunnery tests the crewmembers' ability to take knowledge and skills learned during preliminary gunnery and apply it to the basic gunnery tables exercising the crew and the weapon systems in both fully operational and degraded modes. Though truck crew gunnery was developed for the reconnaissance elements commanders should utilize it for all wheeled systems in the HBCT to include combat support and combat service support

CREW QUALIFICATION RATINGS	
Distinguished	Crew scored at least 70 points on at least 9 of 10 engagements. Crew scored 900 to 1,000 points overall.
Superior	Crew scored at least 70 points on at least 8 of 10 engagements. Crew scored 800 to 899 points overall.
Qualified	Crew scored at least 70 points on at least 7 of 10 engagements. Crew scored 700 to 799 points overall.

elements until Volume III, *Combat Support/Combat Service Support Gunnery*, is released. Flexibility in FM 3-20.21 allows the commanders to tailor the engagements to support their anticipated COE. Training managers are encouraged to develop the basic gunnery tables similar to their in-theater threat.

We encourage commanders, master gunners, and training managers to read the coordinating draft of FM 3-20.21 and ask them to contact the Stryker/Bradley Proponent Office with recommendations for the gunnery manual. The point of contact is Sergeant First Class William Simons. He can be reached at (706) 544-6201 or william.f.simons@us.army.mil.

Sergeant First Class William Simons is the BFV doctrine and systems lead for the S/BPO and future chief. He has served for 19 years in the Army and is a combat veteran; his previous assignments include serving as squad leader, section leader, platoon sergeant, and battalion master gunner. SFC He is a graduate of the BFV Master Gunner Course, the Battle Staff NCO Course, the Advanced NCO Course and holds a bachelor's degree in Management with a minor in Political Science and is nearing completion of a master's degree in Public Administration.



RIFLE SQUAD GUNNERY

SERGEANT FIRST CLASS WILLIAM SIMONS

When holding terrain or securing a foothold in an urban environment, no other weapon system is more important to the success of a heavy brigade combat team (HBCT) than the infantry rifle squad. For far too long the rifle squad has been overshadowed by mechanized infantry units and their Bradley Fighting Vehicles (BFVs); it is the intent of Field Manual 3-20.21 to realize the key role of the rifleman and his weapon by developing a crawl, walk, run methodology for the rifle squad to enhance the squad's gunnery proficiency strategy.

One of the primary efforts of FM 3-20.21 was to ensure that the emphasis for gunnery was placed on the advanced tables; to do so involved creating a paradigm shift in the table methodology which included mirroring the rifle squad tables with the crew tables (for both the tank and Bradley) to prepare them to operate together in advanced tables. Therefore, the rifle squad gunnery tables are only the first half of gunnery (Tables I-VI) while collective gunnery is the second (Tables VII-XII). Chapter 7 of FM 3-20.21 will allow

company commanders the flexibility to incorporate both tactical training and gunnery. It will assist the commander by training the squad to use the direct fire engagement process using DIDEA and teach the squad and fire team leader fire control and distribution. The culminating event for the rifle squad is Table VI - rifle squad qualification.

Photo by Specialist Ben Brody

Soldiers from the 3rd Battalion, 15th Infantry Regiment, practice live-fire squad movement techniques in Kuwait in September 2005.



The reader of FM 3-20.21 will immediately recognize a few changes in the gunnery manual. Throughout the manual there is an inherent flexibility for commanders at all levels to train for their anticipated contemporary operational environment (COE). Commanders should tailor their tables to replicate their anticipated environment as best possible. However, the one constant between the manuals is the reminder of resource constraints. Rifle squad tables must be designed using the same frequency and ammunition allocations from DA Pamphlet 350-38. In the paragraphs below, this article will discuss the methodology of rifle squad gunnery for the HBCT to include the basic gunnery concept, table resources, table design and development, and evaluations. Commanders should also note that this chapter will be redundant in the subsequent BCT manuals for both the Stryker and infantry brigade combat teams. Additionally, Chapter 7 can also be used as a blueprint of training for units that are deploying in nontraditional roles such as artillerymen and tankers mounted on high-mobility multipurpose wheeled vehicles (HMMWVs) tasked to execute dismantled operations.

Rifle Squad Basic Gunnery Concept

Rifle squad training measures the squad’s proficiency in executing specified squad collective tasks and battle drills. The idea behind rifle squad tables is to train the squad as part of a larger operation with concentration on one or two collective tasks from the Army Training and Evaluation Program (ARTEP) Mission Training Plan (MTP). Moreover, the training tables should replicate a unit’s anticipated COE, involve the squad leader’s and fire team leaders’ decisions, demonstrate a cause and effect result for the leadership’s decisions, and be executed as a multi-echelon and combined arms event. This means that for each table developed, the construction of the table should have notional maneuver units and radio traffic incorporated to train the platoon leader (a multi-echelon focus) on making stressed decisions. For example, a squad table can be designed to where the platoon is the maneuver effort in a meeting engagement. With notional BFV radio traffic, adjacent maneuvering squads or squads in a near support-by-fire position can call situation reports to the platoon leader. As the squad begins its assault, the platoon leader orchestrates the massing of fire onto the objective. Though only the rifle squads are assessed, the platoon leader receives training as well. Additionally, this would maximize already constrained resources with accelerated deployment schedules and decreasing calendar space in today’s training environment. In keeping with the new modularity structure of the HBCTs, units should incorporate other CAB and HBCT assets into collective gunnery tables. One effective method is to combine similar collective tables and tasks from mortar, scout, armor, and engineer units and incorporate them into Tables IV, V, and VI. Lastly, commanders should incorporate organic and nonorganic vehicle platforms on the rifle squad tables. For example, as the rifle squad enters and clears a room, the squad leader cross talks with the tank commander in support. As the tank commander suppresses the building with his .50 caliber, COAX or the loader’s M240B, the squad leader calls the tank commander to shift fire to another building or window in accordance with the unit’s SOP.

Rifle Squad Ammunition Resources		
	Frequency	Recommended Table
Fire and Move LFX	4 (2x Buddy Team once per gunnery)	Rifle Squad Table I
	(2x Fire Team once per gunnery)	Rifle Squad Table II
Squad/Platoon LFX	4 (2x Squad Qualification once per gunnery)	Rifle Squad Table VI
	(2x Section Qualification once per gunnery)	Table IX

Table Resources

To underscore, FM 3-20.21 was developed using DA Pamphlet 350-38, and there are no anticipated changes to the strategy. The table above shows how rifle squads are currently resourced for certain events.

Throughout FM 3-20.21 the virtual, constructive, and live methodology has been used to maximize training resources. The virtual device of choice is the Engagement Skills Trainer (EST) 2000, while the constructive devices of choice for rifle squad training on non-firing tables for the preliminary, basic, and advanced gunnery phase is MILES (Multiple Integrated Laser Engagement System) with blank ammunition.

Table Design and Development

Outlined below is the new table layout for rifle squad gunnery training.

Rifle Squad Gunnery Tables: Chapter 7
Table I - Buddy Team/Fire and Maneuver Exercise (LFX)
Table II - Fire Team Maneuver Exercise (LFX)
Table III - Squad Battle Drill Exercise (Blank)
Table IV - Squad Situational Training Exercise (Blank)
Table V - Squad Practice (Blank)
Table VI - Squad Qualification (LFX)

Preliminary rifle squad gunnery tables should be conducted using the crawl (dry fire), walk (blank fire with MILES) and run (live fire) method of training. Once a squad has completed the battery of rifle squad tables in the basic rifle squad gunnery training, it is ready for advanced gunnery training with the tanks and Bradleys. This training model can also be used by units that are deploying in nontraditional roles. Finally, Rifle Squad Table VI is a prerequisite for Table IX.

The purpose of Table I is to train and evaluate individual movement techniques as part of a buddy team in a live-fire and maneuver exercise. Example tasks to evaluate include:

Individual:

- Movement under direct fire (0713260502)
 - o High crawl
 - o Low crawl
 - o Rush

■ Select temporary fighting positions (0713260513)

Buddy Team:

■ Move over, through, or around obstacles (0713260503)

■ React to indirect fire while dismounted (0713260510)

The purpose of Table II is to train and evaluate a fire team's ability to live fire and maneuver. This is the first table that the fire team leader is able to maneuver and control the fire of his team in a live-fire event. Example tasks to evaluate include:

□ Move as a member of a fire team (0713260510)

□ Control movement of a fire team (0713265605)

The purpose of Table III is to train and evaluate a rifle squad's ability to exercise battle drills in a field setting. A battle drill is a collective action executed by platoon or smaller element without applying a deliberate decision-making process and generally supports other collective tasks. This is the first opportunity for squad leaders to fire and maneuver both fire teams during a new gunnery density as an evaluated event. Example tasks to evaluate include:

- Battle Drill 2 - React to Contact
- Battle Drill 2A - React to Contact
- Battle Drill 3 - Break Contact
- Battle Drill 3A - Break Contact
- Battle Drill 4 - React to Ambush

The purpose of Rifle Squad Table IV is to train and evaluate a squad's ability to execute collective tasks in a situational training exercise (STX). This is the first opportunity for new squad leaders to maneuver both fire teams as an evaluated event. Tasks evaluated include but are not limited to those found in Chapter 5 of ARTEP 7-7J MTP. Collective training events for the rifle squad should be organized as part of a larger element.

The purpose of Rifle Squad Table V is to train and evaluate a squad's ability to execute collective tasks in a live-fire training exercise. Tasks evaluated include but are not limited to those found in Chapter 5 of ARTEP 7-7J MTP and/or the battle drills found in ARTEP 7-7J Drill. Collective training events for the rifle squad should be organized as part of a larger

element. This table is the building block to Rifle Squad Table VI (squad qualification) and should focus on collective tasks or battle drills identified as a firing task for subsequent tables.

The purpose of Rifle Squad Table VI is to qualify rifle squads. This table should encompass an entire operation from troopleading procedures through consolidation and reorganization. Rifle squads should be evaluated on their ability to effectively move tactically, control organic fires, and report/communicate as a squad and as part of a BFV platoon. Well prepared squad qualification tables are interactive (forces squad and team leaders to make clear decisive decisions) and multi-echelon (trains platoon leaders to fight both dismounted and notional mounted elements).

Evaluating Rifle Squad Gunnery

All weapon systems in an HBCT will be assessed utilizing the training and evaluation outlines (T&EOs) that support the mission or table being conducted. Evaluation for rifle squad gunnery tables is the same as it is for advanced gunnery and is outlined in Chapter 11. The senior evaluator will assess the overall performance of the rifle squad as either trained (T), needs practice (P), or untrained (U) using the collective task scoring model. The greatest change in advanced gunnery scoring is how scoring is tabulated. First, there is no mathematical solution to the scoring process. Second, the gunnery score is tied to the task standard of each training and evaluation outline, meaning gunnery is much like an additional line in the T&EO task standards. The squad must kill, capture, or force the withdrawal of the enemy, which forces attrition to a point of combat ineffectiveness. Therefore in a T&EO, the gunnery standard minimum proficiency level (MPL) that should be met is half of the enemy force has been killed, which results in no less than a needs practice or P for the firing element. Lastly, using the overall T&EO assessment and the overall gunnery assessment, the senior evaluator is able to assign an overall table assessment.

FM 3-20.21 was written to standardize the evaluation process for all weapon systems in mind for the HBCT. For far too

long the rifle squad has been at a disadvantage with mechanized infantry units and their Bradleys in that tracking crew qualification was more important the rifle squad training. It is the intent of this publication to realize the criticality of the rifleman and develop a crawl, walk, run methodology for the rifle squad's training to enhance the squad's gunnery proficiency strategy. Rifle squad gunnery training consists of six tables, with the first two (or preliminary gunnery) concentrating on buddy and fire-team maneuver and the last four (or basic gunnery) honing the effectiveness of the squad.

We encourage commanders, master gunners, and training managers to read the coordinating draft of FM 3-20.21 and ask them to contact the Stryker/Bradley Proponent Office with recommendations for the gunnery manual. For more information, contact the author at (706) 544-6201 or william.f.simons@us.army.mil.



Sergeant First Class William Simons is the BFV doctrine and systems lead for the S/BPO and will serve as chief of the S/BPO beginning February 2007. He has served for 19 years in the Army and is a combat veteran; his previous assignments include serving as a squad leader, section leader, platoon sergeant, and battalion master gunner. He is a graduate of the BFV Master Gunner Course, the Battle Staff NCO Course, the Advanced NCO Course and holds a bachelor's degree in Management with a minor in Political Science and is nearing completion of a master's degree in Public Administration.



Petty Officer 2nd Class Katrina Beeler, USN

ADVANCED GUNNERY FOR THE HBCT

**SERGEANT FIRST CLASS
WILLIAM SIMONS**

One of the primary efforts of Field Manual 3-20.21 was to ensure that the emphasis for gunnery was placed on the advanced tables; to do so involved creating a paradigm shift in the table methodology. Therefore, the crew gunnery tables are only the first half of gunnery (Tables I-VI) while collective gunnery tables are the second (Tables VII-XII). Though crew qualification is important in training on the direct fire engagement process using DIDEA (detect, identify, decide, engage, assess), the collective tables are where company, battalion, and brigade commanders make their true assessments for combat readiness and expound on the DIDEA process using fire control and distribution.

Those reading FM 3-20.21 may immediately recognize a few changes in the gunnery manual. Throughout the new manual, there is an inherent flexibility for the commander to train for his unit's anticipated COE. In the development of FM 3-20.21, the gunnery doctrine team from both the Armor and Infantry Centers removed all task prescription from the gunnery manual and established only minimum proficiency levels (MPLs) to maintain the critical skill requirements and to have a standard evaluation method so every weapon system platform (tank, Bradley, high-mobility multipurpose wheeled vehicle [HMMWV], and even heavy expanded mobility tactical truck [HEMTT]) in the HBCT will be evaluated in the same manner for both crew and collective gunnery. In advanced gunnery, there are no longer a minimum number of specific collective tasks that units must execute, which mainly affected units other than infantry. However, the constants between the manuals are resource constraints. Advanced tables must be designed using the same frequency and ammunition allocations from DA Pamphlet 350-38. This article will discuss the methodology of advanced gunnery for the heavy brigade combat team (HBCT) to include the advanced gunnery concept, table resources, table design and development, and evaluations.

Advanced Gunnery Concept

Advanced gunnery training measures a maneuver element's proficiency in executing specified platoon missions in accordance with the commander's guidance and intent. Although missions are outlined differently for both infantry and armor platoons in their respective Army Training and Evaluation Program (ARTEP) Mission Training Plans (MTPs), Chapter 11 of FM 3-20.21 does not prohibit training managers of units to establish common collective tables for both infantry and armor units, if that is desired by commanders. Moreover, as will be further discussed, it encourages commanders to train with mixed formations (for example: a one tank, one Bradley, and one rifle squad-mixed section or a two tank, two Bradley, and two rifle squad-mixed platoon.) When mixed sections and platoons are executing an advanced gunnery table, the ARTEP MTP used is specific to the branch of the senior leader for the maneuver element. If that happens to be an armor lieutenant for a platoon table, the armor MTP would be used for the platoon assessment; however, the infantry training and evaluation outlines (T&EOs) are still used as supporting tasks for the rifle squads.

Too often advanced gunnery tables are designed with one, two, or more missions and are supported with several ARTEP MTP collective tasks that train every platoon in the battalion using the same table design with the same number and type of T&EOs. There are generally two problems with that design. First, there is never enough time to train on everything, and it is important for commands to choose the mission that specific platoons will fight in a combat theater and an appropriate number of collective tasks that support the mission. Second, advanced gunnery does not need to be a one-size-fits-all event. Though it is understandable that the latter technique is used to manage range time and resources, it assumes all 12 platoons have a common battle task or that the table is designed to train a single high payoff battle task.

In the development of FM 3-20.21, the premise behind advanced gunnery was to allow commanders the flexibility to tailor the tables to the unit's anticipated contemporary operational environment (COE) and to conduct the table exercising task-organized formations. The intent behind this methodology is not to create an all-encompassing table, but for units to create tables around a specific mission with a manageable number of collective tasks.

What is important in advanced gunnery is that in a single gunnery density, it does not have to be a one-size-fits-all density or collective table. Well-designed collective tables should replicate a unit's anticipated COE; additionally, they are interactive to the platoon leadership's decisions, demonstrate a cause and effect result for the leadership based on their decisions, and are executed as a multi-echelon and combined arms event. This means that for each table developed, the construction of the table should have notional maneuver units and radio traffic incorporated to train the next higher level of leadership. For example, a platoon table can be designed to where the company is the decisive effort in a meeting engagement. A notional platoon would find and fix the enemy force while the firing platoon would maneuver and finish the enemy. Additionally, units should incorporate other combined arms battalion (CAB) and HBCT assets into collective gunnery tables to maximize already constrained resources with accelerated deployment schedules and decreasing calendar space in today's training environment. This is also in keeping with the new modularity structure of the HBCTs. One effective method is to marry similar collective tables and tasks from mortar, scout, engineer, field artillery, and/or even aviation tables and incorporate them into Tables IX or XII.

Units that already know their area of responsibility (AOR) in a theater of combat and have conducted an initial military decision-making process (MDMP) should design their advanced gunnery tables to replicate it. CAB and squadron commanders, their

Advanced Gunnery Training Ammunition Resources		
Table	Frequency	Recommended Use
Table IX	2 (1x LFX)	96 AP each section 97 HE each section 200 7.62mm each section
	(1x Device)	MILES
Table XII	2 (1x LFX)	96 AP each section 97 HE each section 200 7.62mm each section
	(1x Device)	MILES
Rifle squads will use their current programmed allocation for platoon/company LFX.		

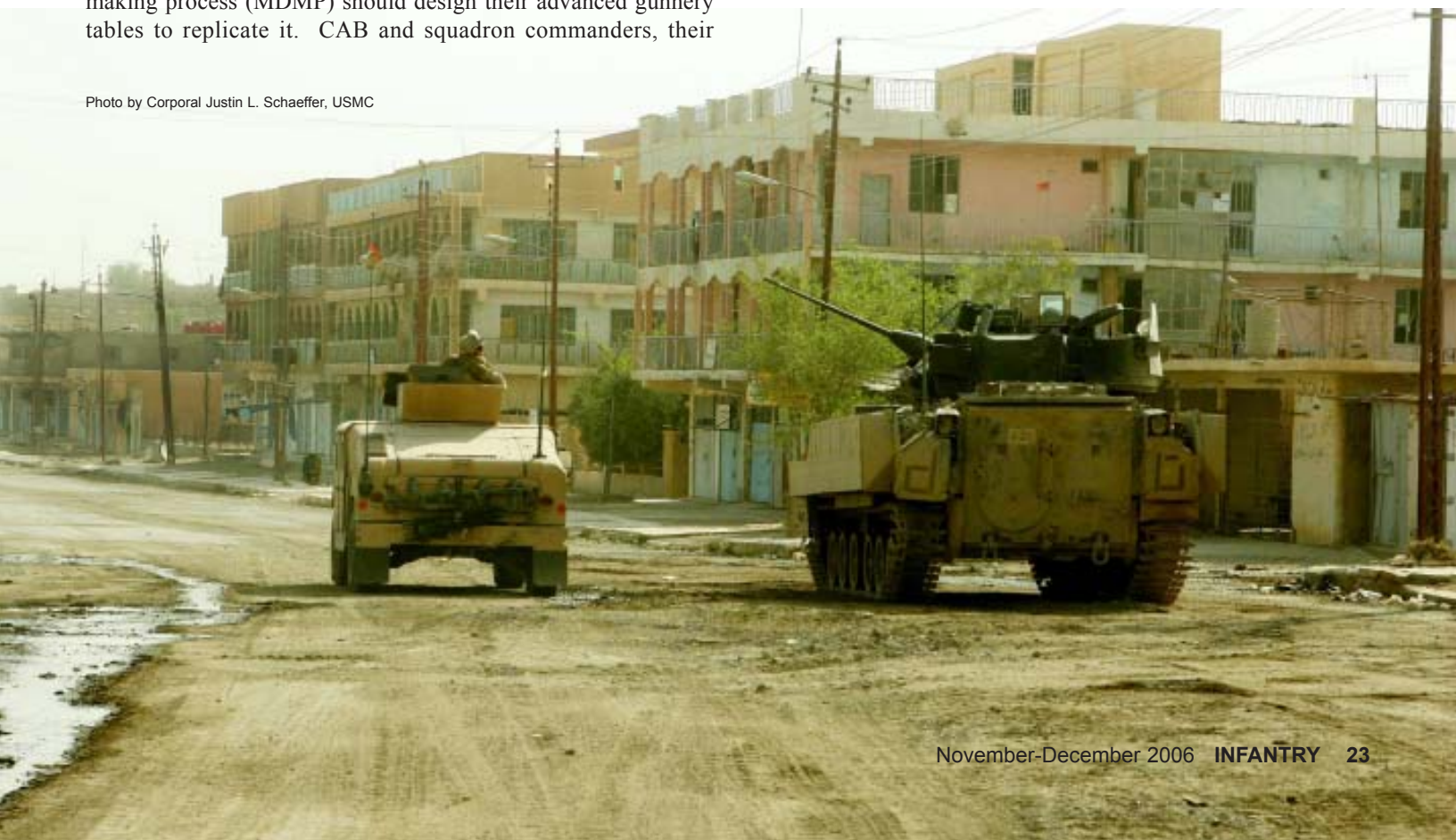
operations and intelligence officers, and master gunners should design the training environment and organize in the formations that they will fight. For example, units deploying with a mission to secure main supply routes and logistical convoys may wish to develop their advanced gunnery tables with mixed platoons (two Bradleys and two tanks) while escorting their distribution platoon incorporating both long and short range targets in both desert and urban terrain.

Table Resources

To underscore, FM 3-20.21 was developed using DA Pamphlet 350-38. Listed in the table above are the proposed changes that will be briefed at the March Standards in Training Commission (STRAC) Council of Colonels.

Throughout FM 3-20.21 the virtual, constructive, and live

Photo by Corporal Justin L. Schaeffer, USMC



methodology has been used to maximize training resources. Unfortunately, the Close Combat Tactical Trainer (CCTT) does not afford units the ability to train advanced gunnery techniques in a virtual environment or fully incorporate rifle squads. As a result of these inadequacies, the CCTT may not be implemented into the mechanized infantry platoon training strategy for advanced gunnery until advancements are made to provide a solution with accurate weapons and visual effects for the Bradley Fighting Vehicle and have a near-full incorporation of rifle squads. Therefore, the devices of choice for advanced gunnery (in order) are precision gunnery systems (PGS) (until PGS has been completely phased out of the inventory), sub-caliber in-bore like devices, Multiple Integrated Laser Engagement System (MILES), and least preferably dry. Commanders and training managers should note that Army-wide budgetary constraints have ceased funding for the life-cycle maintenance of PGS as of 1 Oct 07.

Tables VII, VIII, X, and XI can be executed on gunnery ranges; however, these tables are best trained in local or maneuver training areas using PGS or MILES. One possible solution for training on live-fire ranges is to use sub-caliber devices, much like those used by the armor community. Although they are not currently fielded or yet authorized with ammunition by DA Pamphlet 350-38, the Stryker/Bradley Proponent Office is researching the possible inclusion of a sub-caliber device into the training strategy as PGS is discontinued. Feedback from the field is needed on this issue. Though these tables may be dry-fired if sufficient training devices or sub-caliber and/or blank munitions are not available, it is the least preferred method and is discouraged. It is noteworthy that armor units make effective use of in-bore devices in both preliminary and advanced gunnery. When operating with armor units, every attempt should be made to use like devices in order to minimize resource requirements and to standardize evaluations. Tables become resource intensive when mixing sub-caliber and MILES, as two sets of targets must be emplaced. There is also an increased possibility of unnecessarily

damage to the device equipment.

Though Tables VII and XI can model their qualification events, to include all collective and mission essential task list (METL) tasks for the anticipated operational environment, these tables can also be used to train identified in-theater supplementary/contingency tasks that sections or platoons may perform such as a Table XI (convoy security) versus a Table XII (raid).

Table Design and Development

Outlined below is the new table layout for advanced gunnery.

<p>Advanced Gunnery Tables: Chapter 11</p> <p>Table VII - Section Proficiency Exercise Table VIII - Section Practice Table IX - Section Qualification Table X - Platoon Proficiency Exercise Table XI - Platoon Practice Table XII - Platoon Qualification</p>
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Table VII (section proficiency exercise) has the crews and squads collectively fire and maneuver, for the first time, as a section. The objective is to develop proficiency working as an integrated section. Sections should initially execute Table VII as pure sections though subsequent iterations of Table VII may be executed as mixed or combined arms sections based on task organization and the commander's guidance and intent. The section should practice the fire control and distribution techniques it will use as a platoon. This table is device-based utilizing training devices such as PGS, sub-caliber devices, or MILES.

Table VIII (section practice) prepares the section for qualification. The objective is to enhance the skills developed in Table VII in preparation for the section for Table IX. As with all advanced gunnery tables, the sections should initially execute Table VIII

as pure sections though subsequent iterations of Table VIII may be executed as mixed or combined arms sections based on task organization and the commander's intent. Table VIII can be executed on the same range as Table IX using PGS (if equipped), in-bore devices (if equipped), or MILES. Again, this table can be run dry, though it is the least preferred method.

Table IX, (section qualification), which is an MPL for the mechanized infantry, evaluates the section's ability to execute collective tasks in a tactical live-fire environment. Collective task evaluations provide an accurate assessment for company commanders to measure the section's combat proficiency. All elements within the section are integrated and are evaluated on their ability to fight as a cohesive maneuver force.

Table X (platoon proficiency course) introduces sections and squads to fire and maneuver as a platoon. The objective is to develop proficiency working as an integrated platoon. Platoons will initially execute Table X as pure platoons, though subsequent iterations of Table X may be executed as mixed or combined arms platoons based on task organization and the commander's intent. In Table X, the platoon begins to hone its standard operating procedures and practice the fire control and distribution techniques it will use during qualification and in combat. Though this table is device-based utilizing training devices such as PGS and/or MILES, the same holds true as in earlier tables. FM 3-20.21 will outline the amount of ammunition needed if sub-caliber devices are being used. This table may be dry-fired if sufficient training devices and/or sub-caliber and/or blank ammunition are not available. Even though this table is a precursor to Table XII (platoon qualification), it does not necessarily have to model the qualification table but can include supporting or contingent missions that are anticipated in future operational environments.

Table XI (platoon practice) prepares the platoon for qualification. The objective is to enhance the skills developed in Table X in preparation for Table XII. Platoons should initially execute Table XI as

Commanders and training managers should note that Army-wide budgetary constraints have ceased funding for the life-cycle maintenance of PGS as of 1 Oct 07.

pure platoons though subsequent conduct of Table XI may be executed as mixed or combined arms platoons based on task organization and the commander's intent.

Table XII (platoon qualification) assists the CAB commander in evaluating his platoon's ability to execute collective tasks in a tactical live-fire environment. Table XII evaluates every weapon system platform in the HBCT against one evaluation standard. During the execution of Table XII, mounted (tank and Bradley) and rifle squads are integrated and evaluated on their ability to fight as a cohesive platoon. To underscore, collective tables should replicate a unit's anticipated COE, be interactive to the platoon leadership's decisions that demonstrate a cause and effect result, and be executed as a multi-echelon and combined arms event. This saves precious training hours by pairing like collective events within Table XIs.

Evaluating Gunnery

All weapon system platforms in an HBCT will be assessed utilizing the training and evaluation outlines that support the mission being conducted. The senior evaluator will assess the overall performance of the section or platoon as either trained (T), needs practice (P), or untrained (U) using the collective task scoring model. The greatest change in advanced gunnery scoring is how scoring is tabulated. First, there is no mathematical solution to the scoring process. Second, the gunnery score is tied to the task standard of each firing T&EO. This means that gunnery is much like an additional line in the T&EO task standards. The platoon must kill, capture, or force the withdrawal of the enemy, which forces attrition to a point of combat ineffectiveness. Therefore, in a T&EO the gunnery standard MPL that should be met is half of the enemy force killed, which results in no less than a needs practice or "P" for the firing element. Lastly, using the overall T&EO assessment and the overall gunnery assessment, the senior evaluator is able to assign an overall table assessment.

Summary

Advanced gunnery from Table VII through the combined arms live-fire exercise (CALFEX) are commander's tables. Though crew qualification is important in training the direct fire engagement process using DIDEA, the collective tables are where company, battalion, and brigade commanders make their true assessments for combat readiness and expound on the DIDEA process using fire control and distribution. The advanced gunnery



Sergeant Matthew Acosta

Soldiers from the 3rd Infantry Division patrol an area of Iraq in June 2005.

tables should be tailored to the unit's anticipated COE and should be exercised with its task-organized formations. Additionally, the collective tables should be designed so they are interactive to the platoon leadership's decisions, which demonstrates a cause and effect result for the leadership based on its decisions, and be executed as a multi-echelon and combined arms event. Moreover, to maximize already constrained resources with accelerated deployment schedules and decreasing calendar space in today's training environment, and in keeping with the new modularity structure of the HBCTs, units should incorporate other CAB and HBCT assets into collective gunnery tables by pairing like tables to be fired on one range simultaneously as a single event. Finally, all weapon system platforms in an HBCT that are conducting advanced gunnery will be assessed utilizing the collective scoring model.

We encourage commanders, master gunners, and training managers to read the coordinating draft of FM 3-20.21 and ask them to contact the Stryker/Bradley Proponent Office with recommendations for the gunnery manual. For more information, contact the author at (706) 544-6201 or william.f.simons@us.army.mil.

Sergeant First Class William Simons is the BFV doctrine and systems lead for the S/BPO and will serve as chief of the S/BPO beginning February 2007. He has served for 19 years in the Army and is a combat veteran; his previous assignments include serving as a squad leader, section leader, platoon sergeant, and battalion master gunner. He is a graduate of the BFV Master Gunner Course, the Battle Staff NCO Course, the Advanced NCO Course and holds a bachelor's degree in Management with a minor in Political Science and is nearing completion of a master's degree in Public Administration.

THE BRADLEY MASTER GUNNER COURSE AND ARFORGEN

SERGEANT FIRST CLASS MATTHEW HINKLEY
FIRST SERGEANT TIMOTHY TERPAK
LIEUTENANT COLONEL ROBERT CERJAN

The Bradley Fighting Vehicle (BFV) was introduced to the Army in 1981, and the first Bradley Master Gunner Course was established in 1983. The 10-week course, modeled after the 11-week Armor Master Gunner Course, focused on skill levels I through III tasks and instructed 20 and 30-level maintenance on the M240C machine gun and the M242 Bushmaster cannon.

Over the last 25 years, the instruction for the Bradley Master Gunner Course has undergone 10 evolutions, growing from 11 to 14, to 13 to eight weeks. These changes occurred to meet the needs of the force and return highly trained NCOs who possess the technical expertise to implement BFV gunnery and turret maintenance training programs.

The introduction of Army Force Generation (ARFORGEN) necessitated that the 29th Infantry Regiment examine what critical tasks a master gunner must possess, how long it takes to train those tasks, and how to best support the operational force. This article explains not only the Bradley Master Gunner Course, but also what challenges and trends have been observed during ARFORGEN and how the 1st Battalion, 29th Infantry Regiment has adjusted and continues to adjust to support units.

Because of challenges within ARFORGEN and the needs that have been identified by the field, the course has now undergone its eleventh change in the last 25 years to return highly skilled, technically proficient NCOs to units. To that end, beginning in January 2007, the Bradley Master Gunner Course will increase from 49 training days to 55 training days, or 11 weeks, beginning with Class #1-07.

Mission

The current mission of the Bradley Master Gunner Branch is to train select NCOs to design and implement BFV gunnery and turret maintenance training programs. A trained master gunner can execute maintenance and maintenance management of all turret weapons systems and components; establish and conduct Bradley Tables I through XII; develop a short-range training program (SRTP) for a battalion-sized BFV unit from preliminary gunnery through platoon gunnery; and execute turret gun system malfunctions and troubleshooting.

The BFV Master Gunner Course is structured into two distinct phases: maintenance and gunnery. To earn the title of master gunner and the additional skill identifier J3, a student must attain 80 percent in all written examinations and a “go” in all hands-on testing, which includes the SRTP.

Maintenance Phase

This phase is broken down into three sub-phases. Maintenance I focuses

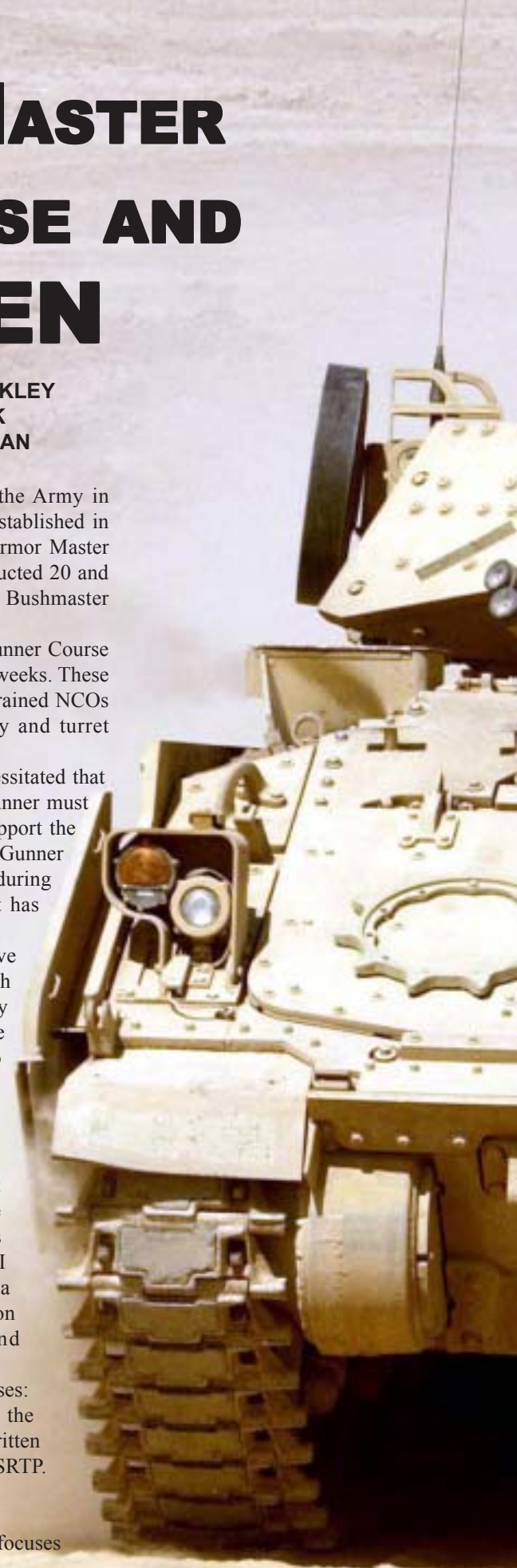




Photo by Staff Sergeant Suzanne Day

on turret components and functions (TC&F), and Maintenance II focuses on organizational maintenance of the M240C coaxial machine gun and the M242 25mm chain gun. Maintenance III focuses on surface danger area diagrams (SDAD), creation of a range overlay, safing of range targetry, Bradley weapon systems ammunition capabilities, and the ballistic firing tables for 25mm ammunition.

Maintenance I

The TC&F focuses the students on learning all aspects of the mechanical and electrical components within the turret and progresses to the components of the tube-launched, optically-tracked, wire-guided missile system (TOW). After initial familiarization training, the students study the schematics of the electrical components, the workings of the turret drive system, and the inner workings of the integrated sight unit (ISU). At the end of the Maintenance I block of instruction, students must successfully pass a graded examination to progress to the Maintenance II portion of this phase.

Maintenance II

This portion of the course transitions the student to organizational maintenance of the M240C coaxial machine gun and M242 Bushmaster. These lesson plans are based on 10- and 20-level maintenance from complete teardown of the weapons systems to a complete rebuild.

During these lessons, students learn some of the most used and critical skills required of a master gunner. A total of 11 days are devoted to this portion of the course, which covers all aspects of both weapon systems from troubleshooting faults, inspections, repair, and replacement of components to maintaining round count cards.

This portion of the course is historically one of the most challenging for the students and should be included in any pretraining that is conducted at the home station to help increase the chances of overall success.

Maintenance III

Students then transition to learning about the ammunition capabilities of the BFV. Emphasis of this portion is placed on ammunition effects, characteristics and capabilities; ammunition identification; and numerous additional lessons for 7.62mm, 25mm ammunition, and the TOW missile. The ballistics portion of the course instructs students on how to properly use the ballistic firing table's manual for 25mm ammunition (FT25-A-2). This lesson enables a Soldier to find the point of impact of a single round using math and the FT25-A-2.

The surface danger area diagram, range overlay, and safing lessons test a student's ability to properly draw an ammunition template and range overlay that will be used to ensure that specific targets within a range are safe to engage from specific firing positions. This lesson greatly enhances a unit's ability to safely establish live-fire ranges while deployed in contingency areas of operation. This skill also assists brigade combat teams (BCTs) and combined arms battalions to execute diverse gunnery operations of each unique weapon system across the unit.

Gunnery Phase

After successful completion of the maintenance phase, students



1st Battalion, 29th Infantry Regiment

A Bradley Master Gunner Course instructor shows a student the electric motor of the M242 25mm Bushmaster chain gun during the maintenance phase of the course.

transition to the gunnery phase and learn all the steps necessary to execute a successful Bradley gunnery. This phase begins with training devices and focuses on the proper employment and capabilities of numerous devices such as the precision gunnery system (PGS), targetry, target lift mechanisms, and thru-site video (TSV).

Once the student understands how to use these devices during gunnery, he then becomes intimately familiar with his core document Field Manual 3-22.1, *Bradley Gunnery*. This manual provides the student in-depth descriptions of the three phases of gunnery: preliminary, device, and live fire. Preliminary gunnery and range operations are where the student will learn the responsibilities and duties of the personnel that are key to any successful Bradley range — from the officer-in-charge (OIC) to ammo NCO — and the initial crew hands-on training that should be conducted prior to any live-fire event.

The preliminary phase consists of numerous training steps to build or reinforce the crew's ability to act as one unit. In the process of becoming a master gunner, the student will learn that this phase is extremely important in forming successful cohesive crews. With the completion of preliminary training, the students will now learn the behind-the-scenes intricacies of crew gunnery and crew gunnery scenario development.

This portion of the course will provide the Soldier with the knowledge of how to establish a full-caliber, live-fire range from the placement of targetry, scenario development, and certification of evaluators to the final execution of a live-fire range.

Upon completion of crew gunnery, platoons now come together to execute gunnery on a far larger scale. Again, the students learn how to establish a proper range for this training, including collective task selection with the support of their operations officers (S3s), targetry placement, dimensions of targetry, evaluator criteria, and ammunition requirements.

With the use of the BFV by a number of Army branches, students must understand military occupational skills (MOS) gunnery and learn the standards, requirements, methods and means to establish various gunnery tables that focus on scouts, engineers, and the fire support elements of a heavy brigade combat team (HBCT).

Following this classroom instruction, students execute their

live-fire gunnery on Fort Benning ranges, using Bradley crews from the 1st Battalion, 29th Infantry Regiment. A rifle company gun-line is replicated, showing the students how gunnery should be executed up through Bradley Table VIII crew qualification. At the completion of live-fire, students are tested on the gunnery phase of instruction.

Short Range Training Plan (SRTP)

This portion of the instruction spans 11 training days and serves as the culminating portion of the gunnery phase and the course. This phase is a check on learning and ties all previous lessons in the maintenance and gunnery phases to assess the student's technical abilities to earn the J3 ASI - master gunner.

The phase begins with students learning ammunition forecasting and training management. The emphasis for this block of instruction is placed on resourcing time and equipment (ammunition) from rifle qualification through a Bradley Table XII gunnery for a Bradley-equipped battalion.

During SRTP, students work individually on their gunnery plan. This plan will require the students to incorporate all of the information that they have learned throughout the gunnery phase of the course and establish a gunnery plan that they will brief to a panel of instructors.

Each student is assigned an instructor/mentor who acts as the student's operations officer. The S3 provides training guidance and the collective tasks to be trained and the student master gunner develops the



Annette Fournier

Kimberly Benford was present in July 2006 when the Master Gunner Course named its distinguished honor graduate trophy after her husband Staff Sergeant Jason A. Benford, who was killed in Iraq in 2005.

gunnery. During SRTP, the instructors will conduct several in-progress reviews (IPRs) to ensure that the students are progressing properly and to demonstrate the planning process found within battalions. The instructors are available to the students 24 hours a day to assist students as required.

A student who has the highest academic average and first-time "GOs" in all hands-on testing and SRTP is awarded the title of distinguished honor graduate. In July 2006, the distinguished honor graduate trophy was named after Staff Sergeant Jason A. Benford, the distinguished honor graduate from Class #4-04, who was killed in Iraq in 2005. Since 1983, there have been more than 3,000 graduates, and only 66 have earned the title of distinguished honor graduate.

Master Gunner Trends (FY05 / 06)

Over the last year a number of trends have emerged as NCOs are attending the Bradley Master Gunner Course. In particular, the historical 74 percent graduation rate has dropped to a 61 percent rate during FY06.

— During exit interviews, the students who did not meet the academic or technical

standards identified that the majority of the course prerequisites had not been completed.

Course prerequisites include that students:

- Be instructor/operator certified,
- Be certified on Bradley Gunnery Skills Test (BGST) within six months and Bradley Crew Evaluator (BCE) within three months,
- Complete formal train-up by the unit,
- Qualify on Bradley Table VIII from a gunner or BC position (within nine months for AC Soldiers, 12 months for NG enhanced brigades, 18 months for NG non-enhanced Soldiers).

These prerequisites were adjusted in January 2006 to reduce the amount of time that a student was at Fort Benning as well as to set the conditions for success for an NCO prior to his arrival at the Master Gunner Course.

— Current execution of ARFORGEN results in BCTs returning to the fight in less than a year; this results in battalions sending the most available NCO to the Master Gunner Course and not necessarily the best qualified NCO. This is directly correlated to the decrease in the graduation rate over the last two years.

— NCOs who are being sent to the Bradley Master Gunner Course have limited experience on the BFV; in many cases, they were dismantled squad leaders who have not received any pretraining. This lack of experience creates a steep learning curve that many NCOs cannot overcome to meet the intense technical or academic standards of the course.

— Very few units provide pretraining (Sabot academies) to NCOs prior to arrival at the Bradley Master Gunner Course.

o Some units have been flooding the course with the most available NCOs and not the most qualified NCOs. Historically, the candidate who completes a pre-course two to three weeks prior to the start of the Bradley Master Gunner Course has greatly increased his chance of success. The focus of this type of course should be on 25mm organizational maintenance (TM 9-1005-200-23&P), Plotting of eight-digit grid coordinates as a refresher (overlay), crew gunnery, and platoon gunnery.

— There are not enough instructor/operators (I/Os) or senior instructor/



1st Battalion, 29th Infantry Regiment

Master Gunner Course instructors evaluate students' Surface Danger Area Diagrams.

operators (S/O) in the field; many NCOs who come to the course fail to have this prerequisite training.

— The force does not have enough master gunners to support transformation and modularity. According to the 2nd Quarter, FY06 career management field (CMF) review, there were 199 11B3OJ3 Soldiers in the Army. The Army requirement is 456. This deficit further demonstrates the need for qualified master gunners in the force.

How we can help the force

Based on the identified trends from across the force and ARFORGEN challenges, Fort Benning and the 29th Infantry Regiment developed a plan of action to provide the ways and means to assist the operational force achieve master gunner graduates and prepare for combat.

The six-day increase includes the addition of the I/O and S/O courses, increased hands-on training and practical exercises, and a modification of the prerequisites to attend the master gunner course.

– **Instructor/Operator (I/O) course (two-day increase):** Currently, units are unable to produce I/Os internally to meet their training needs. Additionally, units were unable to conduct I/O instruction at home station and, therefore, were unable to meet the old prerequisite for the master gunner course. The inclusion of the I/O instruction in the course will help alleviate that issue for units.

– **Senior/Instructor Operator course (two-day increase):** The operational force does not have enough S/Os to train I/Os in the unit. This also inhibits a Soldier from meeting the prerequisites to attend the Bradley Master Gunner Course. Inclusion of the S/O instruction will allow graduates to return to their units with the capability for them to train and certify I/Os.

o **Increase hands-on training and practical exercises (+ two days).** While training efficiencies were gained when the



course moved from 13 weeks, the net result was a compression of technical data that the student must understand and attempt to master in a short period of time. To counter this negative effect, additional hands-on training and practical exercises are being added to the Maintenance II, III, and Gunnery examinations. This time will allow the student to comprehend all of the technical data or master the skill sets required to progress to the next lesson plan.

o **Prerequisite adjustments.** Effective with Class #1-07 (January 2007) the prerequisites for attendance in the course will only require the following:

- Formal pretraining by the unit,
- Certified on BGST within six months,
- BCE certified within three months, and
- A minimum GT score of 100.

Enabling Actions

The battalion is assisting Fort Benning to establish a *hot loop* that allows the Infantry Center to push information to BCT battalion commanders (AC/RC, Infantry and Armor) to arm them with the latest information and points of contact to assist them during ARFORGEN and while deployed.

We will work with the U.S. Army Human Resources Command to manage the additional skill identifier J3 to ensure qualified Soldiers are manning critically short positions within units, especially during reset. The operational force is severely short master gunners, and it is critical to ensure that these NCOs are positioned to support ARFORGEN requirements.

Units are encouraged to pool resources at the BCT level and implement a Sabot academy (pre-master gunner training) to prepare candidates for the master gunner course. We can assist units with subject matter expertise from 1/29 Infantry during the development of a Sabot academy. The focus of this course should be 25mm organizational maintenance (TM 9-1005-200-23&P), plotting of eight digit grid coordinates as a refresher (overlay), crew gunnery, and platoon gunnery. We

recommend that BCT commanders be the approval authority for sending students to the Bradley Master Gunner Course. We encourage brigade and battalion master gunners to use the Fort Benning website as well as contact the Master Gunner Branch for assistance. The website contains an updated Sabot academy training program as well as points of contact for the 1/29 Infantry.

We will communicate with battalion commanders who have Soldiers on ATRRS prior to the beginning of each course to provide feedback on current trends or training issues to assist. We will also sustain a communications link with battalion commanders to provide feedback on their NCOs' progress during the course.

Due to the large number of NCOs who



U.S. Army photo

Soldiers in a Bradley Fighting Vehicle conduct live-fire training on Fort Benning.

do not have mechanized experience, we recommend that commanders use the Mechanized Leaders Course (MLC) as a means to mitigate training experience. While the Master Gunner Course is designed to be a graduate-level class, the MLC provides an opportunity for units to send NCOs (staff sergeants through master sergeants and lieutenants through majors) who are new to Bradley units to help them gain hands on experience and training. The resident Fort Benning course is four weeks (20 training days) in length and can be executed as an MTT at a unit's home station. The course has a modular capability when being executed as a MTT that allows commanders to meet the ASI requirements while adjusting the training to meet their specific needs.

The center of gravity in the ARFORGEN model is a BCT; therefore it should be the primary headquarters that coordinate for mobile training teams (MTTs). Resource requirements for most MTTs exponentially surpass what a battalion can support; a pooling of assets at the BCT level will set the conditions for success.

Mobile Training Teams (MTTs)

The capability exists to export the resident instructional capability to the location that best suits a unit's needs; MTTs are the best method to do this. MTTs are flexible because they can be brought to a unit's home station or executed at Fort Benning by blocking an existing course, called "buying the course."

The benefit of bringing the course to a unit's location allows Soldiers the opportunity to go home each night and reduces the turmoil brought on by temporary duty. However,

executing an MTT at the unit's location is also resource intensive. By blocking a course at Fort Benning, a unit can leverage the existing resources (equipment, ranges and ammunition), minimize distractions on the Soldier, and allow him to be immersed in the course focusing his attention. The overall intent is to provide a unit the most amount of flexibility to support their ARFORGEN efforts.

We recommend that a brigade headquarters be the organization to coordinate for an MTT. The general rule is that MTTs (resident to Fort Benning or at a unit's location) must be coordinated and locked in one training quarter before execution. For MTTs going to a unit's location, the initial planning factor is for 12 instructors to train 20 students. Based on a unit's needs, these parameters can be adjusted. When a MTT comes to a unit's location, unit master gunners are used as assistant instructors.

There are three options that can be offered to a unit for MTTs to meet their training needs:

51 Training Days (10 Weeks). This training module can be used by a unit that has the ability to pretrain Soldiers by certifying and validating training before instruction begins. Student prerequisites for this module include the following:

- Formal pretraining (Sabot academy),
- Instructor/operator certified (I/O),
- BGST certified within six months, and
- BCE certified within three months.

55 Training Days (11 Weeks). This training module can be used by a unit that has the ability to certify and validate some training prior to instruction beginning but is not capable of training I/Os before instruction begins. Student prerequisites for this module include the following:

- Formal pretraining (Sabot academy),
- BGST certified

within six months, and

-BCE certified within three months.

65 Training Days (13 Weeks). This training module can be used by a unit that has not had the capability to execute pretraining or the ability to train and certify Soldiers on the prerequisites for the course. This module includes a Sabot academy as part of the module and trains and tests BGST. The only prerequisite for this module is that the unit must train and certify Soldiers as BCEs (within three months from the start of the Bradley Master Gunner Course)

Other training menu options. While executing an MTT at a unit's home station, the 1/29 Infantry has the capability to assist units with other potential training. The instructors can assist units executing a BCE or I/O course for those students not in the Bradley Master Gunner Course.

We encourage feedback from the operational force (AC/RC) to refine and make the course better to support a unit's needs. We remain committed to providing the force NCOs with the best technical training on the Bradley fighting vehicle to train Soldiers, leaders, and units in their preparation for combat and to save lives once deployed in harm's way.

Sergeant First Class Matthew Hinkley is the branch chief of the Bradley Master Gunner Course at Fort Benning, Georgia. He is responsible for leader training on all variants of the Bradley. He is the honor graduate of Master Gunner Class #4-99 and has served in numerous leadership positions. Most recently, he was a platoon sergeant with A Company, 1st Battalion, 41st Infantry Regiment, Fort Riley, Kansas.

First Sergeant Timothy Terpak is the first sergeant and acting commander of the Stryker/Bradley Instructor Company at Fort Benning. He is responsible for leader training on the Bradley Infantry Fighting Vehicle (BIFV) and Stryker Infantry Carrier Vehicle at Fort Benning. He is the distinguished honor graduate of Master Gunner Class #2-97. Most recently, he was a platoon sergeant with C Company, 3rd Battalion, 15th Infantry Regiment, Fort Stewart, Georgia.

Lieutenant Colonel Robert Cerjan is the battalion commander of the 1st Battalion (Mechanized/Stryker), 29th Infantry Regiment, responsible for leader training on both Bradley Fighting Vehicles and the Stryker Infantry Carrier for the United States Army Infantry Center & School. He has served in a variety of mechanized, light, Joint and Special Operations assignments in Europe, the Pacific, OIF and OEF. Most recently, he was the Chief of Strategy - J5 for the Special Operations Command Central, USCENCOM.



TRANSITION TEAMS AND OPERATIONAL INTEGRATION IN IRAQ

MAJOR PATRICK T. COLLOTON
MAJOR TOMMY E. STONER

“We are embedding coalition ‘transition teams’ inside Iraqi units. These teams are made up of coalition officers and noncommissioned officers who live, work, and fight together with their Iraqi comrades. Under U.S. command, they are providing battlefield advice and assistance to Iraqi forces during combat operations. Between battles, they are assisting the Iraqis with important skills, such as urban combat, and intelligence, surveillance and reconnaissance techniques...”

— President George W. Bush
June 2005

Since 2004, the main effort of coalition forces in Iraq has been the establishment and development of Iraqi Security Forces (ISF) and their transition to independent operations. Success has been achieved in Iraq once the ISF have assumed the lead role in security with supporting assistance from coalition forces. It is critical for U.S. units to understand that history has shown that foreign forces cannot normally win a protracted war against insurgents. It is also important to understand that the ISF were handicapped before they began due to the disbandment of the previous military forces in 2003 and the subsequent limitations on who could rejoin the new ISF. For these reasons and others, the ISF have had to effectively start from ground up not only in developing systems and infrastructure, but also knowledge and experience in its personnel. The most effective method of influencing and assisting the ISF is the same method used to influence U.S. Soldiers: personal example. Coalition personnel must become embedded in the ISF organization to set that example, identify issues, and assist in their resolution. Those personnel comprise the transition team (TT).

This article is designed to give company, battalion, and brigade commanders and



Courtesy photos

Members of a military transition team observe an Iraqi Army and partnership unit rock drill.

their staffs a better understanding of externally sourced transition teams in order to facilitate better integration of efforts, improve working relationships, and successfully develop the ISF.

Composition and Purpose of Transition Teams

TTs are either generated in theater out-of-hide (OOH) by the coalition unit partnered with the ISF or sourced from the continental United States (CONUS) with the Secretary of Defense’s approval of a request for forces (RFF). Because OOH personnel are organic to the unit partnered with the ISF on the ground, the structure, composition and capabilities of those teams are inherently understood by the chain of command. Externally sourced (RFF) TTs, however, are generally more challenging to understand for coalition units as their structure, personnel, and purpose are often foreign to them until they meet on the battlefield. The coalition unit that the TT

is working with is known as the partnership unit (PU).

There are many transition teams operating in Iraq today. There are military transition teams (MiTTs), special police transition teams (SPiTTs), police transition teams (PTTs), border transition teams (BiTTs) and Ministry of Defense (MOD)/Ministry of Interior (MOI)-level transition teams. Although this article will mainly discuss MiTTs, the information here can be applied when considering or working with other types of TTs. TTs are now present at all levels of ISF command from tactical battalions to MOD/MOI-level staff sections. Each level of TT above the brigade has a different structure and purpose.

TTs are groups of personnel brought together from across the military that are assigned to Fort Riley, Kansas, and formed into 10-person teams. The teams undergo individual and collective training within CONUS for three months and are then

deployed to the Central Command (CENTCOM) theater where they receive further training in Kuwait and Iraq. Training focuses on language, cultural, tactical, and equipment operations. Upon completion of training, these teams are deployed to the location of their ISF unit.

The TTs have collective and individual tasks that support the overall purpose of the mission of training and advising the ISF. The collective tasks are to provide broad advisory support to the Iraqi commander and staff and enable direct access to coalition effects (artillery, rotary and fixed-wing air), quick reaction force (QRF), intelligence, and logistics. TTs are expected to assist the appropriate level staffs in tactics, military decision-making process, counterinsurgency warfare, leadership, teamwork, communications, and urban combat. At brigade and battalion levels, the TT's overall focus is on enhancing the ability of the ISF commander and staff to plan, execute, coordinate, direct, and support operations. The TTs must advise and assist the ISF unit commander and staff with training, planning, and decision-making. On a personal level, as advisors, TT members must act as role models and provide mentorship and leadership for ISF unit commanders, staff officers and personnel while helping foster a wartime ethos and service ethos in those units. TTs should provide coalition leadership with ground truth assessment of the current ability of the ISF unit leadership and future capability and potential of those units and leaders.

The 10 personnel assigned to a TT are a mix of officers and NCOs. Each has a different task and therefore a different area of background experience. Functional areas that are covered down on are command, intelligence, operations, and logistics. The intelligence, operations, and logistics elements have an officer and NCO to provide these functions. Additionally, each team is assigned an effects officer and NCO and medic in theater. Each member of the TT "wears many hats" and performs multiple functions during his tour on a TT. These duties include advising the NCOs in the unit, advising the support companies that exist in the battalions and brigade, and assisting in personnel functions



With the help of an interpreter, a transition team advisor conducts training for Iraqi Army staff.

to name but a few. How the TT specifically divides up duties with regards to the additional functions will vary with each team.

The success of TT members depends on their scope of experience and maturity more than their rank and MOS. A member's ability to demonstrate competence to and develop a personal relationship with a senior-ranking ISF officer is proportional to the amount of success he will experience. The closer the personal relationship becomes the greater resolution the advisor will gain into the workings of the ISF staff section and greater the influence the advisor will have with the counterpart officer or NCO. Establishing and maintaining this rapport, as well as providing competent advice is the full-time and highest priority job for the TT. Any additional tasks assigned by the TT leadership or PU leadership serve only to take away from these priority tasks and can quickly result in the lack of ability to identify and assist in the resolution of issues within the ISF unit staff or command.

The number and scope of tasks for a TT and its members can be overwhelming to experienced personnel let alone those with less experience in these areas. Depending on the situation and the requirements of the ISF, a TT member can be a teacher, an advisor, a rifleman, a provider of effects, or a friend. Often, several roles are required at the same time. PUs must understand the challenges that the TTs face and support them as necessary. The bottom line is that the overall purpose is to enhance the ability of Iraqi forces to operate independently. This is not only the purpose of the TT but the purpose of the PU as well. The two must come together and develop an integrated and coordinated plan to achieve this goal.

Command and Control Structure of Transition Teams

It is critical for the maneuver commander working with the externally resourced (RFF) TTs to understand the command relationship in order to ensure unity of effort. The relationship is convoluted somewhat in that command is different for operational control (OPCON), tactical control (TACON), and administrative control (ADCON). Additionally, there is often one "pseudo" chain of command that exists for TTs.

Before we look at the command relationship, it is worthwhile to review the definitions for ADCON and TACON. Army FM 3-0, *Operations*, defines ADCON as:

"Administrative control is the direction or exercise of authority over subordinate or other organizations with respect to administration and support. It includes organization of service forces, control of resources and equipment, personnel management, unit logistics, individual and unit training, readiness, mobilization, demobilization, discipline, and other matters not included in operational missions of the subordinate or other organizations."

TACON is defined as:

"The authority normally limited to the detailed and specified local direction of movement and maneuver of forces to accomplish a task. It allows commanders below combatant command level to apply force and direct the tactical use of CSS assets but does not provide authority to change organizational structure or direct administrative or logistic support. The commander of the parent unit continues to exercise those responsibilities unless otherwise specified in the establishing directive. Combatant commanders use TACON to delegate limited authority to direct the tactical use

of combat forces. TACON is often the command relationship established between forces of different nations in a multinational force. It may be appropriate when tactical-level Army units are placed under another service headquarters. Army commanders make one Army force TACON to another when they want to withhold authority to change the subordinate force organizational structure and leave responsibility for administrative support or CSS with the parent unit of the subordinate force.”

The Iraqi Advisory Group (IAG) is assigned ADCON of the externally resourced RFF TTs in Iraq. The IAG is a one-star command with a joint support staff under the Multi-National Corps-Iraq (MNC-I). The primary mission of the IAG is to provide administrative and logistical support to the TTs. Previously, TTs assigned to work with MOI elements were assigned to the Multi-National Security and Transition Command Iraq (MNSTC-I). All TTs were assigned to the IAG in the spring and summer of 2006 in order to unify the advisory effort.

The IAG is responsible for all administrative processes to include awards and evaluations. They ensure that the TTs are resourced by providing personnel and durable, nonexpendable items needed to accomplish their missions. Examples of these items include weapons, vehicles, radios, computers, and personal gear. The IAG is not required to provide maintenance for these items other than replacement of destroyed or damaged equipment. As the advisory effort in Iraq expands and eventually becomes the primary mission for coalition forces, the IAG will assume a greater and more tactical relationship in the operations of the TTs.

The MNC-I has retained OPCON of the TTs but has given TACON of the TTs to the major subordinate commands (MSCs) throughout the Iraqi theater of operations. Specifically, TACON of the TT is normally assigned to the U.S. battalion or brigade-level element in the area in which the TT is working. Since the TTs are assigned to an Iraqi unit vice a regional command, the TACON will change if the Iraqi forces move. For example, the Iraqi National Police Commandos, an MOI unit, are frequently moved from one crisis area to another. As the Iraqi unit moves, the TT moves with that Iraqi unit, and the TACON relationship shifts to the MSC of the unit



An MiTT advisor conducts train-the-trainer training for an Iraqi Army headquarters company.

in the area in which the TT has moved to.

TTs may have a higher TT chain of command that is important for MSCs to understand and respect. A previous commander of the 2nd Iraqi Army Division MiTT called this semiformal relationship “MiTTCON.” The TT chain exercises ADCON of the TTs underneath it. Additionally, the TT chain of command is responsible for ensuring that TT operations fall within the directives and guidance set force by the IAG and MNC-I commanders and that the TTs are being used appropriately by the MSCs. The command structure helps ensure that there is multi-echelon unity of effort on the part of the TTs in the development of the ISF. This structure allows issues to be tracked from subordinate units to the headquarters units and has proven critical in the development of accountability processes and procedures within the ISF. Not all TTs will have this form of a higher TT chain of command. As an example, one TT had a formalized chain of command that went from the battalion TTs up through a brigade TT to a division TT. Another had a battalion to brigade TT chain of command but did not have a higher RFF-resourced TT division chain of command and, therefore, reported directly to the IAG from the brigade for ADCON affairs.

Transition Team Relationship with the Partnership Unit and the Iraqi Security Force

As stated previously, a TT’s primary purpose is to advise, assist and provide coalition effects (QRF, medical evacuation [MEDEVAC], and fire support) to ISF forces. PUs should view the TT as a “bridge” between the coalition forces and ISF. The TTs not only advise and assist the ISF, but they advise and assist the PU on the capabilities and limitations of the Iraqi unit they are working with.

It is critical that TTs should not be viewed as extensions of the PU staff. PUs often require TTs to provide detailed information on the ISF which can often overload the TTs with staff-type work which detracts from their advisory mission. During one of the author’s tour in Iraq, the PU required daily formatted products to include charts, briefs, and presentations. These products took valuable time and effort to produce that could have been better used in training and advising the ISF element.

The TTs may require assistance in manning from the PU in order to accomplish their mission. TTs at the brigade and battalion levels are 10-man teams. Leave, injuries, and other commitments often reduce the manning levels on the teams to eight or nine personnel. This is critical since once the team falls below nine personnel they cannot man more than two vehicles without assistance from the PU. Daily duties can also stretch TT capabilities. TTs often maintain a U.S.-only tactical operations center (TOC) when located on a remote ISF

base due to secure communication systems and networks. Full-time manning of an additional ISF TOC liaison element is normally only possible with PU augmentation. There are many different operational methods for PU and TT integration. Though the command relationships are often well defined, the interaction of the TTs and the PU are often not. PUs must evaluate the capabilities and limitations of each TT individually and adjust interaction accordingly. Due to varying degrees of leadership, experience and competence, some will be better than others. In one of the author's experience, TTs were sometimes treated as "step children" and a secondary effort to the overall mission. PUs should work to avoid this and, if necessary, assist the TTs in overcoming any personnel shortfalls they have.

TTs should be viewed as the coordinator for efforts to train and assist the ISF. One successful method of operation is to view the TT, PU, and ISF relationship as a triad effort. The "triad" occurs when all three elements partner together for the common goal of advancing the capabilities of the ISF.

Using the triad concept, information should be given directly to the ISF by the PU. For example, operations orders should be given by the PU to the ISF directly. This ensures that the ISF are treated as true partners and helps in the process of establishing credibility and relevance. TTs should be included in the process in almost an observer/controller (OC) manner instead of the typical liaison and communication channel that most PUs view TTs as being. In his article "Forging the Sword: Conventional U.S. Army Forces Advising Host Nation Forces" (*Armor*, September-October 2006), Major Todd Clark, an advisor on a TT with the 1st Special Police Commando Brigade said, "Western thoughts and the Eastern mind do not combine to form a common picture." TTs advise and assist both the ISF and PU to ensure common understanding by both elements. Much is often lost in translation and having TTs who are in tune with the situation and culturally aware of the players (ISF and coalition) can go a long distance to ensure that this does not happen. Open and effective communication channels must be maintained between the TT and the PU. It must be emphasized again that the ISF should be the operational focus.

It should be clear to this point that TT personnel must be fully



An Iraqi Army officer and transition team advisor coordinate operations in Abu Ghraib.

integrated into the ISF unit in order to perform their duties to the fullest extent. The advisor must establish a strong personal relationship with the counterpart ISF officer through competence, reliability, and dedication. The advisor and PU must always remember one thing: it is the ISF commander that is in charge of his unit and must be perceived by his subordinates, superiors, and peers as such. It is the task of the TT advisor to influence the ISF counterpart in a way that achieves success and allows them to maintain their own authority. The only time it is acceptable for a TT or PU to attempt to command ISF is when the lives of advisors are at risk or the situation has become critical. Each ISF commander or staff officer must feel like they are the final decision maker and feel they are perceived in that light. Treating the ISF as an equal will make great inroads in this effort.

When it comes to training, the ISF do not possess, and won't likely possess for some time, the capability to effectively run individual and collective training at the unit level without direct U.S. oversight and support. A TT's training focus is normally on the individual and collective skills for the ISF staff. TTs have limited ability to conduct training at lower levels. Multi-echelon training can only be effectively executed with PU assistance. Success has been found in Iraq by having the TTs focus on the staff-level training and having the PU focus on training companies, platoons, and squads. It is critical that the PU understands that training is not limited to only combat skills, but combat support and combat service support skills as well.

Training needs should be identified by the TT, the ISF, and the PU. After the required training is identified, the TT and PU can determine how best to support those training requirements with their elements. As with American units, it is critical that the focus on training the ISF remains in preparing to train themselves. The Transition Readiness Assessment (TRA), the document that identifies ISF unit capabilities, can be used to identify some of the training shortfalls, but it should not be the only document.

TT advisors are responsible for planning and conducting collective staff training with the ISF command and staff. These events may come in the form of planning classes and exercises, or actual operations that force the ISF leaders to put what they have been taught into action. The benefit of training in an operational environment is that actual large scale operations can be conducted to have a tactical impact while achieving training goals and improving performance. As the ISF begin to see the benefits from training, they tend to internalize the concept and push it down to subordinate levels.

TTs and the ISF leadership must evaluate their unit and determine the training requirements. Below the battalion level, the PU has the responsibility to train individual and collective tasks. There are, however, schools and training within the ISF system for specialty skills and leadership development. The TT advisor must work with the ISF commander and training officer to decide who should attend this training. The TT advisors must influence the critical step of sustainment training or Iraqis training Iraqis. By sending ISF soldiers and officers to ISF-run schools, the idea of self-sustaining training becomes more achievable to the ISF personnel. The TT and PU must help develop the infrastructure and multi-echelon programs of instruction for the ISF to use and manage independently. PUs can help secure critical training resources such as ranges, classrooms, ammunition, and

administrative materials such as paper and pens. The TT leadership must work with the ISF and PU leadership to protect training time from the high operational tempo, in order to sustain the Iraqi unit for long term operations.

Planning for all operations involving ISF should be conducted as a combined element. If the mission originates with the PU, the PU operations officer should notify the TT operations officer of the mission. This will allow the TT operations officer to study the mission and provide initial advice to the PU operations officer on best use of the ISF. This is critical to identify any capabilities or limitations that the ISF may have at that time. The PU should then work directly with the ISF to develop the operation as they normally would with a subordinate or adjacent unit. The process of direct involvement between the PU and the ISF is critical as it helps establish their relevance and build confidence as true partners. When required for time sensitive operations, the TT can act as the conduit of information to expedite the process, but this should only be done as a last measure.

The process should work similarly in ISF-generated operations. The ISF leadership should notify the TT of the upcoming operation. The TT then, in turn, notifies the PU of the operation. If time permits, the PU should be directly briefed by the ISF. If not, the TT can use its communication channels to ensure that the ISF plan is communicated to the PU.

If the PU does not directly plan with the ISF unit, the TT should assist in ensuring the ISF understands the concept and purpose of the overall operation, and help them plan the mission. The TT should also ensure that any issues found during planning are immediately relayed to the PU. While the ISF unit is planning, it

is the responsibility of the TT to ensure that all coalition effects are understood by and made available to the ISF leadership. The ISF does not have similar systems and is not normally familiar with their capabilities, limitations, and requirements for use. The process of providing coalition effects to ISF begins with assisting in the planning for, the request of, and the integration in the execution of those assets. By repeating this process, the ISF and coalition effects providers become more familiar and comfortable working with each other and eventually develop their own systems and processes. The TTs span the capability gap until the ISF can develop its own capability to provide the necessary effects.

The primary purpose of the TTs during mission execution is to provide PU situational awareness to ISF operations, give advice to the ISF elements, and provide coalition effects. The PU should understand that if the operation is mounted, the TT will normally only be able to embed with one element (normally the command element) due to vehicle manning. TTs should not normally be expected to embed at the squad, platoon, or company level on a habitual basis. Effects that TTs must be able to provide are coalition QRF, fire support, and MEDEVAC. PUs should ensure they are familiar with the true request capabilities of the TTs they are working with, as training in basic fire support procedures and emergency close air support (CAS) at Fort Riley is often their only experience.

TT elements, like leaders, move to where they best can provide assistance to the ISF during operations. Normally, this will be located with the HQ element, but the task to provide effects often requires that the TT move to more forward elements. Operations by the authors in Iraq during 2004-2005 can be used as examples.



Military transition team advisors provide assistance during combined mission planning.

During operations the TT vehicles would collocate with the ISF HQ element and vehicles, and if required the TT would dismount a small element to move with the ISF forces if they conducted

dismounted operations. The TT vehicles served as a relay station for the dismounted ground element. The dismounted ground element would move to where they could best provide effects for the ISF and provide the PU with situational awareness by ensuring a two way flow of information. These TT members become most critical when U.S. forces are conducting a combined operation with the ISF and the movements and fires of ground forces must be de-conflicted in a rapid but accurate manner.

Due to the number of personnel, TTs often have to divide their effort during operations. Battle tracking of ISF operations is best done through the ISF TOC. TTs require augmentation to accomplish this task while they are embedded with ISF units on missions. A method that has proven successful in Iraq is to provide personnel from the PU unit to establish a liaison element in the ISF TOC. These elements can then battle track with the ISF and keep U.S. forces apprised of ISF reported locations or issues. The PU liaison element can also help the ISF maintain situational awareness of PU elements. A successful package was a Blue Force Tracker (BFT) TOC kit with at least one radio on the PU operational net. Care must be taken to ensure that these cryptographic items are secure. This augmentation is a small price for the added value and combat power of an ISF unit. Through continual use and positive influence by the TT and the PU, the ISF TOC will become more and more functional with time and achieve a critical step towards conducting independent operations; the ability of the ISF to battle track its forces, other friendly forces, enemy activity, and use that information to maneuver its forces successfully. As the TTs and PU identify that the ISF is progressing to the point that it is taking control of the fight, they can begin moving into more of a supporting role. A successful step is when the ISF exchange tactical information through their TOC with the PU and identify and request specific coalition

One of the first priorities of a new unit in country should be to determine how it can best support the transition of operations to the Iraqi Security Forces.

support when needed.

TTs and the IAG have no inherent CSS capabilities and require support from the PUs that they are assigned to. The orders that assign the TTs to MSCs specifically spell out that PUs are responsible for providing CS and CSS support to the TTs. The exact support requirements for TTs from PUs will vary depending on the location of each team. Typically, TTs are collocated and live with the ISF that they support. Much of the Class I support comes from the IA with limited supplements from the PU. Class IX and maintenance are provided by the PU. TTs also receive limited funds to purchase items off the local economy in a self supporting role.

The support structure is the most underdeveloped element of most ISF units. A deliberate decision was made by U.S. commanders to develop the tactical capability to conduct counterinsurgency first and then develop the ability for ISF to support themselves. It was thought that US units could continue to provide the support while the ISF conducted operations and took the lead role in security of the country. Unfortunately, the ability to conduct independent support operations and independent tactical operations are tied together. If the ISF unit has justifiable, critical shortages, for example in body armor or authorized weapons systems, the TT logisticians must ensure the parent PU is informed and can therefore forward the requirements and apply pressure to their higher command to secure the necessary equipment. The lack of support can lead to the loss of personnel, equipment and therefore a fall in morale and unit effectiveness.

CSS training is being conducted for the ISF at national level schools. If specific training is not available or shortfalls exist, the TT should arrange the support skill training through the PU unit and its support elements. PU elements must understand that this training is as important as any other type of support they give to the ISF unit and resource it appropriately.

Conclusion

One of the first priorities of a new unit in country should be to determine how it can best support the transition of operations to the ISF. The key to this transition is the TT and

PU integration to support the ISF. The closer and more productive the relationship between the ISF, the TT, and the PU is, the more integrated and coordinated combined training, planning, and mission execution becomes. This allows coalition and ISF tactical leaders to effectively use the full power available to them against the enemy. Together the leadership of the triad should develop a plan to provide security in the area of operation and develop the ISF unit. The investment of a few personnel and some equipment on the part of the PU will pay great dividends in the form of effective ISF integrated in the fight.

The ISF leaders must be treated and made to feel as equals to the PU leadership by all levels of the PU. Maneuver leaders that understand the composition and purpose of transition teams, their command and control structure, and relationships with PU and ISF will be able to maximize the productivity of those relationships and achieve the goal of independent ISF in the lead. The only remaining hurdle is having the faith in the ISF unit to truly independently lead and conduct operations. It is this leap of faith that must be made for the coalition to succeed in our counterinsurgency efforts.

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Major Tommy Stoner is currently pursuing a master's degree in Irregular Warfare at the Naval Postgraduate School. He previously served as a brigade-level transition team operations advisor with the 2nd Brigade, 2nd Iraqi Division in Mosul, Iraq. Other past assignments include serving as commander of Special Forces Operation Detachment Alpha 751 and group assistant operations officer for the 7th Special Forces Group (Airborne). He has also served with the 82nd Airborne Division's 3rd Battalion, 504th Parachute Infantry Regiment and 1st and 3rd Battalions of the 75th Ranger Regiment.



FSCOORD CHALLENGES FOR FIRE SUPPORTERS IN THE BCT

MAJOR CHRISTOPHER W. WENDLAND

This article first appeared in the November-December 2006 issue of *Field Artillery*.

Today's brigade combat team (BCT) fire support coordinator (FSCOORD) faces many new challenges commensurate with BCT transformation and the evolving roles of fire supporters in the field artillery. The BCT's FSCOORD (traditionally the title applied to the direct support field artillery battalion commander) is now applied to the FA lieutenant colonel billet on the brigade staff — one of three lieutenant colonels on the BCT staff (executive officer [XO], and the S3 are the other two).

The FSCOORD is responsible for properly manning, equipping and training all fire support personnel in the brigade on both

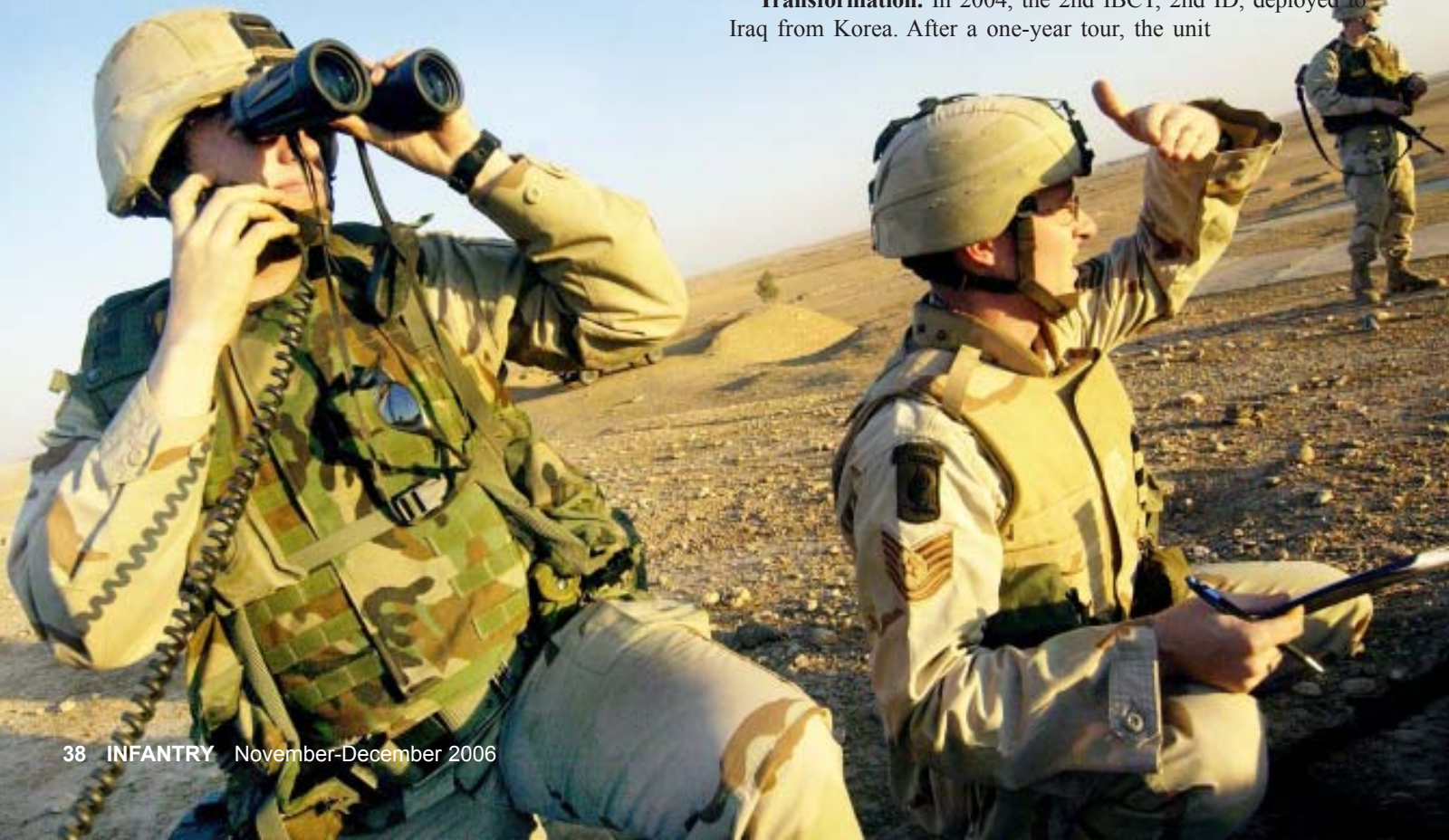
traditional fire support tasks as well as non-traditional civil-military operations (CMO) and information operations (IO) tasks. He also builds a fusion cell in the BCT headquarters, the fire support cell (FSC). This FSC is comprised of traditional lethal fires and the Air Force tactical air control party (TACP) personnel and integrates IO, CMO, public affairs (PA) and the staff judge advocate (SJA) personnel and functions.

In these changing times, the FSCOORD must develop methods to work with maneuver commanders and their senior NCOs to seamlessly integrate all fusion cell enablers from the brigade to the platoon levels by way of the maneuver battalion fire support channels in support of an evolving brigade campaign plan.

To help current and future FSCOORDs, this article explains the processes and challenges within the fire support channels of the 2nd Infantry BCT (IBCT), 2nd Infantry Division (2nd ID), Fort Carson, Colorado, during the last 10 months as it prepared for its Operation Iraqi Freedom (OIF) deployment.

Transformation. In 2004, the 2nd IBCT, 2nd ID, deployed to Iraq from Korea. After a one-year tour, the unit

Photo by Staff Sergeant Jeffrey A. Wolfe, USAF



deployed to Fort Carson in August 2005. Soon after, the brigade began transforming from a heavy brigade to a modular IBCT. With restructuring, reflagging and the introduction of six new battalion commanders and one new brigade commander, “muddy boots” training did not begin until January 2006. Part of this restructuring included the movement of all fire support personnel from the fires battalion to their respective maneuver battalions.

The new modified table of organization and equipment (MTOE) for the IBCT has a battalion FSC in both the BCT’s infantry battalions and in the reconnaissance, surveillance and target acquisition (RSTA) battalion. (See Figures 1, 2 and 3, the latter two on Pages 40 and 41, respectively.) In addition to the FSCs, each battalion also has a fires platoon made up of three to four company-level fire support teams (FISTs) along with their respective forward observers (FOs). Even the brigade special troops battalion is allocated three fire support personnel to augment its S3 shop: an E7 (battle staff), E6 and E5.

Headquarters and Headquarters Company (HHC), 2nd IBCT, has a robust brigade FSC led by the IBCT FSCOORD that includes four combat observation lasing teams (COLTs) and a nonlethal effects cell.

In the transformation process, the 2nd IBCT maneuver units were eager to accept their fire supporters. Each maneuver battalion then dissolved its fires platoons and quickly attached each company FIST down to its companies.

The challenge is evident. How does the BCT FSCOORD ensure all fire support personnel are adequately manned, equipped and trained to support the traditional fire support mission as well as the nontraditional IO and CMO missions?

The answer is “*Carefully.*”

Manning. In the 2nd IBCT, the fires battalion commander, in conjunction with the brigade commander, coordinates all FA officer moves. The FSCOORD makes recommendations, but the fires battalion commander decides which officer in the BCT enters or leaves the fire support world and which enters or leaves the artillery world.

Initially this was a sticking point with maneuver battalion commanders who inadvertently may have approved personnel actions (branch transfers, career course

attendance, etc.) for “their” FA officers without consulting with the fires battalion commander. Also maneuver commanders become attached to their FA officers and may not want to lose them when the fires battalion commander, for example, thinks an officer’s movement to the fires battalion is optimal for the officer’s career progression.

Enlisted personnel manning is more problematic. In the 2nd IBCT, the fire support operations NCO (senior 13 series NCO in the BCT FSC) works closely with the brigade command sergeant major (CSM) to recommend enlisted sourcing to specific battalions for inbound gains and also recommends senior NCO moves for professional development.

We’ve found that the maneuver battalion

CSMs are very concerned about their fire support NCOs and Soldiers, especially in reference to moves for NCO professional development, i.e., moving an NCO to a COLT at brigade or moving a promotable sergeant to another battalion to assume the role of company fire support NCO. We’ve found that a move is facilitated when the final decision comes from brigade CSM to the maneuver battalion CSM.

A unique challenge with the new MTOE structure is the battalion FSC NCOs often are not fulfilling their roles as platoon sergeants because their platoon is dispersed throughout the maneuver company. In addition, these FSC NCOs have limited visibility of their company fire support NCOs and platoon FOs. This makes fire support mentoring from

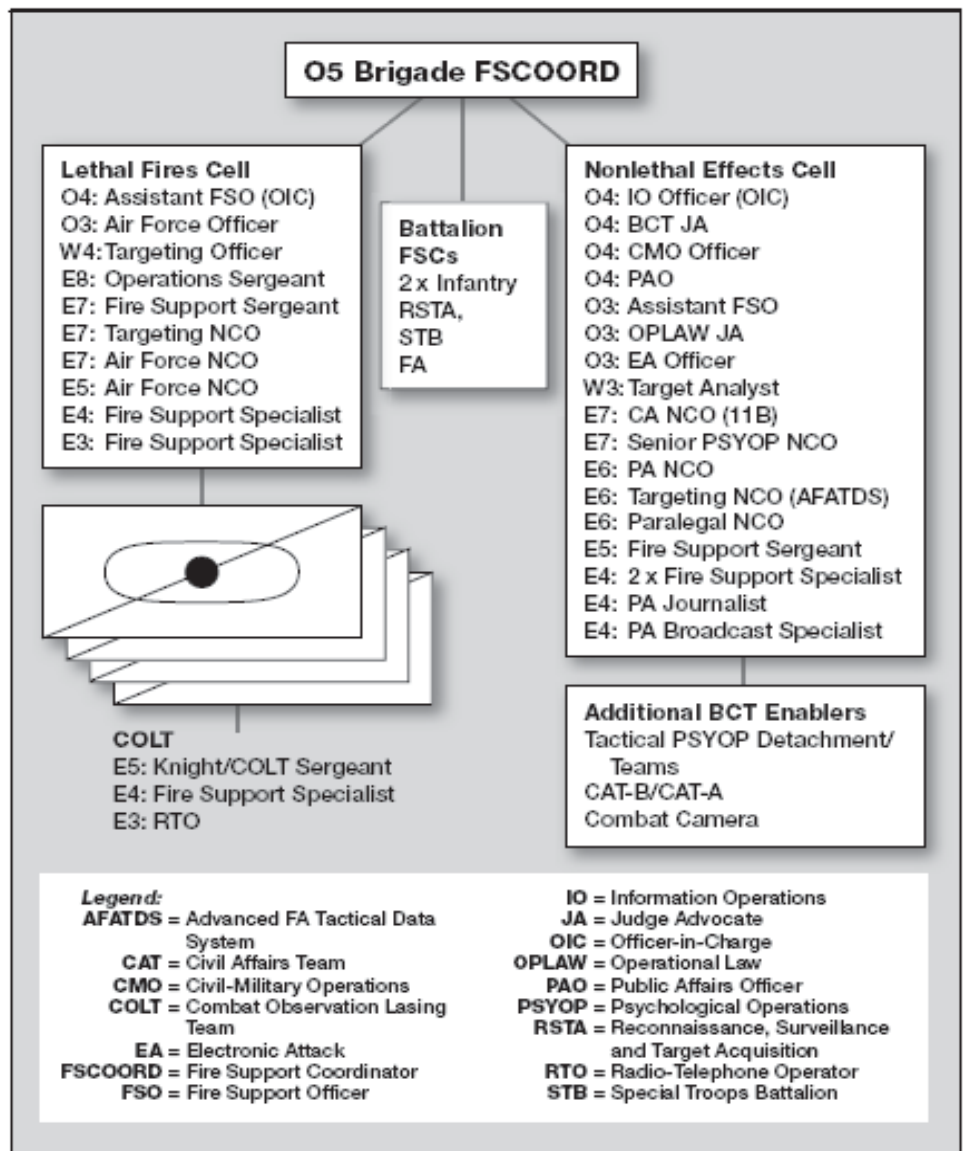


Figure 1: Brigade Combat Team (BCT) Fire Support Cell (FSC)

senior NCO to junior NCO extremely difficult.

Equipping. If you are a new BCT FSCoord, don't assume everyone follows the MTOE. The allocation of fire support personnel down to the company level causes additional friction because fire support equipment comes from the battalion's HHC MTOE authorizations. Without proper coordination, usually the FSCoord's face-to-face meeting with a battalion XO, equipment intended for a battalion FSC, company FIST or platoon FO team may never make it to the intended user—especially optics, vehicles and radios.

The MTOE may address the need, but the maneuver commander at the battalion or company level can quickly reassess the need to fit his mission. On more than one occasion, unless the FSCoord was specific about radio/vehicle/optic requirements, FISTs arrived at a training event under-equipped.

Training. Training is more of a challenge today because fire support personnel are expected to know their traditional roles (calling for and adjusting indirect fires) as well as their non-traditional roles (understanding and implementing IO and CMO). All this training must occur in the BCTs new decentralized structure.

Coordinating the training for fire support personnel in 11 separate maneuver companies and five headquarters companies can be problematic. Early planning solves many problems. When the FSCoord works closely with the BCT S3 to ensure all training is included on the long-range training calendar and is followed up with an operations order (OPORD) or fragmentary order (FRAGO), most personnel attend.

As the FSCoord, I focused the BCT training into three quarters. First quarter (January to March) was dedicated to the 13F Fire Support Specialists' validating their traditional fire support tasks. Second quarter (April-June) was dedicated to IO/civil affairs (CA) training and the employment of both lethal fires and nonlethal effects in maneuver platoon- and company-level operations. Third quarter (July-September) was dedicated to establishing the brigade FSC and systems to fuse all the BCT enablers (lethal fires, TACP, IO, CMO, PA and SJA) in support of brigade- and battalion-level operations at the National Training Center (NTC), Fort Irwin, California. We then took those lessons learned to prepare for the deployment.

Always a Fire Supporter. First quarter trained the fire support fundamentals. Each company FIST underwent an arduous certification process composed of a written test, guard unit armory device, full-crew interactive simulation trainer (GUARDFIST); and pre-combat checks (PCCs) and pre-combat inspections (PCIs); followed by an exercise in dismounted military operations in urban terrain (MOUT).

We conducted the certification exercise on Fort Carson's main post and had the opposing force (OPFOR) dress in civilian clothes and drive around in privately owned vehicles

(POVs) to blend in with the local population. We tested each team's observation and situational awareness abilities as well as their fundamental fire support skills. A compass, binoculars, radio, map and heavy rucksack were the only authorized items for this certification.

After FIST certifications, in February, we took all the FISTs and FO teams to Fort Sill, Oklahoma, for a week of joint fires and effects simulator training. Building on their FIST certification, the teams were ready to use the new simulators and video after-action review (AAR) facilities to drill further on their fire support fundamentals.

In conjunction with this training, the BCT and battalion FSCs received their new advanced FA tactical data system (AFATDS) tadpoles and effects management tool (EMT) new equipment training (NET) while the BCT fires battalion was fielded its M119A2 howitzers. These events set the conditions for the BCT's first artillery live-fire exercise in March, finishing the quarter with all fire supporters trained and validated.

IO and CMO. Second quarter trained IO and CMO skills. Building on the current operations in theater, we provided IO and CA training to each maneuver battalion FSC and maneuver company FIST, including those in the BCT's fires battalion and two line batteries. (The fires battalion transitioned its battalion FDC to into an FSC after it was determined it would perform as a maneuver mission in theater.)

Our brigade and battalion FSC leadership took advantage of the 1st Cavalry Division's mobile training team (MTT) from the 1st IO Command at Fort Belvoir, Virginia, while battalion targeting officers and company fire support officers (FSOs) took Fort Sill's three-week Tactical IO Course. The BCT had the 1st IO Command's MTT at Fort Carson in late May for fire support personnel new to the BCT. We provided additional IO training down to the battalion level during this time frame, including electronic warfare (EW) training (EC-130H and EA-6B) to one member of each maneuver battalion FSC at the Navy's Electronic Warfare Officer (EWO) School in Whidbey Island, Washington.

To exploit this training, the BCT conducted a pre-NTC mission rehearsal exercise (MRE) at Fort Carson. One of the training

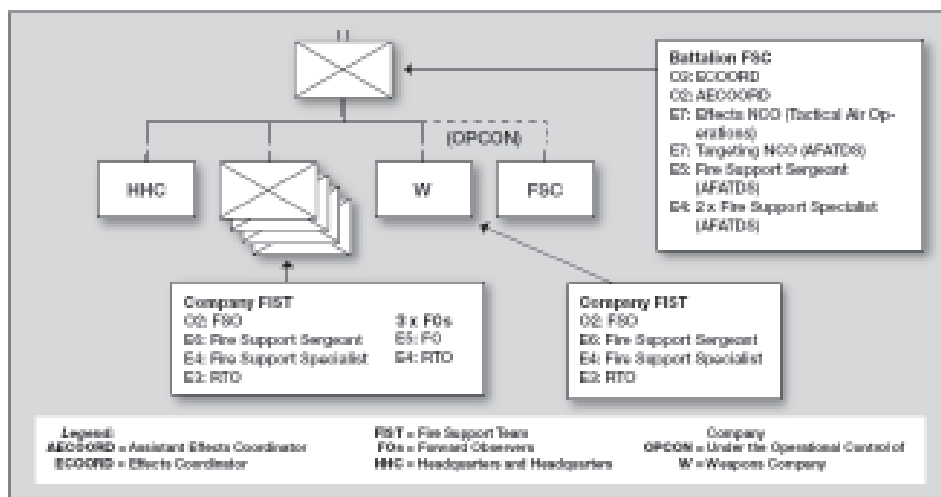


Figure 2: Fire Support Personnel in the BCT Infantry Battalions. In the 2nd Infantry BCT (IBCT), 2nd Infantry Division (2ID), at Fort Carson, Colorado, they are the 1st Battalion, 8th Infantry (1-8 IN) and 242 IN.

modules was designed around integrating IO at the company level. Also, to retain the fundamental fire support skills learned in the first quarter, another training module included kinetic operations in which each company conducted both day and night MOUT raids with live close air support (CAS), artillery and mortar fires. The BCT provided both the CAS and artillery in direct support roles to each of the evaluated maneuver battalions.

Development and Integration of the Brigade FSC. Third quarter's focus was on developing the BCTs FSC and integrating this cell with the battalion FSCs down to the company FIST and platoon FO levels. Most nonlethal staff enablers did not arrive until just before the July NTC rotation. The challenge was to integrate them into a cohesive group without inundating the battalion FSCs with new requirements initiated by such a robust brigade staff.

Today's Challenges and the Way Ahead. Today's FSCOORD coordinates and synchronizes all efforts within the FSC and integrates those efforts with the BCT S2 for collection assets and the BCT S3 to ensure required actions are supported in daily FRAGOs. The BCT FSC fuses all enablers, including the battalion FSCs that provide the linkage from the Soldiers on patrol to the BCT for further analysis and integration into future operations.

The battalion FSC is more robust than the pre-transformation battalion fire support element (FSE), and its functions are much more complicated. Maneuver commanders today expect their battalion and company FSOs to understand IO and CMO. Aside from a few classroom hours in the schoolhouse, most FSOs (and NCOs) were unaware of their new nonlethal role, unless they recently redeployed from OIF or Operation Enduring Freedom (OEF).

The brigade has an IO officer, a CMO officer, a PA officer (PAO) and an SJA among many other functional area specialists. These positions are not replicated at the battalion or company level. The FSCOORD coaches and mentors his battalion FSC personnel to understand and implement these new functions daily on today's battlefield.

In theater, every company or battalion operation will require some sort of bilateral negotiation, IO application, possible damage

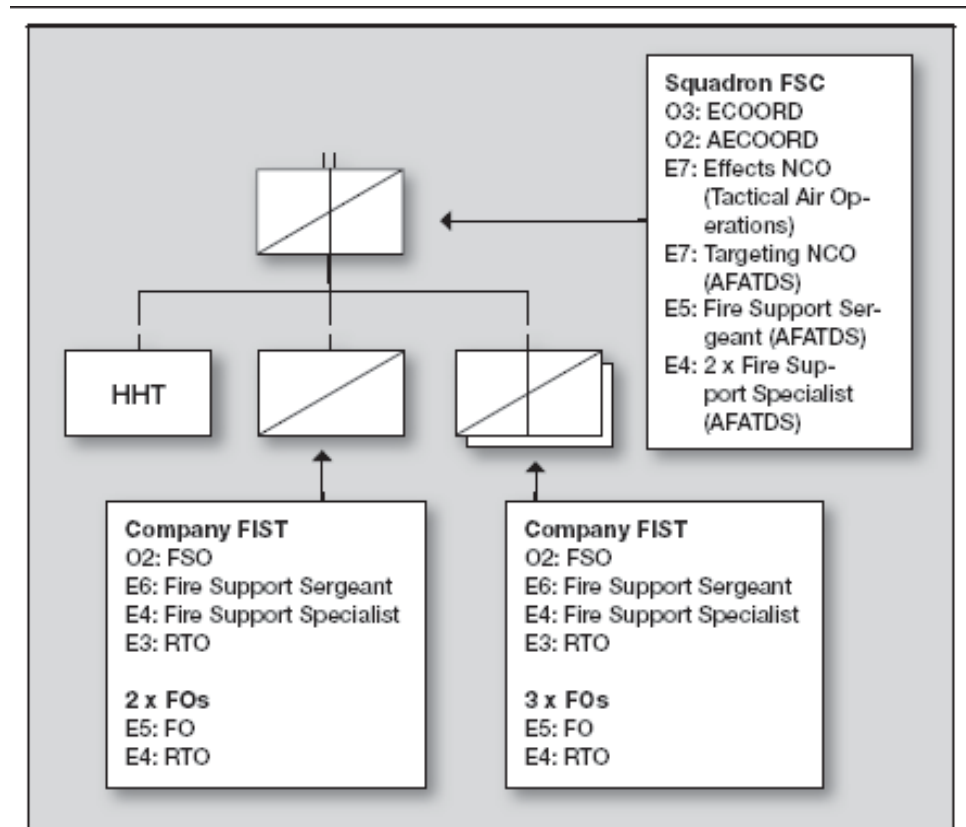


Figure 3: Fire Support Personnel in the RSTA Squadron. In the 2nd IBCT, 2ID, the squadron is 3-61 Cav.

claim to a local civilian, quick-turn anti-propaganda story or exploitation of a recent success in the company or battalion area of operation (AO). All are synchronized by the battalion FSC or company FIST. These FISTs provide data from their FOs attached to each maneuver platoon up to the brigade FSC. The BCT experts analyze the data and produce products for the battalion, keeping the BCT focused on the overall campaign plan.

The 2nd IBCT is ready for our future deployment. The *Strike Force* fire supporters are practiced in the fundamentals of integrating lethal fire support from traditional artillery and mortar. This training included employing precision munitions, such as CAS and guided multiple-launch rocket system unitary (GMLRS-U) in an environment respectful of collateral damage. Our fire supporters are also rehearsed in the practical application of IO and CMO at the tactical level. Our battalion FSCs are integrated with the brigade FSC and have rehearsed the process of turning complex data from the maneuver company FISTs into an analyzed and synchronized product for future operations in concert with the

brigade's campaign plan.

The BCT FSCOORD, charged with some new responsibilities and a new decentralized manning, equipping and training structure, has many challenges that require careful and dedicated coordination across the BCT and the successful coaching and mentoring of junior maneuver and artillery officers as the new modular BCTs continue to take shape.

Major Christopher W. Wendland is the brigade fire support coordinator (FSCOORD) for the 2nd Infantry Brigade Combat Team (IBCT), 2nd Infantry Division, from Fort Carson, Colorado, that recently deployed to Iraq. In his previous assignments, he was a fire support officer, fire direction officer, firing platoon leader and service battery executive officer with 4th Battalion, 1st Field Artillery, 1st Armored Division, at Fort Riley, Kansas; the Combined/Joint Forces G3 Deep Operations Division Fire Support/Direction Officer in Seoul, Korea; and a battalion S2, maintenance officer and battery commander with 1-27 FA, 41st FA Brigade, in Germany. During Operation Iraqi Freedom I, he commanded HHTB, 41st FA Brigade, V Corps Artillery.

A CASE AGAINST BATTLE DRILL SIX

MIKE FORMAN

An overemphasis on training for close quarter combat (CQC), or close quarter battle (CQB), in recent years has resulted in its overuse in combat, often in situations where more appropriate options exist.

Platoon by platoon, the Army is learning the hard way how hazardous it is to fight room to room against a well prepared and often suicidal opponent. We can no longer afford to learn the lesson individually. It is time for a candid discussion on this subject, and to address the problem as a responsive, learning, and adaptive Army.

Roots of CQC

Specialized units developed and refined CQB tactics, techniques, and procedures (TTPs) over many decades. The Army gradually adopted these methods, renaming them CQC, and in recent years they have been put to the test extensively in the real world. Unfortunately, little in the way of methodology and risk assessment has been transferred along with the tactics.

These special mission units developed these TTPs almost exclusively for hostages rescue operations. It was understood that any such operation would be of great strategic importance and therefore worth great risk and cost. It was also understood that to have any reasonable chance of success, the assault must be conducted with *complete surprise, simultaneously* entering the *critical point* from as many *unexpected* directions as possible, ending the fight almost immediately. It was assumed that if the operation failed to accomplish this in the opening seconds and a protracted fight resulted, the opportunity for a successful resolution would quickly evaporate, hostages would be lost, and casualties would mount.

It was also understood that this would be a onetime operation, and that the units involved would have years to recover from their casualties before being called on to perform again, if ever.

How often do our day-to-day operations fit the above criteria? Rarely do conventional units find themselves conducting hostage rescue operations, yet it is disturbingly common to see units utilize these CQC techniques as if it were an in extremis situation.



It is a challenge for any unit to train its Soldiers to an acceptable level of proficiency in the necessary individual tasks, then to train collectively as teams, squads, platoons, etc. This can also mean routinely starting over as new individuals are integrated and leadership changes take place. Battle Drill Six requires a lot of time and effort in training to get it right. The hardest tasks always do require more training time. The elite origins of CQC add appeal and may also contribute to overtraining. All of this emphasis in training conditions a response. We go into autopilot mode, default to what we are most familiar with, “close with and destroy the enemy, eliminate the threat at close range” We find ourselves employing *high-risk tactics* against *low-payoff targets*.

Historical perspective

As students of military history we are familiar with past armies who dismissed new technologies, fortifications, artillery, etc., and focused on the offensive spirit and the bayonet as the core of their military doctrine, as if spirit alone were the decisive factor in warfare.

We are also familiar with what happened when their infantry assaults as well as their élan were shattered by an army who had embraced technology and firepower. How often have you seen squads dismount Bradley fighting vehicles, leave them lined in the street with all the firepower and protective armor they offer, to enter and clear buildings on an equal footing with the occupants? In truth, when the occupants turn out to be hostile, they have had ample time to plan and prepare their defense for the purpose of achieving successful escape or martyrdom, whichever they prefer. This puts the attacking troops at a decided disadvantage no matter how perfectly they perform their CQC drills.

When MILES (Multiple Integrated Laser Engagement System) and simunitions scenarios produce light casualties, we should realize that live bullets will over penetrate bodies and many walls. They will ricochet and create secondary casualties further down range than our training weapons can produce, and grenades and improvised explosive devices will cause carnage impossible to replicate in training. Those “light casualties” in training scenarios should be interpreted as the tip of an iceberg that will fully reveal itself only in the real world.

Use of fire and maneuver have been fundamental to the U.S. Army for decades. Have we now come full circle? Is CQC the modern equivalent of the bayonet charge? Should CQC be our last resort, utilized only after all other options have been exhausted?

More than 100 years ago, General Philippe Pétain, struggling to get his army to accept his modern theories on firepower said, “Cannon conquers, infantry occupies.” He once made a promise to a decimated regiment: “You went into the assault singing the Marseillaise. It was magnificent. But next time you will not need to sing the Marseillaise. There will be a sufficient number of guns to ensure your attack’s a success.”

No responsible commander would order troops to assault a piece of terrain without giving them supporting firepower sufficient to ensure their success. A building is a piece of urban terrain, and given its potential as a defensive position, deserves *at least* the same respect as any other defended terrain.

Clearly, flattening a building with firepower at the drop of a



Gary L. Kieffer

Soldiers from the 173rd Airborne Brigade practice building clearing procedures during training at the Joint Multinational Readiness Center in Hohenfels, Germany.

hat is not the first option unless the *assessed threat is high enough to justify it*. Neither should the bayonet charge be the first option unless the *assessed threat is low enough to justify it*. Somewhere in between, depending on the situation, is the right answer.

Threat assessment

CQC training is a high-risk training event. Before any such event, a leader is expected to do a risk-assessment. He will identify hazards associated with the event, establish control measures and provide assets to mitigate the risks and to ensure a reasonable degree of safety. A threat assessment could be considered a risk assessment with the addition of the enemy capabilities and intent, with careful thought given to risk vs. benefits.

When a building is empty or occupied by a non-hostile opponent, our CQC techniques work well. How could they not?

When specific intelligence indicates that a bad group or a high-value target occupies a site, we need to reassess our methods. Any combative group of insurgents will have planned and rehearsed actions on contact in preparation for a coalition raid.

Our raid objective will usually be kill-capture. The decisive point of the operation is containment or preventing escape, not rapidly eliminating the threat as it would be if hostages were at stake.

CQC training conducted against inanimate paper targets has not conditioned us to anticipate the enemy’s response. It is this

enemy course of action that is critical to the threat assessment. They will anticipate the most likely avenues of approach, choke points, etc., and prepare their defenses accordingly. His purpose will likely be to buy time to facilitate escape, to inflict as many casualties as possible as he martyrs himself, or both. Foiling his plan is our highest priority. Falling into his trap is the last thing we want to do.

Given all of the resources available to us, is there no way to separate the combatants from the noncombatants, and to drive the combatants from their defensive position? The enemy's escape is our mission failure. Trapping him is success. Identifying his potential escape routes is our planning priority. Blocking them is our execution priority. Once he is effectively trapped, we have many safer options than CQC to finish the fight. Selecting the appropriate level of force is our next move.

Target Discrimination and Escalation of Force

We will always have the legal, moral, and ethical responsibility to separate combatants from noncombatants, to engage positively identified threats with force proportional to the threat, and to take every reasonable measure to safeguard innocent lives. We are obligated to take some risks in order to accomplish this. This does not mean that conducting CQC in and around

civilians is the safest way to separate them from the combatants, despite the greater risk to our own troops.

Escalation of force is more than a rigid set of procedures. It is more than traffic control. It is the *principle* of alerting and warning innocent civilians, allowing them to avoid potentially hazardous situations. It is forcing a hostile enemy to show his hostile intent earlier than he would have chosen. It is accomplishing this while keeping our own troops at a safe distance making use of available cover, concealment, and stand-off. It should be the philosophy that guides every operation we conduct.

Whether in traffic or in a building, escalation of force requires getting the attention of the subjects in question, and then giving them clear instructions to comply with. Compliance demonstrates non-hostile status. Lack of compliance with clear instructions triggers each subsequent level of force, until compliance or clear hostile intent is achieved.

Given the opportunity, most noncombatants will choose to depart a building and comply with the instructions of an interpreter. They will answer an interpreter's questions as to whether anyone else or any hazards exist in the building. Based on the consistency of the various stories obtained, we can continue our threat assessment and determine our next course of action.

Determining Hostile Intent

If we are satisfied that the building has been emptied of all occupants, sending an element to clear it by CQC may be an appropriate course of action. If we are not satisfied that the building has been emptied, jumping to CQC is probably premature.

Is noncompliance at this point to be considered hostile intent? Or must we provoke any remaining occupants to fire on us first? If so, how should we probe them to prompt a clear hostile act? A single high explosive (HE) round into the front door may be enough to cause an insurgent to lose his nerve and announce his presence. A pause and a final warning will ensure that we have done everything possible to separate the innocents.

The ultimate goal is to give innocents every opportunity to escape, and to avoid sending troops into a trap until we are satisfied of no hostile intent, or we have positively identified that hostile intent, and eliminated the threat with the appropriate fire power.

In any event, at the first sign of resistance, the only appropriate response is to back off, and once again reapply appropriate firepower.

How many levels of escalation satisfy our legal and moral obligations? Only a commander, under the advice of his JAG, can answer that.

Conclusion

If we make it our goal to surprise, close with and destroy the enemy faster than he can defend and/or escape, how fast can we realistically be? What price will we pay if we miscalculate and lose the critical element of surprise?

How often will we trigger a fight or flight response in innocent home owners, and how often will that result in a fight that would not have otherwise happened?

If our goal is to trap and surround, and the enemy chooses to fight, what have we lost?

Shouldn't we assume that we will never have the right conditions necessary to conduct low-risk CQC until we have taken steps to create those conditions ourselves?

Mike Forman is retired from the U.S. Army with 16 years in special operations assignments. Since retiring, he has served with the Joint IED Defeat Task Force, Joint IED Defeat Organization, and the Asymmetric Warfare Group.



Gary L. Kieffer

Soldiers from the 173rd Airborne Brigade practice building clearing procedures during a training event at the Joint Multinational Readiness Center in Germany.

AAEF: AIR ASSAULT EXPEDITIONARY FORCE CAMPAIGN OF EXPERIMENTATION

LIEUTENANT COLONEL (RETIRED) PAUL E. SNYDER

The Air Assault Expeditionary Force (AAEF) experiment is the Army's principal live, prototype, discovery experiment that began in 2004 at the direction of the U.S. Army Training and Doctrine Command (TRADOC) and is in the third year (Spiral C) of a four-year campaign designed to evaluate emerging technologies and operational concepts in order to inform development efforts related to both current and future forces and enhance risk reduction for the Future Combat System Program of Record.

AAEF brings numerous government and Army organizations along with industry partners together in a unique venue that places more than 40 emerging technologies, linked through a network, in the hands of Soldiers during the conduct of 10 tactical missions. This type of collective experimentation produces synergy, shared learning and significant cost savings to both the government and industry. AAEF provides operational insights that impact and influence development decisions and assist in the risk reduction to future development efforts including the modular force, the Future Combat System, and other major Army programs.

Since its inception AAEF has provided valuable operational insights to the Army demonstrating the power of leveraging technologies and an integrated multi-tier network to enhance small unit mission success and survivability. As depicted in Figure 1, the experimental force was seven times more effective, as measured in terms of survivability, follow-on capability, and mission accomplishment equipped with the emerging technologies.

These findings are a result of the in-depth analysis and data collection efforts associated with the performance of the base case (current force/current organization) and the advance case (future force/technology enhanced). This analysis has led to DOTMLPF findings related to the ways units of the future, and current forces employing these concepts/technologies, might organize, train and fight as well as to the ways units in

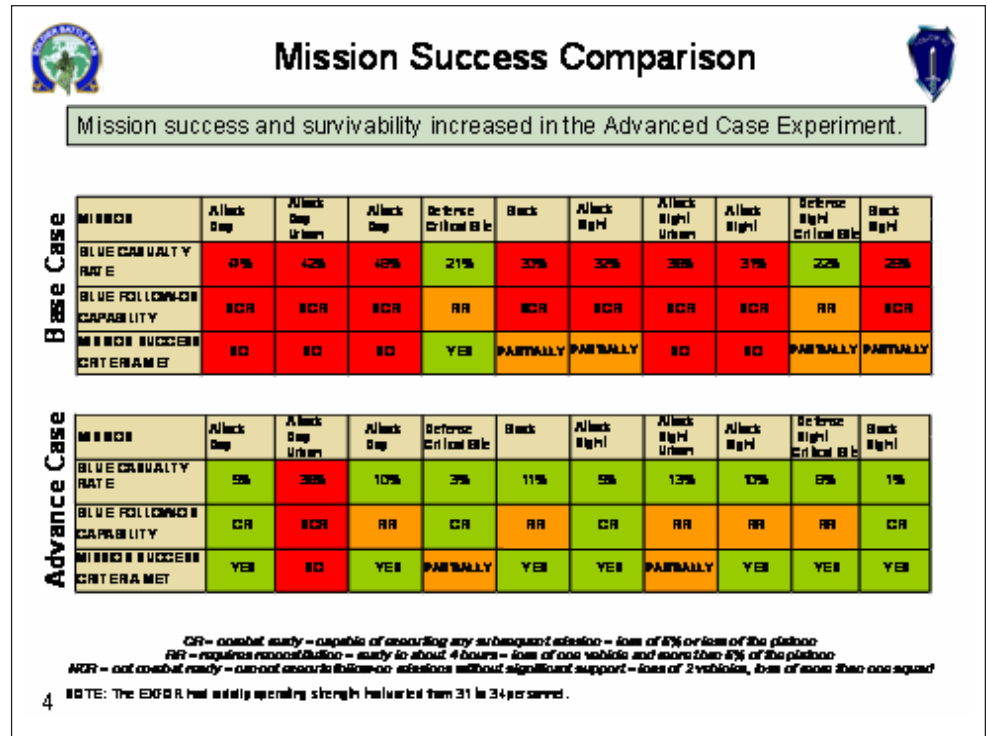


Figure 1

the future might be manned, supplied, trained and even how installations and equipment may need to be built to support such forces.

Specifically the AAEF Spiral C Experiment (October-November 2006) will be focused on garnering insights in the following DOTMLPF (doctrine, organization, training, materiel, leadership, education, personnel, and facilities) areas:

Doctrine

How does the information made available through the implemented C4ISR architecture impact decision making at company and platoon levels?

How does the suite of sensors, implemented fusion processes and information management protocols impact the quality of information at company and platoon levels?

Organizations and Personnel

What organization, equipment and personnel changes are required in the company headquarters and in the infantry platoon

to properly conduct sensor planning, sensor employment and recovery, sensor fusion and security?

Training and Leader Development

Document the increased complexities and mental demands on leaders that occurs from increased situational awareness, the requirements of sensor planning, employment and management, and accelerated decision cycles in a network-enabled force.

Codify training requirements of new technologies (UGVs, UAVs, sensors, battle command systems and communications).

Materiel

What battle command interface functionality and decision aids are essential at the company, platoon and squad levels?

How well does the network enable the flow of data and information throughout the experimental force? Which technologies enhance the effectiveness of the network and contribute to increased lethality and survivability?

Beyond the currently planned spirals, AAEF provides a critical capability as a venue to continue experimentation along the critical prototyping path and to recognize solutions to identified capability



Courtesy photo

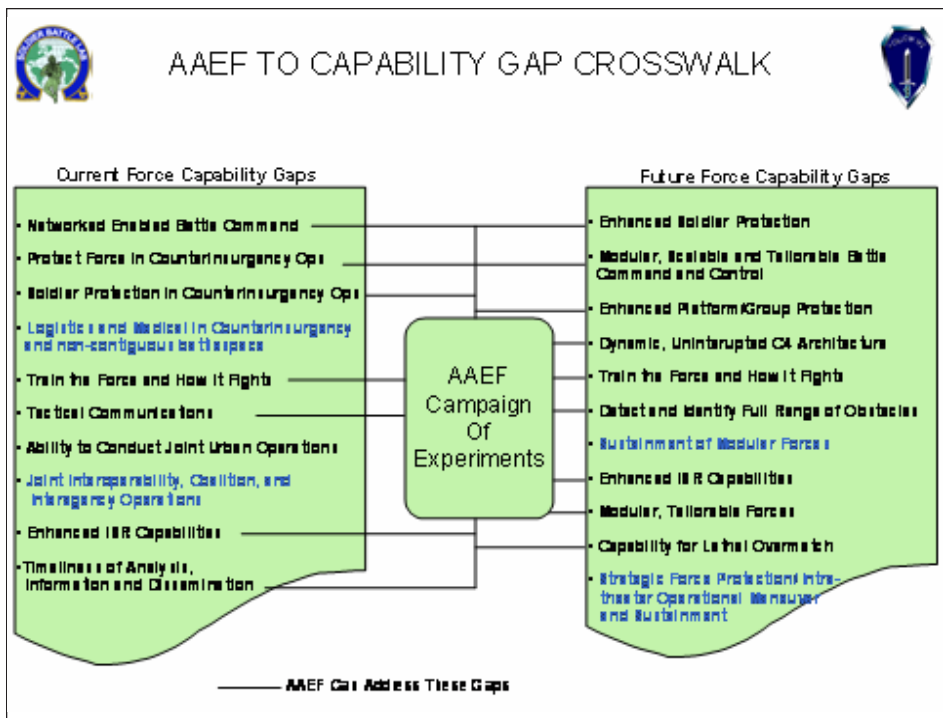
Soldiers of the Experimentation Force (EXFOR) assault the Fort Benning MOUT facility during TRADOC's Air Assault Expeditionary Force (AAEF) experiment.

gaps in current and future forces. (Figure 2) AAEF is a critical link within the Army's Concept and Capability Developments Plan (AC2DP) and ensures

small unit experimentation complements large-scale, system-centric future experimentation centered on the Evaluation Brigade Combat Team. The EBCT and live, small-unit field experiments, like AAEF, are both key components of the Army Concept Development Plan.

The US Army, TRADOC, and Fort Benning have made significant investments to explore new concepts, ideas and insights involving emerging technologies and their employment on the battlefield to ensure that Soldiers continue to dominate land combat in the future. AAEF capitalizes on these investments and fills a critical need in the Army Experimentation Campaign.

Figure 2



Lieutenant Colonel (Retired) Paul E. Snyder currently serves as a project officer for the Air Assault Expeditionary Force (AAEF) Campaign of Experimentation in the Soldier Battle Lab at Fort Benning. He joined the AAEF Team after completing over 20 years of active duty service in various command and staff positions from platoon to division culminating as the Commander of the United Nations Command Security Battalion – Joint Security Area in the Republic of Korea.

Co-Witnessing Lasers to Optics

A FASTER MORE ACCURATE WAY TO ZERO LASERS FOR THE NIGHT FIGHT

MAJOR DARREN R. LORÉ

I have searched the Army's manuals and Center for Army Lessons Learned (CALL) literature for a night-fighting technique that many infantry units use. I'll call this technique the "co-witnessing" technique for lack of a better term. I have yet to find this technique described in any manual or professional journal. This article is intended to put a little more in our kit bag and put into published word a very effective night fighting technique that our Army's literature has so far omitted.

Co-witnessing

This technique is most often associated with the use of back-up iron sights to assist us in zeroing our Close Combat Optics (M-68) or Eo Techs. The Soldier zeros his back-up iron sights in the normal fashion. After he is zeroed, the Soldier mounts his CCO on the appropriate rail, assumes a good supported firing position, sights down his iron sights. He then turns on his CCO. The Soldier then has his coach adjust the red dot of the CCO until it is "lollipopped" onto the front sight post. (See Figure 1.)



Figure 1 - Lollipopped CCO Red Dot

The Soldier then folds down his rear sight aperture and his CCO is "mostly" zeroed. He will still need to confirm his zero using only the red dot, ignoring his front sight post.

This same concept can be applied at night when using infrared (IR)-capable optics, an aiming laser, and a set of monocular night vision goggles. The technique is simple and can be done almost anywhere in less than a minute.

Setting the conditions

- a. Zeroed CCO, Advanced Combat Optical Gunsight (ACOG), or M-145 Machine Gun Optic (MGO) with laser filter removed.
- b. Properly adjusted PVS-14, mounted on firing eye. (Switch it to your nonfiring eye later if you like.)
- c. Mounted PEQ-2A, PAC-4C or other laser aiming device.
- d. Distant aiming point, 200 meters or more, (100 meters will work if that's all you have).

Process

Soldier gets into a supported aiming position, kneeling, or standing supported work best. Soldier switches his optic to the IR mode, usually position 2 and 3 on the CCO. (The ACOG Chevron will also be visible and significantly brighter.) Soldier will have to modify his cheek-to-stock weld so that he can look

through his optic with his PVS-14s. With a little practice he will be able to see his IR aiming dot as quickly as he can acquire his iron sights. Soldier then picks a known distant aiming point, the further the better, stabilizes his weapon and activates his laser. The Soldier will now see two IR dots down range, he then directs his coach to adjust his laser onto the CCO dot or ACOG chevron. Bold adjustments initially, then slowly as the laser gets closer to the CCO's IR dot or ACOG chevron. Once the two dots have merged, the laser is ready to be fired at a field fire range, known distance targets, or if in a rush go on a mission. That's all there is to it; it works very well and can be done in a minute or less if you practice.



Figure 2 - Step 1: Find CCO dot/ACOG chevron at a distant aiming point.



Figure 3 - Step 2: Stabilize weapon and activate laser.



Figure 4- Step 3: Coach adjusts laser onto CCO dot/ACOG chevron.

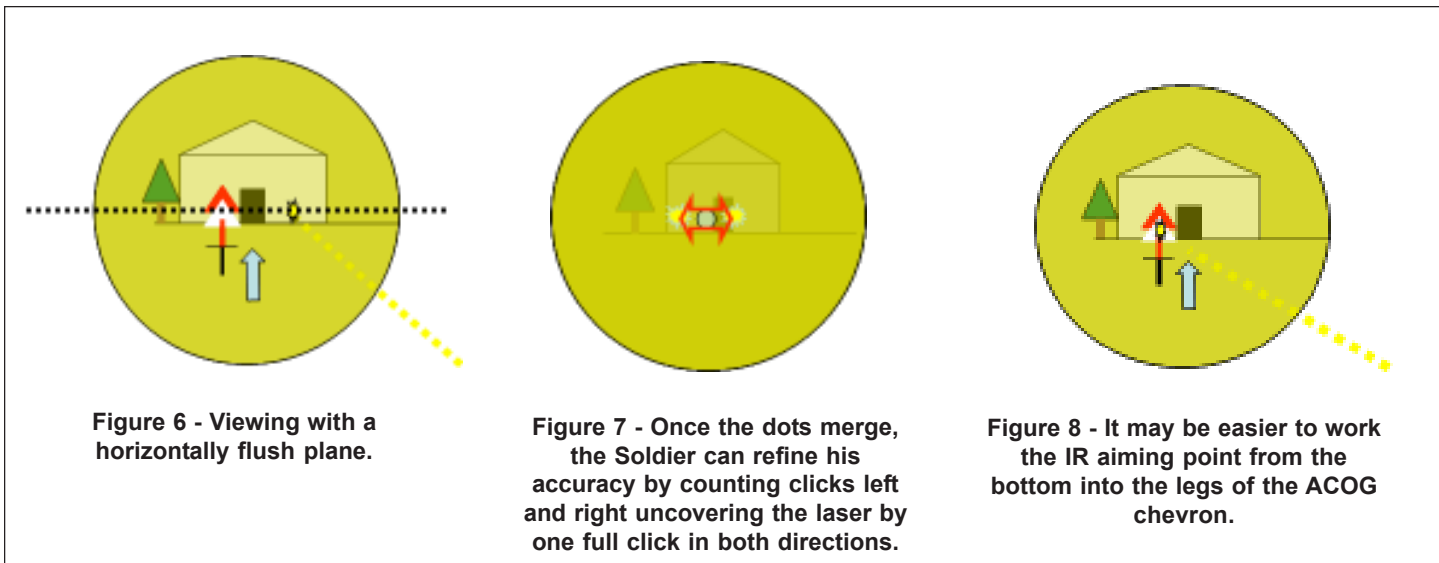


Figure 5 - Step 4: Once the dots merge the laser is mostly zeroed. .

Techniques for better accuracy

Align the laser offset to the right of the CCO IR dot/ACOG Chevron, checking to make sure it's horizontally flush. (See Figure 6.)

Once the dots get close, start counting the clicks. Once the laser becomes visible again to the left of the IR dot, count back in the other direction, the middle number is the zero point. (See Figure 7.)



For the ACOG, align the laser offset to the right and count it to the left until the laser is set between the two legs of the chevron. It may be necessary to cover the fiber optic filament of the ACOG, dimming the chevron to a more acceptable light level. (See Figure 8.)

For the M-145 MGO, the Soldier must remove the laser filter that is attached to the front of the MGO. Once the Soldier is finished zeroing his laser, he will put the laser filter back on. (See Figure 9.)

Just as in daylight, keep the CCO dot as dim as you can, while still being able to identify it.

Range to zero your laser

This is a source of debate, obviously the farther the range of your distant aiming point the more accurate the shot will be. I believe the best guidance to give is that the Soldier should zero the laser at a range from which he can identify a target. A M-240 gunner with PVS-14s and a 3x magnifier may be able to identify a target out to 500 meters, while a rifleman with a set of PVS-7Bs can only identify to 150 meters in good lighting

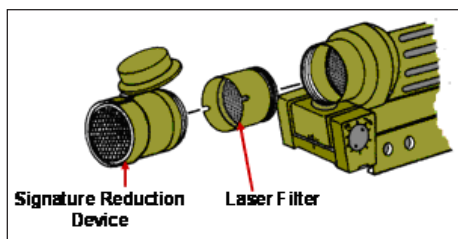


Figure 9 - Remove the laser filter from the MGO and replace after the weapon is zeroed.

conditions. I think the CALL Own the Night Two Table 1-4 has overly ambitious tables for what our IR phase lines really are. Go with what Joe tells you he can see. The bottom line is to zero out as far as you can identify an enemy to engage; 200 meters and further is more than sufficient to ensure that you have removed the bore axis, laser aiming light disparity.

If you can see your CCO without using your laser, why not just omit the laser and not present a laser signature you ask? Good question, and you're right; don't use the laser if you don't have to or if you are identifying a target or directing fires.

To ensure you are getting the accuracy

you want to better kill at night you'll need to fire at KD targets, making minor adjustments to the IR aiming light. Pop-up targets will work and are much faster but unless you get hit location feedback you won't be able to refine your zero. A good technique is to put a small swatch of glint tape, or use a 1/2 by 1/2 inch square cut from a PT reflective belt, and place it center mass of the target's kill zone.

Unfortunately, you will still have to teach and utilize the laser borelighting technique for those Soldiers who only have iron sights.

This technique is much faster than the current doctrine of laser borelighting at 10 meters, and the 25-meter offset zero, field fire confirmation then qualification. Additionally, it is more accurate and easy to teach; good hunting!

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BAYONETS

Nothing embodies the spirit of the Infantry as well as the bayonet, and this extension of the infantryman has been in use at least since the early 17th century. It is the cold-steel aggressiveness of American infantry that has served and defended this nation since her birth, and which is still a part of the Soldier's kit as we prosecute the global war on terrorism. This issue's Weapons Corner highlights a select number of bayonets that have been used by our Soldiers, by our allies, and by our adversaries, many of which are still to be found in service today wherever men settle the important issues at close range. If you have a topic you'd like to see covered in Weapons Corner, e-mail us at Inf.MagazineDep@benning.army.mil.



The U.S. Model 1905 bayonet (Fig. 1) was designed based upon lessons learned during the Russo-Japanese War of 1904, as well as the American Infantry's own experience in close combat with the .30/40 Krag rifle and its bayonet in the Philippines at the turn of the Century. Most nations favored long bayonets at the time, and the M1905 with its 16" blade was certainly no exception. The M1905 was issued for both the .30/06 M1903 Springfield and the M1 Garand rifles and served us into World War II. In 1942 blades of many existing M1905 bayonets were shortened to 10" and the bayonet was designated the M1905E1 (Fig. 2). From 1943 on, all Garand bayonets were manufactured with 10" blades and standardized as the Bayonet M1. In 1955 the Bayonet-Knife M5 (Fig. 3) was adopted for the Garand.

The No 1 Mk 1 Bayonet (Pattern 1907) (Fig. 4) was the standard bayonet for British forces armed with the .303 caliber Short Magazine Lee Enfield (S.M.L.E.) No 1 Mk III rifle in both World Wars, and the blade measured 17". Even though the S.M.L.E. Mk III had been superseded by the No 4 Mk 1 rifle by World War II, the old S.M.L.E. and its bayonet saw service around the globe. The Czech VZ24, a large-ring 8x57mm Mauser variant rifle, had a knife bayonet with a blade of 11.65" (Fig. 5), while the bayonet of the Yugoslav M48 8x57mm Mauser design of World War II had a 9.84" blade (Fig. 6). Both closely resemble the 8x57mm German Kar. 98 Mauser bayonet of World War II (Fig. 7), with its 9.84" blade.



The most-manufactured of all U.S. rifles, the .30 caliber M1 carbine, had its own bayonet: the M4 (Fig. 8), with a 6.75" blade. The first bayonet for the 5.56mm M16 rifles was the U.S. M7 (Fig. 9), which likewise had a 6.75" blade.



10 During World War II, one of the main infantry rifles of Soviet ground forces was the 7.62x54mm M44 carbine, a variant of the Mosin Nagant long rifle. The M44 is still to be found all over the world, and mounts a 12.25" permanently attached cruciform bayonet with a screw driver-type tip (Fig. 10). Another Soviet short rifle is the 7.62x39mm SKS Simonov carbine, which has a permanently affixed hinged bayonet (Fig. 11) with an 8.75" blade.

The bayonet currently issued to U.S. Soldiers is the U.S. M9 (Fig. 12) with a robust 7" multi-purpose blade which can be used as a wire cutter in conjunction with its scabbard. The M9 bears some resemblance to the Russian Model 1968 SVD bayonet (Fig. 13), whose 6" blade closely resembles that of the countless AK47 bayonet variations of the former Soviet Union and its surrogates. The SVD bayonet shown, for example, was captured in action against Iraqi forces during Operation Iraqi Freedom.



COMPARATIVE BAYONET DATA

<u>Bayonet</u>	<u>Origin</u>	<u>Rifle</u>	<u>Blade Length</u>
M1905	U.S.	M1903 Springfield and M1 Garand	16"
M1905E1	U.S.	M1 Garand	10"
M4	U.S.	M1 Carbine	6.75"
M5	U.S.	M1 Garand	10"
M7	U.S.	M16 Series	6.5"
M9	U.S.	M16 and M4	7"
M1907	Great Britain	Rifle #1, Mk. III and Rifle #4, Mk. I	17"
S84/98	Germany	Kar. 98 Mauser	9.84"
Bodák vz/24	Czechoslovakia	VZ24 Mauser	11.65"
M1924	Yugoslavia	M48 Mauser	9.84"
M1968	Russian	SVD Rifle	6"
M1944	Russian	M44 Carbine	12.25"
M1949	Russian	Simonov Carbine (SKS)	8.75"

Bayonet photos are courtesy of the National Infantry Museum, Fort Benning, Georgia.

In the next issue of *INFANTRY*, Weapons Corner will feature **COMBAT SHOTGUNS.**



Book Reviews



***Germany and the Axis Powers: From Coalition to Collapse.* By Richard L. DiNardo, Lawrence, KS: University Press of Kansas, 2005, 282 pages, \$34.95 (cloth).** Reviewed by Lieutenant Colonel (Retired) Rick Baillergeon.

There is certainly no shortage of World War II literature on the Allies' conduct of coalition warfare. Historians and writers have long analyzed the strengths of the relationship and keyed on the Allies' difficulty in synchronizing operations near the end of the war. However, treatment of Germany's ability to conduct coalition warfare with its partners is severely lacking. In fact, this lack of discussion could give many the erroneous impression that Germany did not practice coalition warfare at all. Richard DiNardo realized this void and seeks to dismiss these thoughts in his outstanding book, *Germany and the Axis Powers*.

It would be easy for DiNardo (a professor of National Security Affairs at the U.S. Marine Corps Command and Staff College and author of several other books on German operations in World War II) to simply rehash campaigns conducted during the war. Fortunately, he gives readers just enough background to set the conditions for the true focus of his book. Specifically, he seeks to answer the following:

■ First, did the Germans attempt to implement any lessons learned from World War I in regards to coalition warfare during their conduct of World War II?

■ Second, overall was Germany successful in conducting coalition warfare?

■ Third, were there specific periods of the war or services in which coalition warfare worked more effectively?

■ Finally, did Germany face the same problems or did they encounter different issues than the Allies in executing coalition warfare?

In answering these questions, the author relies heavily on detailed research and his superb writing abilities. In regard to research, DiNardo utilizes many unpublished sources (mainly German) and

in most cases reinforces his arguments with several distinct sources. A highly detailed annotated notes section (60 pages) allows readers to determine the credibility of these sources and provides them information for additional study if desired. DiNardo transforms this research into highly readable copy. A writer of lesser skills could have easily taken this research and made it into a very dry and dull read. However, DiNardo possesses an engaging writing style and the ability to make strong points in a minimum of words. Thus, his study is concise, yet complete.

As expected, the focal point of the book is Germany's relationship with Italy. Certainly, there is much discussion revolving around North Africa and the Mediterranean operations. Yet, the author does not neglect their connection in the Balkans and the Eastern Front. However, most readers will find the most informative sections of the book are the discussions of the operations of Germany with Finland, Hungary and Romania, which generally receive little or no treatment by historians. Each of these had a unique experience with Germany in coalition warfare and DiNardo details these experiences. DiNardo devotes little copy to Japan since their relationship dealt almost exclusively with strategic issues.

The results of DiNardo's analysis are most interesting. In particular, two points especially stand out. First, the author contends that of the three services, it was the German navy that was most successful in waging coalition warfare. Following the navy, the Luftwaffe had some minor success in operations with the Italian and Romanian air forces and the German army was an abysmal failure (except in some instances in North Africa). Second, Germany did not take to heart lessons from World War I in conducting coalition warfare. These included creating unified command structures, a complete disregard of coalition warfare in the German military education system, and a critical shortage of interpreters. The end result was Germany repeating many of the same

mistakes. In each point, DiNardo lays out strong compelling arguments for his readers.

In DiNardo's introduction he writes, "Taken together this study hopes to examine as fairly as extensively as possible Germany's conduct of World War II as a coalition at a variety of levels. Whether it will say anything 'new' is a matter that ultimately must be left to the discretion of the reader. If it broadens your understanding of the Second World War or, more important, makes you rethink much of what you had heretofore held to be true, then this book served its purpose."

I have no doubt readers of *Germany and the Axis Powers* will find that DiNardo has uncovered some new nuggets and that their overall perspective of the War is significantly broadened. Truly, DiNardo has achieved his purpose.

***Military Power: Explaining Victory and Defeat in Modern Battle,* by Stephen Biddle. Princeton, NJ: Princeton University Press, 2004, 312 pages, \$37.50 hardcover.** Reviewed by Lieutenant Colonel (Retired) Harold E. Raugh, Jr.

"Major warfare since 1900 has actually seen much less real change than most now suppose," asserts Stephen Biddle in this scholarly treatise, "and that the future, too, should bring far more continuity than many now expect." The author argues that the emphasis on a "revolution in military affairs" and its impact on warfare are exaggerated. The employment of forces and the doctrine and tactics used by these units on the battlefield are, according to Biddle, more important than materiel factors alone.

To support this thesis, Biddle (associate professor of National Security Studies at the U.S. Army War College) uses a variety of methods, "ranging from careful historiography to formal theory, archival based case research, large statistical analysis, and experimental testing using a Defense Department simulation model."

Three historical case studies test this theory. The first is Operation Michael, the German offensive fought in March-April 1918 on the Western Front during World War I. Operation Goodwood, the penultimate Allied (mainly British) attempt to break out of the Normandy beachhead in July 1944 is the second paradigm. Lastly, Biddle examines the air and ground offensive in Operation Desert Storm, January-February 1991. Biddle enumerates the key independent variables of technology, numerical strength and imbalances, and force employment of the opposing armies in these operations. Analyses and assessments derived mainly from the case studies are then modeled and compared.

This provocative study will be invaluable for military strategists, theoreticians, and policy makers. It makes a significant contribution to strategic studies.

***Given Up For Dead: American GI's In The Nazi Concentration Camp At Berga.* Flint Whitlock. Cambridge, MA: Westview Press, 2005, 283 pages, \$16.95.** Reviewed by Lieutenant Colonel Michael A. Boden.

Recent scholarship on the Second World War has focused a great deal on the actions and experiences of the common Soldier, and accounts of "The Greatest Generation" have been increasingly common. Flint Whitlock's book, *Given Up For Dead: American GI's In The Nazi Concentration Camp At Berga*, falls in this genre by detailing the experiences of a group of American Soldiers captured either during the early stages of the Battle of the Bulge or in the Vosges during the German *Nordwind* offensive. But instead of humane treatment at the hands of their captors, these Soldiers, mostly Jewish and relatively unknown until a PBS television special in 2003, experienced all the miseries of the Nazi concentration camp system.

Whitlock cites primary archival sources and secondary works seldom, and relies predominantly on survivor accounts and first person testimony from a core group of about 20 men. He pieces together their personal stories of induction, combat, and

capture. The majority of the book revolves around this final experience, when these men were a part of the German prisoner of war camp system. Following a brief period at German Stalag IX-B in Bad Orb, 350 prisoners, many of them Jewish, were separated from their comrades, sent to the labor camp at Berga, and subjected not to the rules of the Geneva Convention, but to the rules of the Nazi concentration camp system. After two months at Berga, the surviving prisoners were sent on a grueling 20-day death-march until liberated by U.S. forces in Eastern Bavaria; of the original 350, only 160 were present at liberation.

Whitlock is a plainspoken writer, and only deviates from the prisoners' narrative when discussing the German executors of the crimes committed against the American internees. The author's animated discussion of the postwar deliberations of these perpetrators, though distinct in method and genre from the rest of the book, is a necessary and welcome element of his narrative.

Though interesting and straightforward, because of his reliance on personal accounts without the enhancement of thorough archival research, Whitlock's narrative will not be considered as one of the most profound in its genre or at the forefront of historical scholarship. There are cases where reference to higher headquarters' communication and/or German sources could have enhanced his story significantly. But, as a survivor account, it is better than many, and will be welcomed by attracted readers.

***Soldiering: Observations from Korea, Vietnam and Safe Places.* By Henry G. Gole. Dulles, VA: Potomac Books, 255 pages, \$27.50.** Reviewed by Brigadier General (Retired) Curtis H. O'Sullivan.

I became acquainted with Henry Gole as an author when I reviewed his work on our shared alma mater, the Army War College. I gave it high marks with a few caveats. This effort is different. It is a collection of individual reminiscences. As Gole himself states, participants normally see only a part of the action. Memories may

be self-serving, purposely misleading, sometimes just careless, and always retrospective and subject to the erosion of time. Personal accounts at the lower levels tend to have limited value. As you go up the chain-of-command, there is a chance of learning something about the big picture.

This is an assemblage of vignettes and anecdotes, which deliberately lack continuity and cohesion. The early '50s to the late '80s is the time frame. The book is in roughly five chronological parts which may be of varying interest to the reader — depending on personal experience and interests. For such reasons, I particularly enjoyed the disconnected takes of his two tours with Special Forces in Vietnam. Gole is a good storyteller, and I found enough sufficiently familiar to bring twinges of nostalgia. Amidst some deadly matters he uses a light tone, with an occasional flash of rollicking humor. He has a streak of cynicism with some blasts at the flaws of the establishment. This may come from the unfulfilled idealism that led to his unusual service record. He performed his patriotic duty as an enlisted man during the Korean War and later married and had a promising career as a teacher. Then he experienced an epiphany from JFK's inaugural address and decided to "do for his country" by returning to the Army. Luckily, there was a provision for someone with his qualifications to come back as a regular Army second lieutenant. Once back, Special Forces seemed the ideal place for his dreams and he describes his time there well. Selfishly, I wish he'd given more space to Benning, Leavenworth, and Carlisle so I could compare our impressions of those formative institutions.

The two maps are adequate for their purposes, and the pictures are the usual assortment of group and individual portraits with some not so standardized. The glossary is a helpful reminder of not recently used terms.

Overall, this was worth reading and should appeal to others who served during the period covered. However, I recommend it especially to those starting a career in the combat arms. There are some insights about small unit leadership worth pondering.



Gary L. Kieffer

A squad of soldiers from Bulgaria, Romania and the United States attempts to evacuate a simulated wounded soldier during convoy-ambush training in Bulgaria July 19, 2006. The training was conducted as part of Immediate Response 06.

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Staff Sergeant Marcus J. Quarterman

Soldiers with the 1st Battalion, 102nd Infantry Regiment patrol areas of Afghanistan in December 2006.

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