Field Artillery

A Professional Bulletin for Redlegs

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Training XXI

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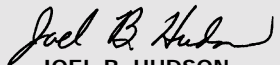***Field Artillery* Home Page**
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Transforming the Field Artillery School

On 9 January 1902, the 29th Battery of Field Artillery arrived at Fort Sill, the first FA unit to be stationed permanently at the installation. The environment at Fort Sill was particularly well suited for FA training, thus beginning Fort Sill's long legacy of service in providing professional competencies to Field Artillerymen.

During the past 100 years, the branch has witnessed significant changes in training requirements and methodologies as weapons systems, organizations and operational environments changed.

Today, the Field Artillery School is about to undergo significant institutional changes, once again. These changes are necessary to adapt to the current requirements of our operating forces, to take advantage of the latest in educational technologies and to position the Field Artillery to meet the challenges of the contemporary operating environment and a transforming Army.

The Field Artillery's Command Sergeant Major Rodney L. Beck and I have conferred with the majority of serving Field Artillery leaders, active and Army National Guard, as well as our senior maneuver commanders and their enlisted advisors. Our purpose was to ensure we understood the personnel, materiel and training issues affecting our operating forces. We have seen firsthand the impact of the current levels of operations tempo (OPTEMPO) and the effects of personnel shortages in the force, and we understand the challenges units face in executing combined arms collective training at home station. We also have witnessed firsthand the excellence in fire support that our corps and division artilleries and our FA brigades are demonstrating worldwide.

Visits to our units have convinced me that while issues related to the latency and replication of fires exist, our Field Artillery formations across the force at every level are responsive to the needs of the combined arms team. The effectiveness of fires is particularly striking where maneuver commanders are committed to achieving combined arms solutions and our fire supporters are innovative and aggressive.

With the introduction of the contemporary operating environment into our dirt Combat Training Centers and the Battle Command Training Program, the importance of developing innovative and aggressive combined arms tactics, techniques and procedures will be magnified.

As we deal with the adjustments dictated by the contemporary operating environment, we also must recognize that the Army will be in a state of constant change for the next 30 years. We will operate with three force structures: Legacy, Interim and Objective, each with differing doctrine, organizations and training requirements.

For the Field Artillery, this will include operating 10 or more weapons systems at multiple echelons in the three force structures in both the Active and Reserve Components. Our soldiers and leaders need focused training for the specific individual and collective competencies required to succeed in their respective forces and organizations and with the particular weapons systems they must employ.

The Field Artillery School must adapt to meet the needs of soldiers, leaders and units of today and, simultaneously, address the educational requirements of FA units in the Interim and Objective forces. We are "moving out" to reduce the time soldiers spend in resident instruction by providing focused assignment-based institutional training combined with distance learning modules. This training is enabled by educational technologies and virtual simulations.

The results will be an increased ability to focus on instruction relevant to soldiers' specific duty assignments, refresh and sustain individual competencies over time and give greater flexibility in the timing of institutional training. This approach will increase the readiness of FA units, active and National Guard, by reducing the time soldiers are away from their units or employers.

In this edition, the article "Fires Training XXI: A Training Strategy for the 21st Century" by Colonel (Retired) John K. Anderson outlines the FA's strategy to maintain readiness as we transform the branch. The strategy is a comprehensive web-based approach to training that provides commanders training support tools now. It also will serve as the basis for us to formally seek resources to develop training aids, devices, simulators and simulations (TADSS) that will enhance our collective training programs. As our concepts for the Interim and Objective Forces mature, we will update the strategy and ensure we can dynamically apply the most appropriate training methodologies to the training requirements.

The FA School is transforming to meet the requirements of full-spectrum operations and Army transformation. Our goal is to synchronize leader and soldier development with the needs of the Army to increase readiness. We are committed to providing the branch the very best institutional training and training support possible to make the Field Artillery an ever more lethal contributor to the combined arms team.
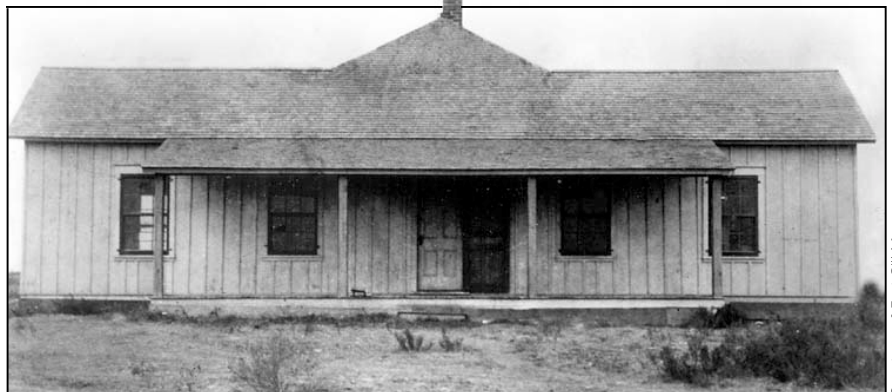
First School of Fire for Field Artillery, Building 432, Fort Sill, 1911

Courtesy of Fort Sill Museum

Brigadier General William G. Webster, Jr.
Director of Training, Office of the Deputy Chief of Staff for Operations and Plans, Pentagon

Post-September 11th:
New Emphasis on Transforming Training

Interview by Patricia Slayden Hollis

Q *Since 11 September 2001, what has changed about Army training?*

A What has changed the most about Army training is the realization that some risks we previously have assumed because of limited resources are no longer acceptable. In my memory, the Army never has been fully funded for all requirements. The Army was funded this year at about 80 percent of what we need. In the last several years, the Army has been funded at about 70 or 80 percent. This means training competes for dollars with installation support, operations and maintenance and a number of other funding areas.

We no longer can afford to take the training risks we have in the past. For example, the Chief of Staff of the Army has directed that all individuals, crews, squads and platoons must fully qualify on their individual and crew-served weapons within the next few months and then qualify a second time five months later. The Chief is front-loading training this year because we don't know what the Army will be asked to do and when. As the bottom line, we want all soldiers and small units to be very confident and competent with their weapons systems.

We always have taken some risk in STRAC [standards in training commission] by not buying enough ammunition for our assistant gunners and combat support and service support personnel to qualify more than once a year or, in some cases, not even to qualify, just to familiarize. But the Chief wants to change that. We have no "front line" in this campaign with its new operating environment. Every soldier is at risk—all soldiers must be able to protect themselves and their force.

Since September 11th, we've also realized we need to speed up some acquisitions of TADSS [training aids, devices, simulators and simulations]. We don't have enough time to conduct all the training we need for maximum preparedness.

To give you an example, some small unit individual and crew-served simulators allow soldiers to run scenarios over and over, building confidence with marksmanship and the experience one needs for rapid decision making in combat. Without simulations, training scenarios over and over to give soldiers a wide array of experience is very expensive and labor-intensive. We also don't have the time or range space.

We are learning new lessons from antiterrorism and force protection that apply to expanding specific military occupational specialty training, collective training and leader development training in all the schoolhouses, including at Fort Leavenworth [Command and General Staff College] and the Pre-Command Course.

Q *Some say the FA is failing to provide responsive, accurate close supporting fires to maneuver units at the dirt CTCs [Combat Training Centers]. Based on your experience as a former Commanding General of the NTC [National Training Center, Fort Irwin, California] what are your thoughts?*

A The notion that indirect fire accuracy and responsiveness challenges at the CTCs are a Field Artillery problem is *hogwash*. It is a combined arms problem.

The problem is one of integrating and synchronizing fires with maneuver. If you take a look at the five or six common negative trends at the NTC, you'll see some common characteristics.

The problem at the CTCs is partially one of how difficult it is to train realistically. First, integrating and synchronizing fires and maneuver is combined arms in nature and incredibly complex. Next, it is not trained well in simulations or at home station. It takes lots of time, lots of resources and lots of range space to train fires integration and synchronization with maneuver in scenarios over and over.

Last, the integration and synchronization of fires and maneuver is not trained well at any schoolhouse. The Field Artillery School teaches artillery, the Armor School teaches armor and the Infantry School teaches infantry. They all teach a little combined arms operations, but the Army has difficulty pulling combined arms operations together in any one place until units get to the CTCs.

The problem at the CTCs is also partially one of technology. It is very difficult to replicate the effects—the terrorizing, massively destructive effects—of US and Soviet-style indirect fires on the battlefield without hurting soldiers in training.

To help solve the problem, we need to improve the fires computer instrumentation database at the CTCs to more quickly and accurately identify where

the artillery rounds are going and determine casualties. The dirt CTCs also need to increase the number of fire markers and look for realistic ways to eliminate them in the long run.

Q *How can the Army enhance combined arms home station training?*

A We have to have a better mix of live, virtual and constructive training events at home station training. And that means buying TADSS that allow us to have realistic virtual and live simulations.

We also must ensure our replacement system for MILES [multiple integrated laser engagement system] at the dirt CTCs determines where people are and who shot whom and are embedded in all combat vehicles. The Chief wants to embed engagement simulation and instrumentation systems into our vehicles. The same systems would be available to soldiers training at the CTCs, at home station or deployed overseas preparing to go into combat. And, eventually, in the future combat system [FCS] of the Objective Force, soldiers will be able to flip a switch on their vehicles and go from wartime live-fire capabilities to virtual and constructive simulations while internetted with the rest of the vehicles in the battlespace.

At home station, these embedded capabilities would make training more realistic but not dependent on some fixed infrastructure on an installation. That's where we are headed.

There are several other things we are doing to improve home station training. We are incorporating lessons from the current operating environment into home station training scenarios—including some of the unpredictable, asymmetrical kinds of attacks that we have been dealing with. We are acquiring more ammunition and upgrading installation ranges so soldiers can more easily be competent and confident with their weapons in the day and night—under all conditions.

Q *The Army institutional training and education system (officer, NCO and warrant officer) is transforming with the Chief of Staff's new Leader Development Campaign Plan [LDCP], the results of a recent Department of the Army study. The officer education*

system (OES) will be the first of the three transformed when the OES plan is finalized. In general, what are the Chief's overall intent and the objectives of the institutional transformation?

A The objective is to develop adaptive leaders who can make the right decisions for their subordinates while planning and executing combat operations. We start developing leaders as young soldiers and continue as we send them through training and then simulated exercises over and over, making them comfortable with their combat expertise and decision-making skills in changing situations—building the foundation for adaptive leadership.

We are in the process of transforming the way we train and develop leaders in our institutions, in units and through self-development. Each is important, but the contents of what each teaches must change to better prepare leaders to do their jobs.

Although we are transforming training for all groups of leaders, we are further along in the OES portion of the study because we started there. For officers, the Army is changing training in the schoolhouse and simulations to emphasize combined arms leadership in tactical assignments rising to joint operations across the spectrum of conflict in the new operating environment.

For example, we must transform institutional training to produce a young officer who, from the beginning, is fully qualified and prepared to take a small unit to the field and accomplish basic soldier tasks. Lieutenants must be more comfortable with their brother and sister lieutenants across the entire Army—feel a closer cohesion with their counterparts, not just with those in their branches. To accomplish all this, TRADOC [Training and Doctrine Command] is considering a common Basic Officer Leaders Course [BOLC] that would precede shorter branch training

courses. A second lieutenant of any branch must be able to lead soldiers in combat the day he arrives at his first unit.

OES also is being redesigned at the other levels, including captain, major, battalion/brigade commanders and even is adding an operational refresher course for assistant division commanders and corps commanders. The concept for the entire OES redesign is being staffed across the Army. The OES redesign should be finalized this spring.

During OES, courses will emphasize critical thinking, problem solving and decision making in experiential learning designed for the various levels of an officer's career.

Officers will have more distance learning work before they attend their OES courses. Distance learning courses for branch-qualification—MOS [military occupational specialty] qualification for enlisted soldiers—will be completed during duty hours. Distance learning courses for individual self development will be completed as agreed to by the commander but, generally, during off-duty hours.

We are rapidly expanding the number of distance learning courses, not just in preparation for institutional training, but also for unit training. It won't be long before a commander will be able to tell an officer being assigned a new job to complete courses "X, Y and Z" to prepare for the new job.

Using web-based technology, soldiers and leaders will be able to access job descriptions and references for their current or future assignments, on-line manuals for, say, maintaining their vehicles, and a host of other information.

Soldiers will be able to get on their computers and ask questions of experts back at the schoolhouse or in some other unit and get answers in near real-time. They will be able to share the same information worldwide.

As we move toward the Objective Force, soldiers and leaders will be able

"The combined arms team members must know each other very well and where, when and how indirect fires support maneuver."

to turn on computers in their vehicles and, in a distributed mode, access information—whether they are in the motor pool, in the field or deployed worldwide. The same computer that gives them situational awareness or helps them plan and execute fire missions also will allow them to go out on the web through the Army Knowledge Online portal and get the information they need to do their jobs in near real-time, including maps, weather, the latest news and other information during real-world operations.

Q *What are the plans for CTC training to reflect the contemporary operating environment?*

A Training at the CTCs has been evolving since the Cold War—it is just intensifying. Since September 11th, the commanding generals of the CTCs have developed three or four new rotation scenarios for brigade operations.

The OPFOR already fights quite differently than it did five years ago. OPFOR units now operate more widely dispersed on the battlefield, coming together briefly for operations and than dispersing again.

The CTC battlefield is more nonlinear, and units have to deal with many more mines. For example, one estimate has as many as 11 million mines across Afghanistan. Units face more threats throughout the battlefield—in the front, rear, left and right—conventional weapons and weapons of mass destruction, such as chemical and biological. The OPFOR is challenging commanders with deception, infiltration and other such operations during the entire CTC rotation.

Q *What message would you like to send Field Artillerymen stationed around the world?*

A The Field Artillery must continue to do what it has been doing for hundreds of years—that is produce well-trained NCOs and gunners who know how to use their systems to provide accurate, predicted and timely fires. The Field Artillery School does that extremely well.

You, Field Artillerymen, out there in division and corps units have got to *fight* to get onto the training battlefield with infantry, armor and other brothers of arms—in the field or in simulations. The combined arms team members must know each other very well and where, when and how indirect fires support maneuver.

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Brigadier General (Promotable) William G. (Fuzzy) Webster, Jr., is the Director of Army Training in the Office of the Deputy Chief of Staff for Operations and Plans at the Pentagon. In his previous assignment, he was the Commanding General of the National Training Center, Fort Irwin, California. He also served as Assistant Division Commander of the 3d Infantry Division (Mechanized), Fort Stewart, Georgia. General Webster commanded the 1st Brigade, 1st Cavalry Division, Fort Hood, Texas; the 3d Battalion, 77th Armor in the 4th Infantry Division (Mechanized), Fort Carson, Colorado; and an Armor company in the 5th Infantry Division (Mechanized), Fort Polk, Louisiana. He is a graduate of the Army War College at Carlisle Barracks, Pennsylvania, and holds a Master of Military Arts and Science from the Command and General Staff College, Fort Leavenworth, Kansas.

New Safety Course Mandatory for Commanders—Battery Through Brigade

The Training and Doctrine Command (TRADOC) is testing a self-paced distance learning Commanders Safety Course of 24 academic hours that soon will be mandatory for all officers before they take command. The on-line course is designed to give commanders the tools they need to build unit safety programs through all command levels. The course will be a pre-command requirement effective sometime before the end of the Second Quarter of FY02. The Army Safety Center at Fort Rucker, Alabama, currently is validating the course.

Officers waiting to take batteries will be required to complete the course before taking command. Likewise, future battalion and brigade commanders will have to have completed the course before beginning the portion of the Pre-Command Course taught by the Command and General Staff College at Fort Leavenworth, Kansas.

The course will provide the tools and knowledge to implement and manage a unit safety program. The first tool is for risk management. It helps identify hazards as well as control measures to minimize risks involved in unit and individual actions.

The second tool is for building a unit safety program. It uses an example of a program designed by the 2d Airborne Brigade, 82d Airborne Division, Fort Bragg, North Carolina. Students will learn how to build a program using data gathered from a large safety program reference list.

The last tool is a resource navigator, a portal to the Army Safety Center. The navigator contains URLs (uniformed resource locators) for safety-related links.

Students will be able to take the tools with them after completing the course. They can either download them from the Reimer Digital Library or request a CD-ROM from the Army Training Support Command at Fort Eustis, Virginia.

The Commanders Safety Course is not just for commanders, but also for safety officers or others working with safety programs. The risk management portion is being considered for incorporation into the Sergeants Major and First Sergeants Courses taught by the Sergeants Major Academy at Fort Bliss, Texas. However, any officer, warrant officer or NCO will add to his professionalism by taking the course.

The course is the result of a directive by the Chief of Staff of the Army. General Eric K. Shinseki wanted a course to help commanders identify and reduce needless accidents and deaths of soldiers. He also wanted a course that would qualify an officer, sergeant major or first sergeant to perform safety program duties and invigorate risk management programs and training.

Jim Caldwell
TRADOC Public Affairs
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Faster Fires:

TTP for Sensor-to-Shooter and Clearance of Fires Operations

By Lieutenant Colonel Scott G. Wuestner

Today's brigade task force is well-equipped and manned to place indirect combat power at the critical time and place. The problem is task force indirect fires are not responsive in the close fight.

At least part of the problem is the sensor-to-shooter architecture. The system is bogged down with layers and layers of command and control nodes that clear fires.

In addition, doctrinal clearance of fires procedures are neither followed nor rehearsed. In Joint Readiness Training Center (JRTC) rotations at Fort Polk, Louisiana, we rarely hear units discuss the clearance options of *pre-designated* or *decentralized* control in the operations order (OPORD) or during rehearsals. Units have defaulted to *centralized* control for all tactical operations because they have little confidence in the

company fire support team's (FIST's) clearing fires and little training in the clearance process.

This article focuses on TTP for the Field Artillery forward observer (FO) and Kiowa Warrior aerial observers employed as sensors to make fires faster and more responsive. I outline TTP to streamline sensor-to-shooter operations and clearance of fires procedures.

Weighting the Main Effort. The decision to establish either centralized or decentralized control of fires is based on the tactical mission and the results of the military decision-making process (MDMP). A clear task, purpose and end-state must be assigned to both the sensor and shooter.

For example, during the movement-to-contact phase at the JRTC, requirements to mass artillery fires are limited.

So how do FA units task organize their firing batteries? They weight the main effort by assigning priority-of-fires (POF) and priority targets to a specific battery to support a specific maneuver battalion. (Unfortunately, priority targets are not consistently used throughout all phases of operations at the JRTC.)

Of note, on an average, it takes 30 to 45 seconds to shoot a priority target; in comparison, it takes three to three and one-half minutes to shoot a target of opportunity—a significantly longer time to deliver mortar or artillery fires.

In most cases this would be the battery habitually assigned to the battalion task force. This battery would respond to calls-for-fire (CFFs) from the infantry battalion as a first priority and the FA battalion as a second priority (much like a direct support, or DS, mission for an FA battalion).

This does not mean the battalion can't mass if the target warrants it. But the FA battalion must do the target analysis and determine what targets will require massed fires before executing the mission.

This weighting of the main effort eliminates two levels of control or delay. It eliminates the battalion fire direction center (FDC) as an additional technical step and the brigade or battalion fire support element (FSE) as a clearance headquarters for all fires.

Using Focused Targets and Clear Graphics. A second consideration is the development of targets or target areas of interest (TAIs) during the MDMP to focus the sensor and orient the shooter. Limited, focused targets combined with clear and concise graphics enable units to clear fires more efficiently and effectively.

We have lost our ability to portray the battlefield graphically. For example, during movements-to-contact, some units design "horse blankets" that aren't tied to the current operational graphics. The horse blanket must be tied to specific phase lines, boundaries and other graphical measures that are tied to the terrain. FSOs must be involved in the MDMP process and develop graphics that facilitate clearance of fires integrated with maneuver.

Such linkages facilitate the brigade's ability to shape the deep fight by moving fire support coordinating measures (FSCM) as close as possible to friendly forces. With proper graphics, fire supporters can give close air support (CAS) aircraft and attack helicopters much needed battlespace to execute the deep fight.

In the end, detailed graphics coupled with priority targets reduce sensor-to-shooter times significantly.

Clearing Fires and Employing Sensor Control Options. Given focused sensors and shooters with executable graphics, units can optimize the sensor-to-shooter linkage and improve fires in the close fight. The next consideration is the pre-clearance of fires against specified targets tied to specific sensors.

Pre-Clearance of Fires. Typically, fire support coordinators (FSCOORDs) and brigade and battalion fire support officers (FSOs) at the JRTC don't pre-clear fires to the lowest execution level. Most units cover target responsibility using the PLOT-CR methodology (purpose, location, observer, trigger—communication and rehearsals) and do not discuss types of sensor controls or clearance of fires procedures.

Rapid clearance of fires is tied directly to the type of control specified for the sensor and whether or not they have POF. Using our current doctrinal definitions for "centralized," "decentralized" and "pre-designated" control, the figure shows the relationship between POF, the type of control and communications. These procedures apply from the brigade down to the platoon levels.

Communications. Another major consideration is the communications system and structure. Units should ask two questions. What is the distance between the sensor and shooter and do we need

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1. POF for a Specified Shooter

- **Centralized Control**
  - *Good communications with the Higher FSE—*The sensor controls the shooter after getting clearance to engage from the higher level FSO.
  - *No Communications with the Higher FSE—*The sensor works through the shooter or chain of command to receive clearance. The shooter does not engage without clearance.

- **Decentralized or Pre-Designated Control***
  - *Good Communications with the Higher FSE—*The sensor controls the shooter directly (i.e., pre-arranged target(s), lead elements in movement-to-contact, shifting priority targets, etc. The Kiowa Warrior or FO executes the CFF directly with the firing battery. (This is a version of Option 4 listed in the new *FM 6-20-40 Tactics, Techniques and Procedures for Fire Support for Brigade Operations.)* The FSO monitors the CFF. (Note: He does not have to clear the mission; it already has been cleared during planning, coordination and reshearsals.) The sensor sends BDA/mission status to the higher FSE.
  - *No Communications with the Higher FSE—*The sensor controls the shooter directly (i.e., pre-arranged target(s), lead element in movement-to-contact, shifting priority targets, etc. The Kiowa Warrior or FO executes the CFF directly with the firing battery. (This is a version of Option 4 listed in the new *FM 6-20-40.)* The sensor works through the shooter or chain of command to send BDA/mission status to the higher command and control element or FSE.

2. No POF for a Specified Shooter

- **Centralized, Decentralized or Pre-Designated Control***
  - The sensor requests the firing asset from the higher FSE. The FSO approves or denies the mission. If the mission is approved, the asset returns to the appropriate sensor that had POF, once the mission is complete. The sensor provides the FSO BDA or mission status. (Note: the POF and type of control can be changed at any time in the operation.)

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*To use decentralized or pre-designated control, units must clearly understand the scheme of maneuver and ROE and have conducted detailed planning and rehearsals.

Legend:
  BDA = Battle Damage Assessment **FO** = Forward Observer **FSO** = Fire Support Officer
  CFF = Call-for-Fire **FSE** = Fire Support Element **ROE** = Rules of Engagement

Clearance of Fires Procedures. This figure gives the clearance procedures when a unit has priority of fires (POF) from a specified shooter or no POF from a specified shooter, based on the type of control and communications.

to establish a separate communications net between the sensor and shooter?

At times, these questions are the key element of the process. If the sensor can't talk to the shooter, they can't shoot.

Most units do not properly analyze radio ranges, line-of-sight diagrams and net configurations between the sensor and shooter before executing all phases of an operation. During a movement-to-contact, communications between the FO with a long whip antenna and a firing battery is normally less than eight kilometers, the planning range for the single-channel ground and airborne radio system advanced system improvement program (SINCGARS ASIP). However, FOs consistently send missions to the company FSE or battalion FSE for relay to the battalion FDC. This is inefficient and ineffective.

If units must retrans a battery CFF net, they usually pick the brigade FSE or battalion observed fire net over the battalion or battery CFF net. This net becomes task saturated with fire support coordination, tactical fire control and CFFs and fails to facilitate rapid CFFs. A light FA battalion can retrans two nets based on current modified table of organization and equipment (MTOE).

The FSCOORD must decide how to task organize his nets. He must consider retransmitting the main effort battalion's battery CFF net during movement-to-contact operations. During the attack or defense phase, the CFF may shift to the battalion CFF net where massing of fires becomes more critical.

There has been much discussion about quick-fire nets (voice only, not digital). *FM 6-20-50 TTP for Fire Support for Brigade Operations (Light)* defines two types of nets: the quick-fire net and the exclusive net. A quick-fire net (voice) authorizes direct association of an observer with a selected weapon system (normally Field Artillery). Although the designated observer is not the only observer on the net, he has the highest priority for CFFs. In a voice net, the net control station (NCS), which is normally the FDC, restricts all other net traffic immediately upon receiving a request for fire from the priority observer.

An exclusive net (voice) is a fire direction net designated to be used solely by the observer and the appropriate FDC for a limited time (as a field expedient). No other sensor enters the net except in an emergency. Exclusive nets are not used very often because they tie up assets for extended periods.

Currently all light divisions use one net for both mortar CFFs and battalion fire support coordination.

As you can see, we have some redundancy in our definition of a quick-fire net and in the execution of our FO control options. If an FO or Kiowa Warrior observer is given POF and either decentralized or pre-designated control, then he has the highest priority for CFFs.

Most units end up calling a habitually associated CFF net, such as the battery CFF net, a quick-fire net. This is not a quick-fire net. Using a battery CFF net is nothing more than changing the sensor priority of the battery and executing decentralized fire direction.

In the end, the definition is irrelevant as long as the process of tying specific sensors to a shooter is planned for and rehearsed.

There are two other ways to reduce sensor-to-shooter times for battalion and company teams. The first is to establish a separate battalion mortar net. Currently all light divisions use one net for both mortar CFFs and battalion fire support coordination. The net again becomes saturated with coordination and CFFs occurring simultaneously. This can be disastrous. There should be a separate net for 81-mm mortar CFFs and one for battalion fire support coordination.

Second, ground forces should control Kiowa Warriors using a separate net. Currently, Kiowa Warriors contact ground forces using the maneuver company command frequency. This method inhibits the company commander from controlling his company and ties up his net, especially CFFs sent over that frequency.

A separate permanent net or quick-fire net should be established between the company FSE/FO and the aircraft—just like the artillery battery CFF nets. The FSO can send the initial situational information to the aircraft, and the company FSE can control the Kiowa Warriors in concert with the commander's guidance, just like the artillery.

These techniques are not new. Unfortunately, units have strayed away from some of these basic procedures.

Our task is to provide timely, accurate fires for our maneuver forces. We do this by weighting the main effort with POF and priority targets and using dedicated batteries; using detailed graphics and FSCM that facilitate indirect and direct fires; ensuring clearance of fires and sensor-to-shooter options are clearly written and thoroughly rehearsed; and configuring communications to talk to the lowest level to rapidly execute fires.

As light and contingency force fire supporters, our ability to execute rapid, accurate fires in the close fight remains critical to the Field Artillery's remaining relevant on today's transforming battlefield. The more we look for different ways to speed up sensor-to-shooter responsiveness, the more we see our doctrine is applicable—if used properly—and effective in supporting maneuver in the close fight.

Lieutenant Colonel Scott G. Wuestner is the Senior Brigade Fire Support Observer/Controller (O/C) at the Joint Readiness Training Center (JRTC), Fort Polk, Louisiana. Also at the JRTC, he was the Senior Fire Support Combat Service Support (CSS) O/C. He served as S3 for the 3d Battalion, 319th Airborne Field Artillery Regiment and Brigade Fire Support Officer (FSO) for the 504th Parachute Infantry Regiment, both in the 82d Airborne Division, Fort Bragg, North Carolina. He also served as an FSO for the 1st Special Forces Operational Detachment-D, Fort Bragg; the Battalion FSO for the 2d Battalion, 75th Rangers at Fort Lewis, Washington; and the Battalion FSO for the 3d Battalion, 17th Infantry, part of the 7th Infantry Division (Light) at Fort Ord, California. He commanded A Battery, 5th Battalion, 15th Field Artillery, also in the 7th Division. Lieutenant Colonel Wuestner was a Fire Support Instructor for the Field Artillery Officer Basic Course at the Field Artillery School, Fort Sill, Oklahoma. He is a graduate of the Command and General Staff College, Fort Leavenworth, Kansas, and holds a Master of Arts in Management from Webster University in Missouri.

FIRES

Training XXI

A Training Strategy for the 21st Century

By Colonel (Retired) John K. Anderson

The strategic environment has changed dramatically since the end of the Cold War. In broad categories, Figure 1 outlines these changes. Each category imposes corresponding adjustments to the way the Army must organize, equip, train and execute its missions.

The changes in the threat we face are, perhaps, the biggest driver of changes to the way the Army trains. Potential adversaries are developing capabilities more suited to their cultures, circumstances and their perceived enemy. These include capabilities to counter those of the most advanced army in the world: the US Army.

The threat in the contemporary operating environment spans the spectrum from disrupting our way of life to violent terrorist acts, such as those on September 11th, to major theater war. For example, based on the terrorist threat, the content of our training now will put more emphasis on homeland defense, force protection, psychological operations, facilities security and other areas.

The threat levels that tend to be the most difficult to deal with and train to are those at the higher end of the spectrum. Aware of their vulnerabilities to our precision strike and control of the air, adversaries will attempt to avoid massing their forces in linear echelons.

Instead, they will employ selective precision strike and rapid tactical and operational maneuver from areas of sanctuary and other asymmetrical actions aimed at continuous engagement. They can be expected to disperse and operate from areas of physical and moral sanctuary, often located in complex and urban terrain and often using noncombatants and manmade and protected structures as shields. From such locations, the enemy will attempt to initiate force-on-force battles at the time and place of his choosing, integrating decentralized nonlinear maneuver and precision fires in simultaneous operations and using unconventional and special purpose forces.

The opponent's goal is to offset our technological advantages by fighting during periods of reduced visibility in an environment in which they can gain sanctuary from our effects. They will attempt to preserve their military forces as a means of ensuring continuation in power.

This changing threat means our future Army requires inherent versatility and adaptive soldiers and leaders. The Chief of Staff of the Army directed implementation of the Army Transformation Plan. Fires Training XXI is the Field Artillery's training strategy for maintaining readiness as we transform the branch.

This article provides an overview of Fires Training XXI and an explanation on how units use it. The strategy covers all aspects of FA and fire support (FS) training and is designed to ensure a high state of readiness. It ensures well-trained soldiers and adaptive and multi-functional leaders and battle staffs that can synchronize fires in combined arms operations against the enemy in the contemporary operating environment. In this regard, battle staffs are treated similarly to weapons crews in the strategy and are trained at the same frequencies.

The strategy integrates combined arms training strategies (CATS), artillery tables (ATs), training support packages (TSPs) and mission training plans (MTPs) to identify the training events and resources to maintain both individual and unit readiness, based on the unit commander's mission-essential task list (METL). It applies to both the Active and Reserve Components.

The strategy has three training priorities. First, we train tactically and technically proficient small units (sections, platoons and batteries) capable of executing METL tasks to standard while operating relatively independently in diverse environments. Next, we develop adaptive leaders and soldiers capable across the operational spectrum anywhere in the world. And third, we train battle staffs that can synchronize fires in combined arms operations. This latter training is no longer implied—the strategy specifies training events for staffs at all levels.

Fires Training XXI is maintained on the Fort Sill Home Page (http://155.219.39.98). This allows training developers in the FA School at Fort Sill, Oklahoma, to keep the strategy up-to-date based on input from the field.

The strategy covers the three components of training—institutional, unit and self-development. Figure 2 provides a summary of the contents of the strategy.

1980-1994
• Limited Digital Equipment
• Controlled Operational Tempo
• Clearly Defined Threat
• Fewer Environmental Issues
• Sufficient Funding
• Clear Mission-Essential Task List Focus
• Sufficient Training Resources
• Sufficient Manning

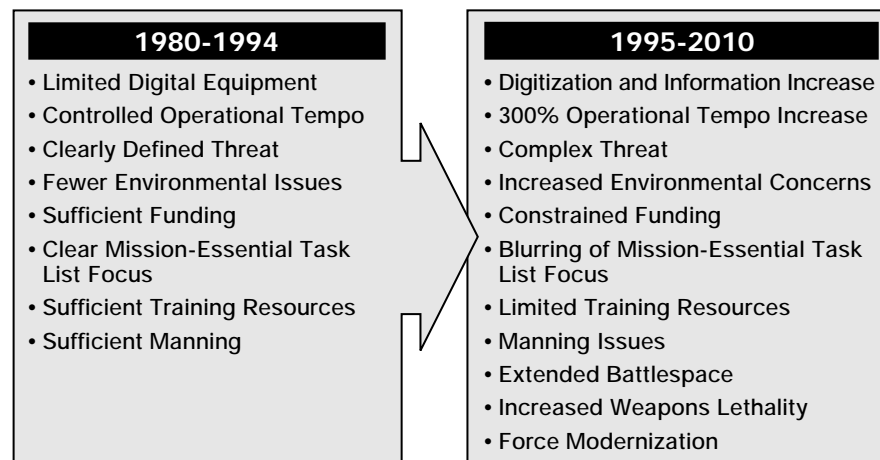| 1995-2010 |
|---|
| • Digitization and Information Increase |
| • 300% Operational Tempo Increase |
| • Complex Threat |
| • Increased Environmental Concerns |
| • Constrained Funding |
| • Blurring of Mission-Essential Task List Focus |
| • Limited Training Resources |
| • Manning Issues |
| • Extended Battlespace |
| • Increased Weapons Lethality |
| • Force Modernization |

Figure 1: Changing Strategic Environment

Chapter/Appendix	Highlights
1. Introduction	Explains purpose and scope and the Army Training Strategy. Prescribes delivery methods for automated systems approach to training (ASAT), Reimer Digital Library Data Repository (RDL DR) and standard Army training system (SATS).
2. Individual Training	Describes individual development courses. Lists types of training available. Defines tasks for Master Gunners. Lists distance learning (DL) methods available for individual training. Lists TADSS available for individual training.
3. Institutional Training	Describes elements of institutional training. Defines initial entry training (IET) content. Directs transition from "process" to "experiential" leader training. Directs new DL course for chief warrant officers two. Defines categories of digital training. Defines FA School DL program.
4. Unit and Battle Staff Training	Describes when and how to train what to whom and where. Explains how to plan training. Illustrates combined arms training strategies (CATS). Defines the five levels of battle staff training. Defines training frequencies by the training readiness category TRC) of the unit. Lists CATS events and frequencies for all echelons. Describes the benefits of using SATS.
5. Self-Development Training	Prescribes self-development as the third component of training. Defines a goal of 40 hours per year. Explains the components of directed and self-motivated training. Details the CSA Army Professional Reading Program.
6. System Training	Describes the purpose of synchronizing training, doctrine, combat and material developments. Defines responsibilities during phases of the acquisition cycle. Ensures training products for operational training (OT), new equipment training (NET) and institutional training. Prescribes the use of ASAT for all training development. Describes NET methods and responsibilities.
7. Training Aids, Devices, Simulators and Simulations (TADSS)	Lists current and programmed TADSS (individual and section levels). Specifies the types of events for TADSS use. Describes available sim-stim devices for levels I-III battle staff training. Defines objective levels I-III training devices. Describes devices for levels IV-V battle staff training. Defines objective levels IV-V training devices.
A Individual Training Strategies	Lists tasks by skill levels. Outlines the training location. Lists the types of training products available for each task.
B Institutional Digital Training	Outlines the strategy to conduct institutional digital training. Outlines the four categories of digital training. Defines the category of training required by duty position. Defines in which institutional course the training will be conducted.
C Unit and Battle Staff Training	Contains an annex for every type of Field Artillery unit. Lists crawl, walk, run CATS events for every echelon. Lists required gates, frequencies and multi-echelon opportunities. Lists TADSS, training support packages (TSPs) and artillery tables (ATs). Lists CATS, TSPs and ATs hyperlinked to the FA School's home page. Defines ammunition requirements. Contains Bradley fire support vehicle (BFIST) gunnery training strategy.
D Chief of Staff of the Army (CSA) Professional Reading Program	Lists reading by junior, mid-grade and senior officers and NCOs.
E System Strategies	Lists tasks by each military occupational specialty (MOS) and skill level for each system. Depicts where each task initially is taught. Provides system-specific tasks only.
F TADSS	Lists current and programmed TADSS by system. Explains the levels of training for which the TADSS are appropriate.
G Implementation Strategy	Outlines specific unit and institutional responsibilities. Specifies the responsible department/directorate within the FA School.

Figure 2: Summary of Fires Training XXI Contents (http://155.219.39.98)

	Crawl		Walk		Run	
	TRC A	TRC B/C*	TRC A	TRC B/C	TRC A	TRC B/C
Crew/Section	W	M/Q	M	S	Q	A
Platoon	W	M/Q	M	S	Q	A
Battery	W	M/Q	M	S	Q	A
Battalion	W	M/Q	M	A	S	A
Brigade/Div Arty	W	Q	M	N/A	S	N/A
Corps Artillery	W	Q	M	N/A	S	N/A

Legend:
W = Weekly   M = Monthly   Q = Quarterly   S = Semiannually   A = Annually

*Digital sustainment training is monthly; all other "Crawl" training is quarterly.

Figure 3: Training Frequencies for Training Readiness Categories (TRCs) of A Units (Active), B Units (Army National Guard and Enhanced Brigades) and C Units (All Other FA Units)

Planning Training. The first step in developing a training plan is to determine the unit METL following the procedures outlined in *FM 7-10 [25-101] Battle Focused Training*. As part of this procedure, the commander identifies specific missions for his unit using the unit's MTP, the collective tasks that support the missions and the individual tasks that support the collective tasks.

The commander then gets his unit's CATS off the Fort Sill Home Page. CATS outlines how many training events (both individual and collective) the unit can accomplish in a training year.

CATS uses the Crawl-Walk-Run gated methodology and takes into account personnel turnover and preparations for a capstone training event, such as an external evaluation (EXEVAL) or a Combat Training Center (CTC) rotation. The commander then tailors CATS for his unit's METL.

Unit trainers use standard Army training system (SATS) software to design the training. SATS has evolved from a system that primarily produced training schedules into one that provides substantially expanded automation support for unit training management functions based on current training doctrine. It is a Windows-based point-and-click system. SATS sup-

ports planning, resourcing, evaluating and assessing training, as well as tracks operational readiness.

Next the commander goes to the home page to get the TSP for the CATS events. The TSPs tell him how to train each

Unit trainers use standard Army training system (SATS) software to design the training. SATS has evolved from a system that primarily produced training schedules into one that provides substantially expanded automation support for unit training management functions based on current training doctrine. It is a Windows-based point-and-click system.

collective event. He also gets the Army school system (TASS) courseware or computer-based instruction (CBI) or other multimedia products that tell him how to train the individual events. Finally, he again uses SATS to develop a database that tracks all the information: the status of training, requirements for and expenditure of resources, and an evaluation of training effectiveness.

Using the Strategy. Fires Training XXI defines the optimum frequencies for executing Crawl-Walk-Run CATS training events by training readiness category (TRC). Active units are designated as TRC A, Army National Guard enhanced brigades are designated TRC B and all other Field Artillery units are designated TRC C. The training event frequencies for the TRCs depicted in Figure 3 are the minimum to sustain readiness.

The strategy next defines the CATS events and the frequencies to conduct them for all units from section or crew through the corps artillery. See Figure 4 for TRC A units and Figure 5 for TRC B and C units. These events have been chosen to ensure TRC A units sustain readiness in the band of excellence and TRC B and C units can attain this level during annual training and post-mobilization training.

For example in Figure 4, a TRC A battalion staff conducts weekly digital sustainment training, a monthly staff exercise (STAFFEX) and a quarterly command post exercise (CPX). These are specific CATS events developed by the FA School. The trainer goes to his unit's annex in "Appendix C Unit and Battle Staff Training" of Fires Training XXI to get the details of his unit's training events. Appendix C contains the required gates, multi-echelon opportunities, and the TADSS, TSPs and ATs available. The CATS events, TSPs and ATs are hyperlinked to the Fort Sill Home Page.

The trainer then views the CATS to determine the tasks to be trained, the duration of the event and the resources required to conduct that

	1st Qtr	2d Qtr	3d Qtr	4th Qtr
Section-Corps Arty	Weekly Digital Sustainment			
Section	Team Training x 3 Per Quarter			
	LTX*	LTX*	LTX*	LTX*
Battery	STX x 3 Per Quarter			
	FTX ATXII, XV	FTX* ATXII, XV	FTX ATXII, XV	FTX ATXII, XV
Battalion Staff	STAFFEX x 3 Per Quarter			
	CPX	CPX	CPX	CPX
Battalion	STX x 3 Per Quarter			
		FTX* ATXVIII	CALFEX	FTX ATXVIII
Bde and Higher Staff	STAFFEX x 3 per Quarter			
Bde and Higher	CPX	CPX	CPX	CPX
		CPX		CPX

Live	Virtual	Constructive	*External Evaluation (EXEVAL)

Legend:

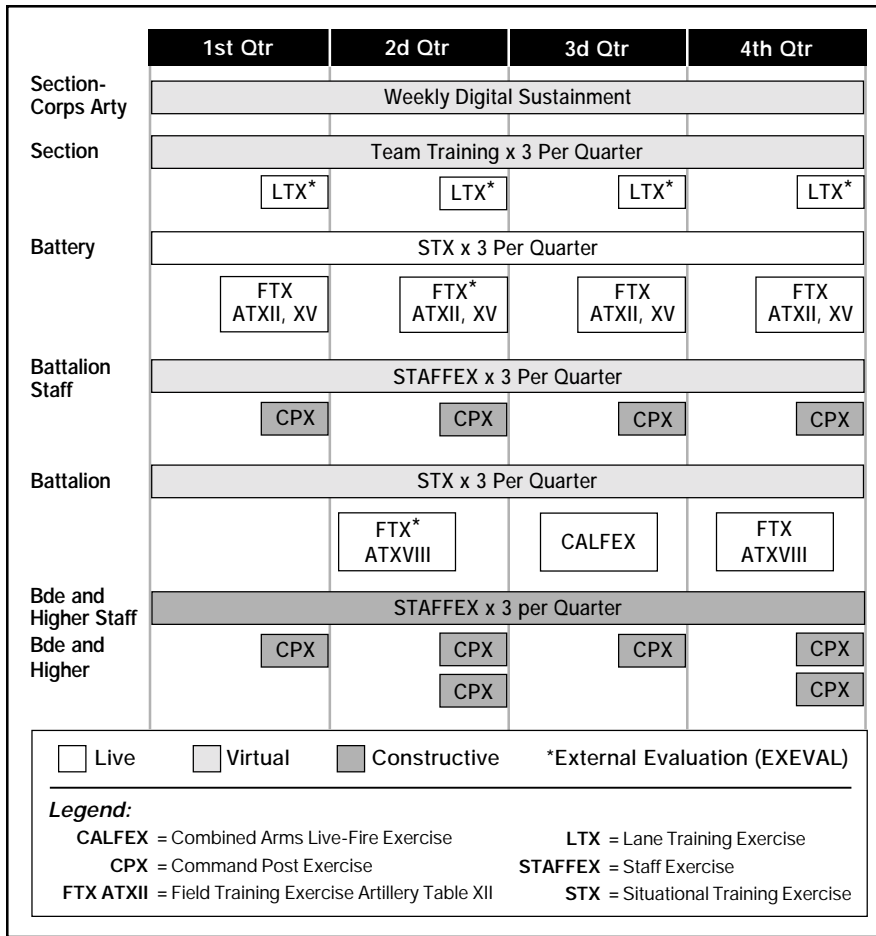|		
CALFEX = Combined Arms Live-Fire Exercise		**LTX** = Lane Training Exercise
CPX = Command Post Exercise		**STAFFEX** = Staff Exercise
FTX ATXII = Field Training Exercise Artillery Table XII		**STX** = Situational Training Exercise

Figure 4: Training Strategy for Training Readiness Category (TRC) A Units (Active)

event. He then downloads the TSP for use in planning and conducting the event and views the applicable AT to determine the gunnery tasks to be trained. Using SATS, the trainer also imports CATS from the Reimer Digital Library Data Repository (RDL DR) at http://155.217.58.100/dr and modifies CATS, as necessary, based on his METL.

These procedures are applicable for trainers at every echelon; CATS events have been developed for every echelon.

A key to the success of the Fires Training XXI training strategy is the TSPs the FA School is developing for digital sustainment training and Run-level CATS events for all units. The TSPs minimize unit training development re-

quirements, leaving more time for unit training.

A TSP consists of a digital scenario, maps, operations orders, etc; a master events list; training evaluation outlines; and a list of the resources required to conduct the event. They are easily modified for local training areas.

Several TSPs are available on the Fort Sill Home Page (http://155.219.39.98/doctrine/wddfrm.htm). Other TSPs are being developed. (Note: TSPs cannot be downloaded from the RDL DR with the current version of SATS.)

Upon conclusion of the training event, the unit trainer again uses the SATS terminal to update resources used, capture observations and prepare after-action reviews (AARs), assess the training and unit readiness—perhaps to prepare an automated quarterly training briefing.

Fires Training XXI is a strategy that builds on proven training doctrine by incorporating new and emerging methodologies with the goal of developing competent, confident and adaptive soldiers and leaders in FA active and National Guard units. The strategy synchronizes tools to conduct individual, institutional, unit, battle staff and systems training. It will help ensure the FA maintains a high state of readiness as we move into the future.
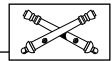
Colonel (Retired) John K. Anderson wrote the Fires Training XXI strategy under contract with the Field Artillery School, Fort Sill, Oklahoma. Prior to his retirement from the Army in 2000, he was the Director/Commander of the Operational Test Command's Fire Support Test Directorate and, previously, the Director of the Gunnery Department in the Field Artillery School, both at Fort Sill. He also served as Deputy Commander of the Operations Group and Senior Fire Support Trainer at the National Training Center, Fort Irwin, California. Colonel Anderson commanded the 1st Battalion, 82d Field Artillery, 1st Cavalry Division, Fort Hood, Texas, deploying his battalion to Southwest Asia for Operations Desert Shield and Storm. He also commanded a battery in the 2d Armored Division Artillery in Germany and the Milwaukee Area of the Milwaukee District Recruiting Command. Among other assignments, he was a Brigade Fire Support Officer, Brigade Assistant S3 and Battalion S3. He is a graduate of the National War College, Washington, DC.

	1st Qtr	2d Qtr	3d Qtr	4th Qtr	1st Qtr	2d Qtr	3d Qtr	4th Qtr
Section-Battalion	Monthly Digital Sustainment							
Section	Team Training		Team Training		Team Training		Team Training	
Battery				LTX*				LTX*
		STX		STX		STX		STX
			FTX ATXII, XV				FTX ATXII, XV	
Battalion Staff		STAFFEX				STAFFEX		

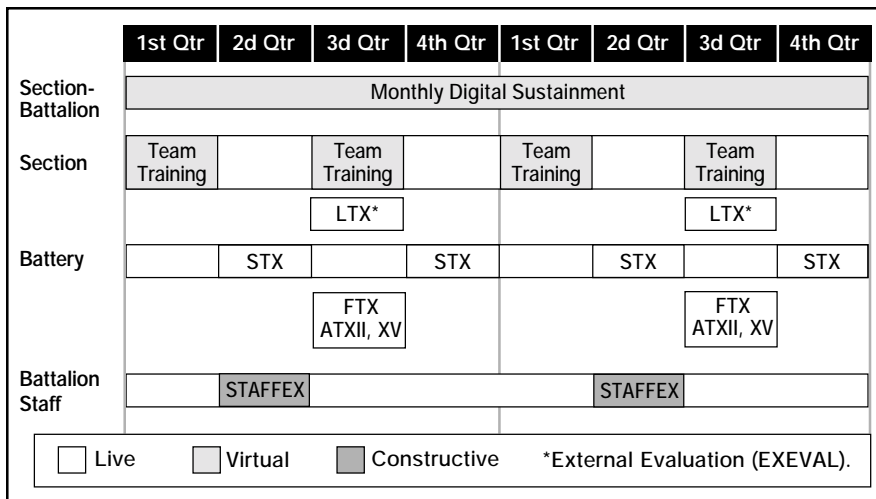| Live	Virtual	Constructive	*External Evaluation (EXEVAL).

Figure 5: Training Strategy for Training Readiness Category (TRC) B Units (National Guard Enhanced Brigades) and TRC C Units (Except Active, All Other FA Units)

The integration of fires into the close fight remains a challenge for rotational units at our Combat Training Centers (CTCs). The Field Artillery School, Fort Sill, Oklahoma, working closely with the Center for Army Lessons Learned (CALL), Fort Leavenworth, Kansas, and the CTCs, has developed an aggressive Negative Trends Reversal Program to solve problems that have plagued units for the past two decades.

The program's strategy encompasses doctrine, training, leadership, organization, material and soldier (DTLOMS) initiatives to meet the many challenges inherent in making close supporting fires more accurate and responsive. As a part of this strategy, the Fire Support and Combined Arms Operations Department (FSCAOD) in the FA School focuses on enhancing home station training to help prepare units for the gradu-ate-level CTC rotations. Because the Army DTLOMS are so interdependent, FSCAOD's training includes aspects of all the DTLOMS, some of which are mentioned in this article.

FSCAOD's Training Strategy. Our strategy is a two-pronged approach to improve the integration of fires into brigade and task force operations at the CTCs. First, we work with one light and one heavy brigade combat team (BCT) and its supporting FA battalion each year to enhance their home station training in preparation for a CTC rotation. At the rotation—called a "Fires Focused Rotation"—we evaluate the units' effectiveness after training and determine causes of other indirect fire challenges. Since FY00, FSCAOD has worked with three Fires Focused Rotation battalions.

Second, using this fires focused training and research, we have developed training support packages (TSPs) in con-cert with other departments in the school to help FA units and fire supporters Army-wide reverse negative trends during their home station training. (See the article "Fires Training XXI: A Training Strategy for the 21st Century" by Colonel John K. Anderson, also in this edition, for an explanation of the tools and methods for designing home station training, including how to access the TSPs on line for the various levels of training.)

The conduct of Fires Focused Rotations has produced benefits for both the FA School and units in the field. The improved coordination with the CTCs has brought to light issues, such as the need to more realistically replicate and adjudicate effects at the CTCs as well as update fire support tactics, techniques and procedures (TTPs). It also injected new life into the Project Warrior Program that brings observer/controllers (O/Cs) from the CTCs back to the school-houses where they have a significant impact on their branches.

We found our Fires Focused Rotations necessitated improved interaction with units in the field. The FA School Trends Reversal Training Team gained a new appreciation for the competing priorities units face and had a chance to see units validate or learn TTPs.

Training to Reverse CTC Negative Trends
Getting Fires Back into the Close Fight
By Colonel Leonard G. Swartz
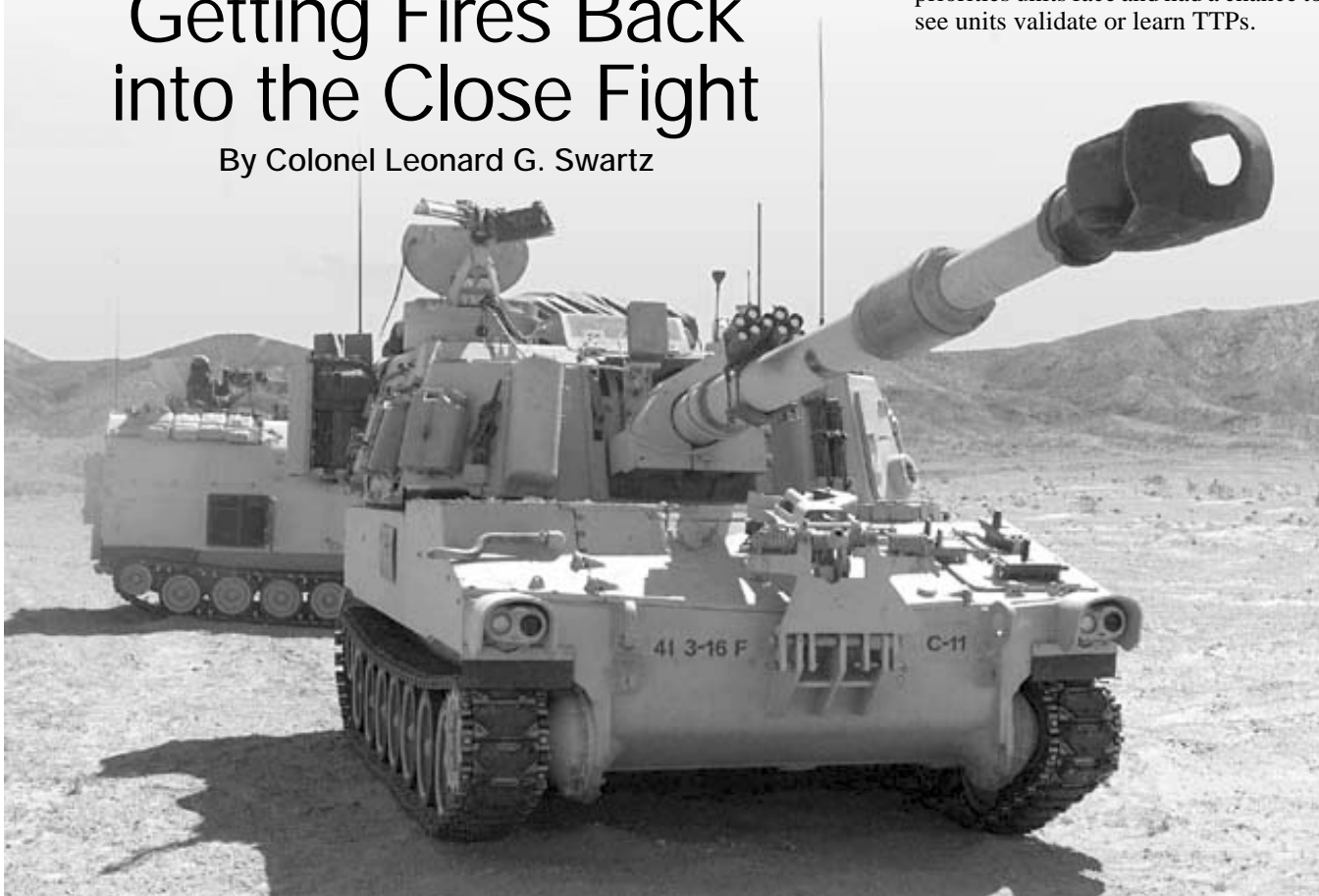
Units in the field benefited from assistance from school subject matter experts (SMEs) during video-teleconferences (VTCs) and mobile training team (MTT) visits. The Trends Reversal Training Team includes officers, NCOs and warrant officers whose primary jobs are as FSCAOD instructors and SME doctrinal writers/reviewers.

The FA School nominates units to participate in the Fires Focused Rotations through the Combined Arms Center (CAC) at Fort Leavenworth, then through Training and Doctrine Command (TRADOC) Headquarters at Fort Monroe, Virginia, and Forces Command (FORSCOM) Headquarters at Fort McPherson, Georgia, to commanders in the field. The FA School generally nominates units scheduled for spring CTC rotations so home station training visits have little impact on instructor turnover during the summer and large class sizes at the FA School in the late summer and fall after college and high school graduations.

The Good, the Bad and the Ugly. The results of our work were mixed. Not surprisingly, we found that FA observers, such as combat observation lasing teams (COLTs), Striker teams and fire support teams (FISTs), did a better job of providing accurate target location and, as a result, effective fires. Some of their accuracy was due to better training and better equipment: the Bradley FIST vehicle (BFIST), Viper laser rangefinder binoculars and digital mini eye-safe laser observation sets (MELIOS). However, fire supporters are just a small percentage of the eyes on the battlefield, and we continue to have problems with basic accuracy in target location.

We found that maneuver shooters (scouts, maneuver platoon leaders or platoon sergeants and commanders) were executing poorly triggered missions based on spot reports with no identified observer. Such procedures consistently degraded the FA's ability to bring timely and accurate fires to bear on the enemy.

We saw a real improvement in units' ensuring fires tracked with the commander's guidance for fire support. During both heavy and light force Fires Focused Rotations, units used a mission analysis worksheet and a task/purpose format to bring focus and clarity to the commander's guidance.

The increased awareness of the essential fire support task (EFST) doctrine elevated the units understanding of how to integrate the fire support battlefield operating system (BOS) with the other BOS during the military decision-making process (MDMP) and helped focus both the planning and execution of fires. Despite significant differences between the battlefields for the heavy and light brigade task forces at the National Training Center (NTC), Fort Irwin, California, and the Joint Readiness Training Center (JRTC), Fort Polk, Louisiana, respectively, units did a good job of integrating fire support issues into the MDMP.

With regard to fires in the close fight, improvements in the use of close air support (CAS) and target location were counterbalanced by continued weaknesses in mortar integration, battle tracking and information dissemination plus the continued use of cumbersome clearance of fires procedures. Low volumes of fire and limited integration of fires into the BCT movement planning hampered Paladin operations during NTC rotations. Fire mission execution times were too varied and too slow.

We also found units were somewhat limited in their ability to focus on preparation for their rotations due to competing priorities. Simplified procedures and new equipment were not always used during rotations successfully or even at all because personnel were not trained well enough to execute the procedures or operate the equipment.

Compounding the FA training challenges, the replication of fires during training at the CTCs and home station is woefully inadequate, leading to a perception that fires don't contribute to the combined arms fight. One of our long-term issues is improving the adjudication and replication of fires at the CTCs. We continue to work with the CTCs and the other agencies to more realistically depict indirect fires during these invaluable training rotations.

Also compounding the training challenges is the fact that nearly 70 percent of the FA is in the National Guard. National Guard units participate in fewer CTC rotations and, thus, will benefit more from the observations and TSPs derived from the Fires Focused Rotations.

Fires Focused Rotations. Our FY01 strategy was to focus on three to four topic areas and work with units six to eight months prior to their CTC rotations. The topics were Target Location, Commander's Guidance for Fires, Fire Support Planning, Fires in the Close Fight and Paladin Utilization.

In support of both the heavy and light rotations, our Trends Reversal Training Teams were made up primarily of former O/Cs and had a combined arms "flavor." We were able to provide focused coverage from the brigade to company levels, looking at both fire support and FA issues.

The team members attended CALL Collection Observation Management System (CALLCOMS) training at Fort Leavenworth and then accessed the CALLCOMS database and products from the CTCs to develop detailed observer checklists to help focus their efforts. Our goal was to enhance existing unit training plans by conducting monthly VTCs from a menu of potential subjects selected by the commander.

The replication of fires during training at the CTCs and home station is woefully inadequate, leading to a perception that fires don't contribute to the combined arms fight.

Photo by Raymond A. Barnard, JRTC, Ft. Polk

FA observers, such as combat observation lasing teams (COLTs), Striker teams and fire support teams (FISTs), did a better job of providing accurate target location and, as a result, effective fires. Some of their accuracy was due to better training and better equipment.

BFIST

We also coordinated MTT visits during existing home station training exercises where we presented instruction, conducted seminars, assisted in hands-on training and served as O/Cs for the commanders. We provided regular feedback to our counterparts, conducted exit after-action reviews (AARs) and provided a written report to the commanders.

During CTC rotations, we sent a couple of observers to work with the O/Cs and collect data for a CALL publication. Once we concluded the heavy and light rotations, we began working with SMEs in the FA school to develop or refine TSPs. Another goal is to write a series of professional journal articles in conjunction with the rotational units and CTC personnel. We have published a "Task Force FSO [fire support officer] Handbook" on line. (See the brief piece "FSO Handbook On Line" on Page 4 of the September-October edition.)

Lessons learned are being incorporated into all aspects of instruction in the schoolhouse. We are sharing the refined TTPs with fire support instructors in other TRADOC schools.

Other Initiatives. Of particular note are our doctrinal initiatives to improve the responsiveness of fires. We have developed TTP to flatten the fire support architecture by sending the call-for-fire directly from the observer to the firing battery with the other levels of fire support copied on the message.

We also are clarifying the clearance of fires process to increase responsiveness. With the increased situational awareness of where friendly force units are on the battlefield, we are placing responsibility for clearance of fires back on the company commander—with no triple checking or second-guessing.

Because too many fires are unobserved, bottom up refinement is broken. Our refined TTP does not wed the guns to specific target locations in the task force sector. Instead, it identifies target areas of interest (TAIs) in which likely enemy targets will appear and then gives those areas priority of fires (POF) so the guns already are poised to shoot into that area when the enemy does appear. This procedure gives the task force commander and FSO more flexibility in planning and executing fires.

In addition, we are developing fire support element (FSE) battle drills to improve FSE performance.

We have begun developing CD-ROM and web-based instruction on tactical fire support that can be used by other TRADOC schools, field units and individuals in their training programs. We are pushing for better training aids, devices, simulations and simulators (TADSS) to integrate maneuver and fires at home station training and better devices to replicate the effects of indirect fires at the CTCs and, eventually, home station training. These initiatives should rekindle maneuver commanders' appreciation for fire support.

Because of a lack of joint training at home station, fire supporters have had problems coordinating air space for CAS and other air support at the CTCs. We are working actively with the Joint CAS Joint Test Force at Nellis AFB, Nevada, to refine the air liaison officer (ALO) qualification course. The goal is to improve the coordination and integration of air-to-ground fires during exercises and instruction.

Clearly, improving the effectiveness of fires in the close fight will not occur overnight. Much remains to be done. However, the FA School has "stepped up to the plate" and is working with the CTCs, CALL, our TRADOC counterparts and commanders in the field to build the foundation for more effective fires in the close fight. Our goal is to strengthen fire support as an integral operating system within the BCT and reverse the negative CTC trends that frustrate fire supporters and maneuver commanders alike.
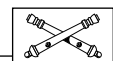
Colonel Leonard G. (Gary) Swartz has been the Director of the Fire Support and Combined Arms Operations Department in the Field Artillery School, Fort Sill, Oklahoma, since August 2000. In his previous assignment, he was the Chief of the Special Exercise Section in the Exercise, Training and Education Branch of the Operations Division for Supreme Headquarters Allied Powers Europe (SHAPE) in Belgium. He commanded the 214th Field Artillery Brigade, part of III Corps Artillery, also at Fort Sill. He was the Senior Fire Support Observer/Controller at the Combat Maneuver Training Center at Hohenfels, Germany. He commanded the 5th Battalion, 41st Field Artillery, part of the 3d Infantry Division (Mechanized) in Germany and a battery in the 1st Battalion, 13th Field Artillery, part of the 24th Infantry Division (Mechanized) at Fort Stewart, Georgia. He is a graduate of the Army War College at Carlisle Barracks, Pennsylvania, and holds a Master of Arts in Management and Supervision from Central Michigan University.

I was in my office on 11 September in Fishkill, New York, with a client when we both looked at the television in disbelief. A little more than three hours later, I received a call from my unit, the 1st Battalion, 156th Field Artillery (1-156 FA), New York Army National Guard (ARNG) out of Kingston, which is direct support to the 27th Separate Infantry Brigade (Enhanced) (Light). I already had anticipated getting a call that day; it was just a matter of when.

In this article I recount the experiences and analyze requirements of two activations to support operations in New York after the September 11th terrorist attacks on the US. During the call up, I served as a joint logistical liaison officer at Fort Stewart AFB, 35 miles south of Kingston; then I moved to lower Manhattan as a logistics officer in support of security operations; and finally, I helped conduct security operations based out of Fort Hamilton in Brooklyn.

Activation Process. As I arrived at our armory, the battalion was implementing the measures necessary for force protection defense condition Charlie (DEFCON C). For the time being, we used 2½-ton and 5-ton trucks to block entrances until Jersey barriers could be installed. A guard at the front door checked IDs while another soldier ensured all signed in.

Soldiers conducted equipment checks and replaced any load-bearing equipment (LBE) that was missing. This was important because we had come off a Joint Readiness Training Center (JRTC) rotation at Fort Polk, Louisiana, on August 17th and didn't have enough time to recover all our equipment.

For the first hour or so, I reviewed the New York State Domestic Emergency Operations Standing Operating Procedures (DESOP) until we were assigned a mission. Most of the unit was anticipating a move to the financial district in lower Manhattan to help in recovery operations.

Stewart Air Force Base. During this activation, I relocated to Stewart Air Force Base to act as a logistical liaison officer between the Air National Guard (ANG) and the ARNG. This was the second time I acted in this capacity at Stewart AFB. The first was during Y2K Operations from December 1999 to January 2000.

Fortunately, most of the Air Force officers were the same ones I worked with more than a year ago, so the transition was smooth. Two captains and another major from our unit joined us as part of the Army liaison team at Stewart.

For the next week or so, we coordinated our efforts with the ANG, the State Emergency Management Office (SEMO) and the New York State Police to ensure National Guard units activated to move into Manhattan that staged at Stewart were properly fed, maintained, briefed and sent on their way. After 10 days, the NYARNG moved staging operations to Camp Smith in Peekskill (about 20 miles south of Stewart AFB). Those of us on the liaison team came off state active duty (SAD) and returned to our civilian jobs.

1-156 FA
in World Trade Center Operations

By Major Paul R. Conte, NYARNG
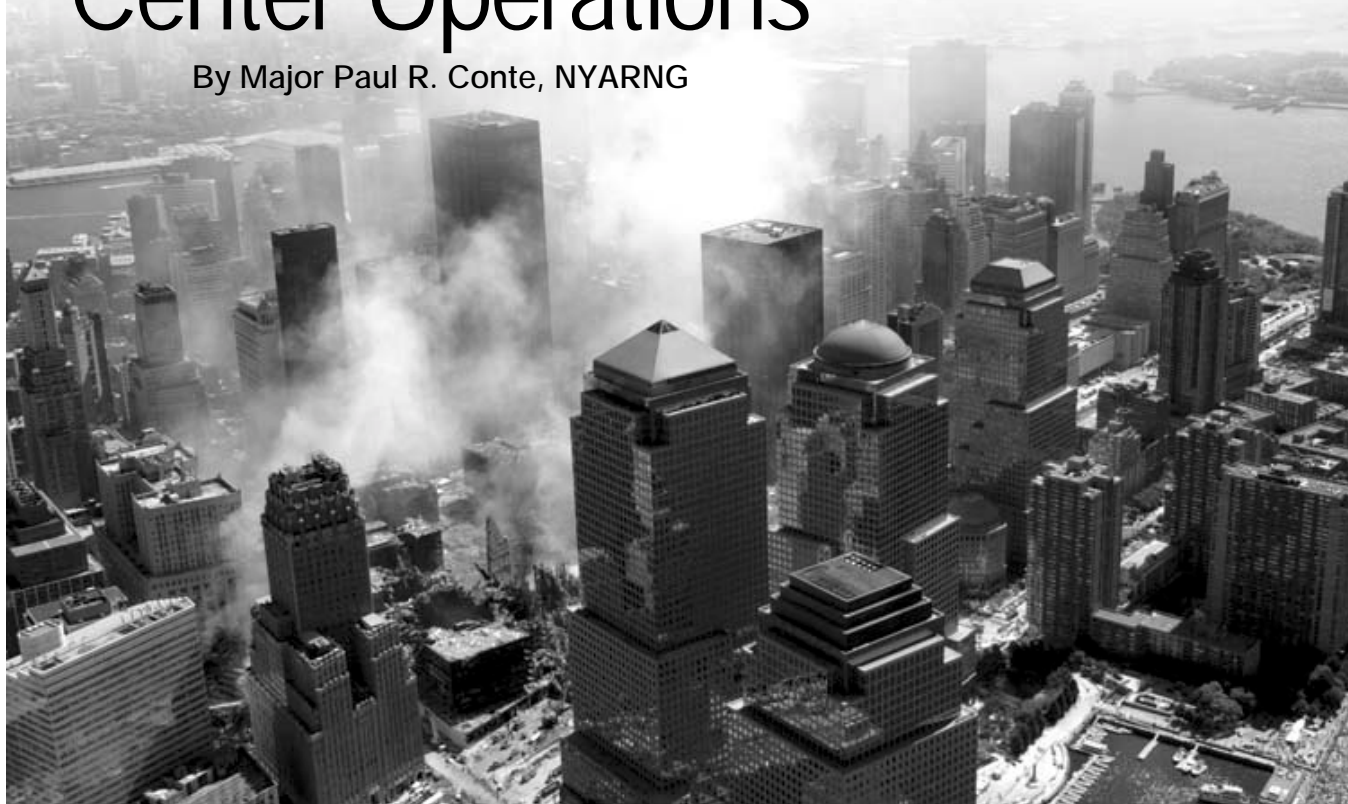
Lower Manhattan. On October 5th, our unit was activated again. This time the tour of duty was in lower Manhattan for 17 days. The mission was to take over the various security operations surrounding "ground zero": Battery Park, the Staten Island Ferry and the waterway. Once again, I was one of the logistics representatives, this time on the night shift.

Also activated with 1-156 FA were elements of the 427th Support Battalion out of Syracuse. By this time, we already had 1-156 FA personnel undergoing Federal Aviation Administration (FAA) training for the mission of providing security at John Fitzgerald Kennedy (JFK) and LaGuardia Airports. Other members of the unit were already on guard detail at various locations in the NYC area.

At the Kingston Armory, elements of 1-156 FA were undergoing pre-combat/pre-deployment checks. Officers and leaders were reviewing maps of lower Manhattan and the areas we would be responsible for. Fortunately, we already had the battalion S3 on the ground in Battery Park; he fed us information, allowing those of us at the armory to adjust our packing lists.

On the morning of October 6th, an advance party consisting of all our high-mobility multipurpose wheeled vehicles (HMMWVs) departed to the intermediate staging area (ISB) at Camp Smith. About three hours later, the main body followed in chartered busses.

Once at Camp Smith, we went through a security check and were escorted to a parking area. Representatives of the 42d Infantry Division (Mechanized) (Headquartered in Troy) and the New York State Area Command (STARC) boarded the bus and gave us instructions.

Across the parking area was a building that was used for in processing. Inside, soldiers gave us an ID card holder for our ID cards to be hung around our necks for easy access. If an ID card was invalid, they had the facilities to produce a new one. Other personnel representatives checked our names and social security numbers to ensure we would be paid.

Once our ID cards and personnel information were validated, we went into a gymnasium that served as a briefing area. For the next hour, intelligence and legal representatives discussed the rules of engagement (ROE) and other pertinent issues. Most important were the restrictions on cameras and handling of
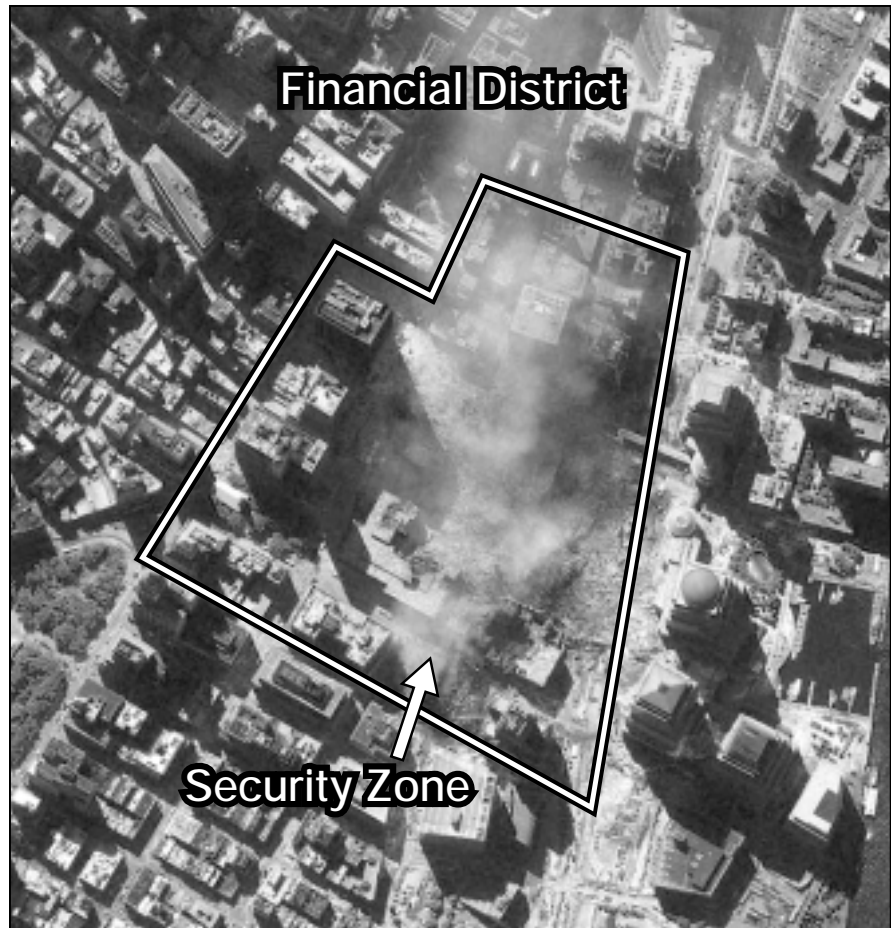
Aerial view of the World Trade Center destruction on 5 October 2001.

debris. (This area was still considered a crime scene, and we were cautioned about respecting those who had perished.)

The ROE gave us very limited power to use force. The strategy was to pair a NYPD officer with a National Guard soldier. The NYPD would help if we ran into a situation that required arrest or the use of deadly force. After the briefing, we headed to lower Manhattan. After a series of briefings, we were ready for battle hand off at 2100.

Our units provided security at various checkpoints surrounding Battery Park, the disaster zone immediately surrounding the World Trade Center and the Staten Island Ferry. Each shift was 12 hours long. Off shift, the majority of the soldiers stayed at Governor's Island.

Before the first shift, we were issued special equipment from 3M, such as goggles, gloves and respirators. Nextel provided cellular phones with a push-to-talk feature. Each checkpoint as well as every leader had one.

Meals were provided on Governor's Island and catered out of Battery Park. Outside of the park, food was also in ample supply. At the Bowling Green,

volunteers at Polo Ralph Lauren and other contributors established a make-shift café. The purpose was to provide meals, snacks, warm beverages and magazines to all firefighters, police and National Guard workers.

Within a week, the security mission expanded to the bridges and tunnels on the east side of Manhattan (Queensboro Bridge, Midtown Tunnel and Williamsburg Bridge). We helped the NYPD with many arrests from false IDs, expired passports and unregistered vehicles. At times, people tried to breach our security in Battery Park with false military IDs. Some took pictures or filmed our activities and then ran away.

On October the 11th, the FBI issued a warning of possible terrorist activity in the NYC area. It became apparent that Battery Park was not the most secure place. Our mission changed from providing security in lower Manhattan to providing security at various power plants in Brooklyn and Queens.

On October the 14th, we conducted a battle hand off with the 69th Infantry. All units eventually abandoned Battery Park and moved their headquarters elsewhere.

1-156 FA and the 427th Support Battalion moved into Fort Hamilton in Brooklyn. All others went to the Lexington Avenue Armory slightly uptown from the park.

We continued to provide security at the bridges and tunnels and, in addition, we had three power plants to cover. At the end of our tour of duty, we abandoned security operations at the power plants and handed off security of the bridges and tunnels to elements of the 42d Infantry.

Lessons Learned. Some of the lessons we learned from operations at Stewart AFB and the Manhattan are as follow.

Class I (Food and Water). At Stewart AFB, we contracted with a local diner to serve breakfast, lunch and dinner. In addition, the ANG had a mess hall on the base that handled catered meals. Eventually, the air base became an overflow area for food that NYC could not absorb.

Coordination was necessary to store perishable as well as non-perishable food products. Fortunately, the air base had the facilities to do this. We also received pallets of meals ready to eat (MREs) from a Pennsylvania Army National Guard unit.

Coordination had to be established with flight operations to ensure joint use of the runways for incoming food and other supplies. That doesn't sound like a big deal, but Stewart AFB houses the C-5 aircraft as well as many C-130 and C-141 cargo planes. Space became minimal quite quickly.

At Manhattan, bottled water, juice, milk and sodas were available from the mess hall in Battery Park, the Bowling Green facility or from Governor's Island. Once in the city, many vendors were offering our soldiers free food and beverages from their establishments.

Sometimes this created a problem because planners did not anticipate that local establishments would feed soldiers. Many soldiers did not want the box lunches arranged for them. Food often was wasted.

Class II (Individual Equipment). At Stewart AFB and Manhattan, units initially had brought the equipment they needed to work in Manhattan but not enough to sustain them over time. LBE was not abundant, and we often sent soldiers back to units to draw what was missing.

Planners can expect to get civilian equipment to replace some missing or damaged military equipment. For example, gloves, goggles and flashlights were either locally purchased or avail-

able in large supply. However, the bottom line: it is best to bring *everything* and try to be self-sufficient.

Class III (Petroleum). At Stewart AFB, because two of the units drove down from Buffalo, the need to refuel became critical before sending them to NYC. Fortunately, the air base had underground diesel fuel storage tanks we could use to refuel convoys before sending them to Manhattan.

Because we forecasted using more fuel than the base could provide, we had to contract for fuel delivery. Approximately five miles east toward the river were fuel storage facilities that the ANG already had a standing contract with.

At Manhattan, fuel was available from a 5-ton fuel trailer parked in Battery Park. Fuel mostly was used to run vehicles so soldiers could stay warm while at their posts.

Class VI (Personal Items). At Stewart AFB, soldiers brought enough toiletry items to sustain themselves for weeks; however, items such as cigarettes were not made available. Fortunately, the base had a PX/BX on the opposite side of the airfield.

The AAFES manager was more than helpful, wanting a list of items needed so she could stock up to serve 400 additional soldiers. The manager extended the operating hours and, as necessary, provided a mobile PX truck.

Class VII (Major End Items). At Stewart AFB, the only need to replace a major end item came from an accident with a HMMWV that we towed away and, eventually, replaced through military channels. In terms of maintenance operations, we were able to locate civilian suppliers of parts that were similar to the parts used on military equipment.

For example, the D30 bulldozer and the Caterpillar equivalent share the same engine components. We coordinated to have those parts locally purchased and have the bulldozer repaired at the maintenance bay on the air base.

At Manhattan, The nearest organizational maintenance shop (OMS) was at the Lexington Avenue Armory. Fortunately, we used golf carts to get around our area of operations rather than military vehicles. There was no need to replace or repair military vehicles. Because we were only going to be in the city for a couple of weeks, if we did have to replace a vehicle, our plan was to evacuate any vehicle needing repair to home station and then drive back a replacement.

Class VIII (Medical Supplies). We coordinated for the units that came through Stewart AFB to bring a list of medical supplies they needed to the base clinic to be filled. Local grocery stores donated refrigerator trucks for us to store donated blood supplies. The refrigerator trucks came in handy to store other perishables as well.

At Manhattan, our battalion aid station (BAS) was established in Battery Park. In addition to routine medical care, they also issued heavy-duty boot insoles for soldiers to relieve foot, ankle and lower back stress.

Another Lesson. By far, the biggest challenge was quickly solving the many problems we encountered to keep critical operations moving. Sometimes we could solve a problem "organically," but most of the time we had to coordinate with the Air Force, civilian agencies and (or) local businesses. In lower Manhattan, understanding what local businesses and support are available for contracting is important—a telephone directory helped.

As I complete this article in early November, elements of 1-156 FA are still deployed at NYC airports and other locations. Local businesses and major corporations have given the National Guard and others working around ground zero tremendous support—for that I am grateful. And, on behalf of my cohorts and all working for and protecting New Yorkers in the aftermath of such senseless evil, we thank the nation for its strong patriotism and support.

Having said that, we are the "National Guard"—and, by definition, *this* is what we do.
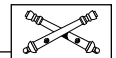
Major Paul R. Conte, New York Army National Guard (NYARNG), is the Brigade Fire Support Officer (FSO) in the 1st Battalion, 156th Field Artillery (1-156 FA), direct support to the 27th Separate Infantry Brigade (Enhanced) (Light). Also in 1-156 FA, he was a Battalion S4, the B Battery Commander and a Support Platoon Leader. While on active duty, Captain Conte was a Battalion FSO in 4-3 FA, part of the 2d Armored Division (Forward) in Germany. Also with 4-3 FA, he was a Support Platoon Leader in Service Battery, deploying in Operations Desert Shield and Storm to the Persian Gulf and Operation Provide Comfort to northern Iraq; a Company FSO; and Battalion Ammunitions Officer. He is enrolled in the Command and General Staff Officers Course out of Fort Leavenworth, Kansas. Currently, he is a Financial Consultant in Fishkill, New York.

The Role of the Reinforcing Battalion

By Lieutenant Colonel Gregory C. Kraak
and Major Dewey A. Granger
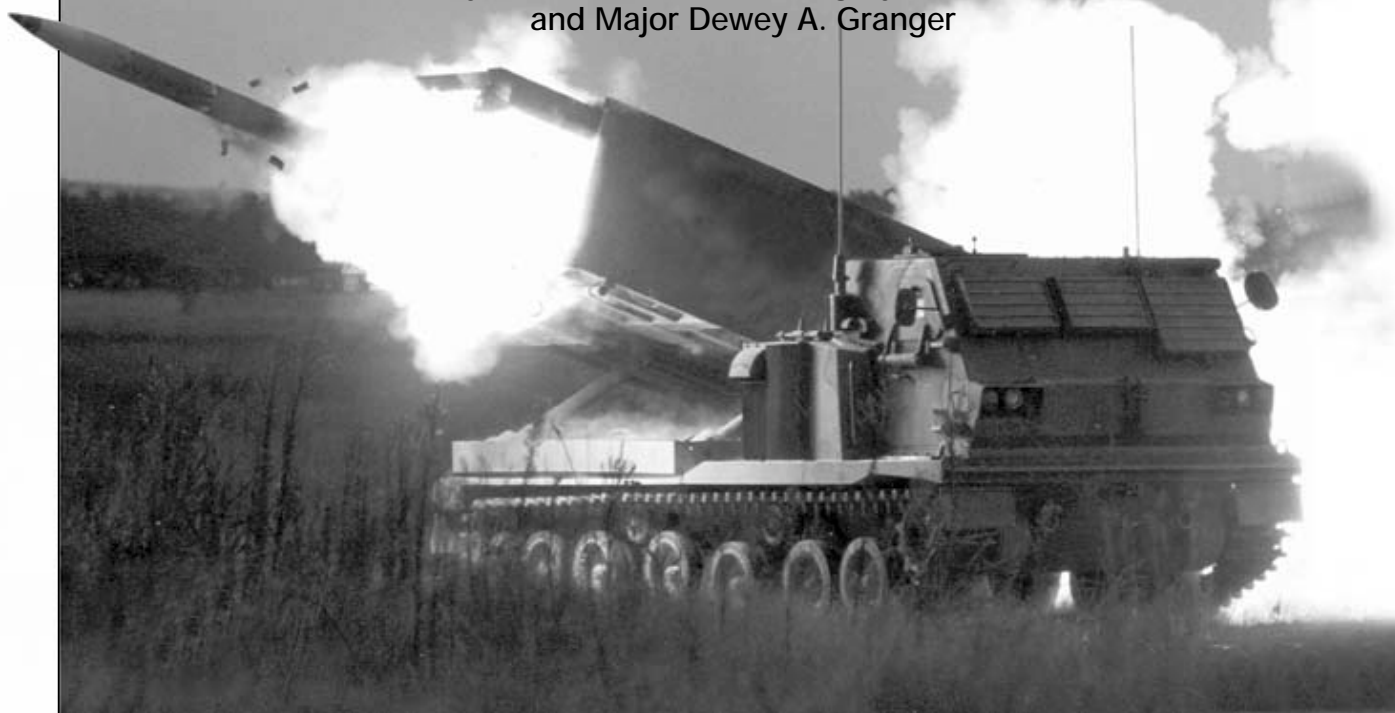
The brigade commander's guidance was clear: deploy your multiple-launch rocket system (MLRS) battalion in a reinforcing (R) role in support of a direct support (DS) battalion. All artillerymen are familiar with the seven inherent responsibilities of standard tactical missions, as shown in Figure 1.

The fire support doctrine that covers the four standard tactical missions has been consistent and relatively unchanged for many years. It has served the Field Artillery well and provides a simple azimuth of who does what for any tactical mission. However, there is no manual that spells out the many additional implied tasks that must be accomplished between the supporting (R) and supported (DS) units.

This article explores the role of the reinforcing battalion and provides insights into some key reinforcing tasks and tactics, techniques and procedures (TTPs) to help ensure success on the battlefield.

The reinforcing battalion brings many resources for the fire support coordina-tor (FSCOORD) to employ, including a fully manned sister battalion staff. The synchronization of these two staffs is paramount in reducing redundancy and streamlining the military decision-making process (MDMP) in what is always a severely time-constrained environment. Accordingly, three key decisions dictate the actions of these two staffs.

Single or Joint FA Support Plan (FASP). The first decision should be whether or not to develop a single joint plan or separate FASPs. Producing a single FASP by conducting a joint MDMP is the most efficient and preferred method. A joint MDMP dictates that each battalion staff principal remains "joined at the hip" with his counterpart, thus creating a fully coordinated and integrated product that takes advantage of each unit's particular strengths while masking each element's weaknesses.

However, the mission might dictate a different approach to the orders process. For instance in a deliberate attack, the focus of the DS battalion is usually suppress, obscure, secure and reduce (SOSR), meaning it is primarily planning prep fires and smoke. Meanwhile, the R battalion likely will be focused on counterfire against the enemy regimental artillery group (RAG) and (or) division artillery group (DAG) as well as on deep shaping fires to help the maneuver commander set the conditions for success in the close fight.

In this scenario, given such divergent tasks in terms of space, time and capability, it may make the most sense for the DS and R battalions to initially conduct a joint MDMP but complete their staff work independently and issue separate FASPs. A technique for accomplishing this is to have the R battalion S3 and the DS liaison officer (DS LNO) attend the DS battalion orders process instead of the entire R battalion staff. In this way, the R staff is able to continue parallel planning by using warning orders (WARNOs) and updates through the DS LNO.

More to the point, the R staff wargames its specific essential FA tasks (EFATS)

with more efficiency and with much more detail than might be allowed in the DS battalion tactical operations center (TOC). In this way, the R battalion can issue a more detailed FASP to its subordinate battery commanders and the radar section. The DS battalion can do the same with more focus on the close fight and special munition tasks.

The key point is that regardless of the mission or approach, the two staffs must be synchronized and integrated so the FSCOORD can employ all his firepower assets to support the scheme of maneuver. As long as the two battalions coordinate their actions, it becomes largely irrelevant as to how they actually meet the seven inherent responsibilities. The seven responsibilities are still valid as a guide for laying the foundation for accomplishing EFATs and establishing tactical relationships between the artillery units.

In the end, the joint MDMP process, through whatever means, sorts this out. Both staffs must work the details out early and include them in all training events.

Control of the DS Radar Section. The second key decision is to determine who will control the DS battalion's lone Q-36 Firefinder radar section. Typically, the R battalion will be the counterfire headquarters and, as such, is best suited to control the Q-36. Attaching the radar section to the R unit seems to work best with all levels of support flowing through the R battalion.

To support the overall scheme of maneuver, the brigade fire support officer (FSO) plans the initial zones, radar positions and critical friendly zones (CFZs) while the brigade S2 should plan the call-for-fire zones (CFFZs). In the initial scheme of fires, the brigade FSO must clearly articulate the PLOT functions of PLOT-CR (purpose, location, observer, trigger-communications and rehearsal) for the radar, while the R battalion is responsible for communications and rehearsals. The initial plan must clearly articulate how the zones will support the scheme of maneuver and, therefore, are an integral part of the scheme of fires.

However, once the battle begins, the brigade FSO does not have full access to all the resources necessary to refine zones as effectively as the R battalion targeting officer, who is based in the R battalion TOC, or the radar section leader. Additionally, he is focused on executing targets and fires specifically related to the EFATs in support of the close fight as is his targeting officer.

With this in mind, managing and refining radar zones—critical tasks for executing the mission—are best handled by the R battalion targeting officer, not the brigade FSO. The battalion targeting officer has the real-time information to refine the CFFZs while the task force FSO refines the CFZs (except for those around the R battalion targeting officer's FA assets).

Once the initial brigade plan is disseminated and understood, specialized execution of this EFAT is underway by the R staff. This technique allows zone refinement to go directly to the R S3, the individual charged with ensuring the CFFZs meet the criteria listed in the EFAT.

Obviously, this approach does not eliminate the FSCOORD's and brigade FSO's ability to dictate CFFZs to turn on or off. However, the majority of their efforts are focused on other, more close support related EFATs.

An FA Unit with a Mission of:	Direct Support (DS)	Reinforcing (R)	General Support Reinforcing (GSR)	General Support (GS)
Answers calls-for-fire in priority from—	1. Supported Unit 2. Own Observers[1] 3. Force FA HQ	1. Reinforced FA 2. Own Observers[1] 3. Force FA HQ	1. Force FA HQ 2. Reinforced Unit[1] 3. Own Observers[1]	1. Force FA HQ 2. Own Observers[1]
Has as its zone of fire—	Zone of Action of Supported Unit	Zone of Fire of Reinforced FA Unit	Zone of Action of Supported Unit, to Include Zone of Fire of Reinforced FA Unit	Zone of Action of Supported Unit
Furnishes FS personnel for[2]—	Temporary Replacements for Casualty Losses, as Required	No Requirement	No Requirement	No Requirement
Furnishes liaison to—	No Requirement	Reinforced FA Unit HQ	Reinforced FA Unit HQ	No Requirement
Establishes communications with—	Company FS Officers and Supported Maneuver Unit HQ	Reinforced FA Unit HQ	Reinforced FA Unit HQ	No Requirement
Is positioned by—	DS FA Unit Commander or as Ordered by Force FA HQ	Reinforced FA Force FA Unit or as Ordered by Force FA HQ	Force FA HQ or Reinforced FA Unit, if Approved by Force FA HQ	Force FA HQ
Has its fires planned by—	Own Fire Plan	Reinforced FA Unit HQ	Force FA HQ	Force FA HQ

[1]Includes all target acquisition means not deployed with supported unit (radar, aerial observers, survey parties and so on).

[2]An FSE for each maneuver brigade, battalion, or cavalry squadron and one FIST with each maneuver company or ground cavalry troop are trained and deployed by the FA unit authorized these assets. USMC artillery battalions, upon deployment, provide FO teams to each company-sized maneuver unit. After deployment, FISTs and FSEs remain with their supported maneuver units throughout the conflict.

Legend:
FIST = Fire Support Team   **FO** = Forward Observer   **FS** = Fire Support   **FSE** = Fire Support Element   **HQ** = Headquarters

Four Standard Field Artillery Tactical Missions with Seven Inherent Responsibilities. The Figure is based on one taken from *FM 6-20 Doctrine for Fire Support.*

6-32 FA FASP Briefing. The mission dictates whether or not the FASP is developed jointly by the DS and R battalions or as separate plans.

Therefore, zone management is often a secondary effort for the FSO. To help meet the challenge, the R targeting officer should be responsible for battle tracking the close fight and refining radar zones based on the tactical situation.

This technique can be effective, but several additional challenges may arise as a result. Task force FSOs, who ultimately are responsible for ensuring the allocated zones meet the commander's intent, do not work for the R battalion. Consequently, radar zone refinement might not be as important as target refinement and easily could be overlooked. As with target refinement, timeliness and trigger execution for zones are critical radar issues.

The Role of the R Battalion Commander. The third, critical decision is to determine the exact role of the R battalion commander. The FA community has no doctrine or formal TTP on this subject, and therefore, there is no one answer as to where he should be located or what tasks he should undertake to help the FSCOORD. Despite the doctrinal void, experience points to the brigade TOC as the best location for the R commander.

The R commander in the brigade TOC can help in many areas. One is the brigade deep fight. As the FSCOORD focuses his attention on the close fight, the R battalion commander can work shaping fires in greater detail. In conjunction with the brigade targeting cell, the R commander can help develop not only the radar plan, but also the deep fires requested by the brigade reconnaissance troop (BRT) and combat observation lasing teams (COLTs) down to the PLOT-CR level.

He also can work closely with the brigade FSO and the brigade targeting officer to develop the plan and supervise its execution. In addition, the R commander can ensure that Army airspace command and control (A^2C^2) is synchronized with all aspects of the fight, particularly the counterfire fight.

The FSCOORD faces similar challenges as he strives to juggle multiple tasks while trying to be everywhere at all times. Prioritization of effort is essential; it is imperative the FSCOORD and R battalion commander meet early and often to synchronize their efforts and compare notes.

They should adopt a "tag team" approach whereby they cover each other's blind spots. For instance, if the brigade reconnaissance and surveillance (R&S) rehearsal conflicts with the FA battalion mission analysis briefing, it may make sense for the FSCOORD to attend the R&S rehearsal and ensure his COLTs and fire support teams (FISTs) are postured to support the scheme of maneuver, while the R battalion commander receives the joint mission analysis briefing from the two staffs. If the two commanders are in synch with each other, they will be equally prepared to issue guidance and allow the staffs to continue to work without unnecessary delays.

This approach requires somewhat of a "leap of faith" by the FSCOORD as, essentially, he must delegate authority to the R battalion commander to give guidance to the DS battalion staff and battery commanders. The key is the relationship between the two commanders. If they are trusting and cordial, the two staffs are set up for success.

The R battalion faces many other challenges as it cultivates its relationship and develops its niche with its sister DS battalion as well as the brigade task force. These tasks include, but certainly are not limited to, communication, such as the use of retransmission, digital nets, multiple subscriber radio terminal (MSRT) integration; terrain management and deconfliction; and establishing quick-fire channels to the BRT, COLTs, Strikers and other sensors as dictated by the mission.

The absence of proven TTPs for the R battalion does not eliminate its mission to provide fires in support of the DS battalion and maneuver commander. A set of ways to meet reinforcing challenges cannot be spelled out neatly in one magazine article. The unit's missions as well as its capabilities largely determine the solutions. However, considering the three key decisions should provide a framework as a starting point.
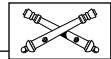
Lieutenant Colonel Gregory C. Kraak commands the 6th Battalion, 32d Field Artillery (Multiple-Launch Rocket System), part of the 212th Field Artillery Brigade, III Corps Artillery, Fort Sill, Oklahoma. In his previous assignment, he served as Deputy Fire Support Coordinator for the 1st Infantry Division (Mechanized) in Germany. In the 82d Airborne Division at Fort Bragg, North Carolina, he was a Battalion Fire Support Officer and Battalion S3 for the 2d Battalion, 319th Field Artillery. In the 101st Airborne Division (Air Assault) at Fort Campbell, Kentucky, he was a Division Artillery Operations Officer and Commander of B Battery, 3d Battalion, 320th Field Artillery.

Major Dewey A. Granger is the S3 of the 6th Battalion, 32d Field Artillery, 212th Field Artillery Brigade. In his previous assignment, he served in Task Force XXI, working the FA aspects of Army Transformation. He graduated from the Naval Command and Staff College in Newport, Rhode Island, where he earned a MS in National Security and Strategic Studies from the Naval War College. At the Combat Maneuver Training Center at Hohenfels, Germany, he was the Direct Support FA Battalion Tactical Operations Center Trainer and, before that, a Rotation Planner and Team Chief in the Operations Group. He commanded a firing battery in the 1st Battalion, 12th Field Artillery, part of the 17th Field Artillery Brigade, also in III Corps Artillery.

ARNG Fielding AFATDS

Approximately 67 percent of the Field Artillery is in the Army National Guard (ARNG). During the past few years, the Guard has assumed a larger role within the Field Artillery, and the relationship between our Active and Reserve Components units have become close. Recognizing the increased role of the FA ARNG, the Army determined that some FA Guard units will be fielded new equipment before some active units. Such is the case with the advanced FA tactical data system (AFATDS).

AFATDS is an Army and Marine automated command and control system for fire support operations. It is the singular command, control and communications solution to the complex problem of integrating and controlling fire support assets. The AFATDS A99 Version vastly improves the flexibility of inputs, such as critical commander's criteria and priority of fires, and has a distributed database that supports horizontal and vertical continuity of operations throughout all levels on the battlefield. The software includes tactical and technical fire direction capabilities.

All fieldings are determined by the Army order of precedence (AOP). In the summer of 2001, the approximate equivalent of three ARNG FA brigades from across the country fielded AFATDS and completed AFATDS new equipment training (NET). (See the figure.) In the summer of 2002, the equivalent of about five more ARNG FA brigades from 10 different states will field AFATDS.

AFATDS NET. This training is intensive and time-consuming—especially for ARNG units that have approximately 39 days a year to conduct training. The AFATDS ARNG NET is conducted as a three-week annual training (AT) event, including weekends. The first phase of AFATDS NET is 15 days of classroom instruction on identifying component parts, developing communications, inputting the commander's guidance, mapping, developing the unit database, processing fire missions and other topics.

After the classroom portion of NET, the unit conducts a three- to four-day command post exercise (CPX). The CPX allows the unit to validate the instruction, its unit tactical standing operating procedures (TACSOP) and that the equipment works in its vehicles. The objectives of the CPX are to tie the classroom instruction together and allow the operators and leaders not only to understand the "buttonology" of AFATDS, but also to understand how to fight the system.

Sustainment Training. The learning process does not stop after NET. Given ARNG training time constraints, digital sustainment training is a challenge. To help units meet that challenge, the FA School at Fort Sill, Oklahoma, via the NET team (NETT) provides a variety of training materials and equipment. Included is computer-based training, which is a CD program on basic operator-level tasks for individuals to load and train with on their PCs. In addition, the NETT leaves the unit all the programs of instructions (POIs) and associated training materials used during NET. These materials provide the unit a starting point in designing training lessons for unique requirements.

The NETT also fields the simulation/stimulation training software (SISTIM) to the unit. SISTIM is a fire support program to enhance unit digital sustainment training. It is loaded onto a separate hard drive that can be inserted in place of the AFATDS hard drive for training purposes. The program provides a scenario and stimulates unit operations in fire support, fire control and observers.

The program allows the unit to develop its own digital training scenarios for all levels of training—section, battery, battalion and brigade/division artillery. It combines automatic generation of tactically sound and doctrinally correct targets with real-time simulation of FA and fire support operational facilities. SISTIM also provides a near real-time scenario modification capability that allows the operator flexibility and promotes scenario continuity. These features minimize the time required for scenario development.

The SISTIM basis of issue (BOI) is one per battalion, brigade/division artillery, corps artillery and battlefield coordination detachment (BCD). The SISTIM software is free as are the upgrades developed in conjunction with the new versions of AFATDS.

Subject Matter Expert (SME) Course. This course was designed by the NETT to help ARNG field AFATDS successfully. Units that are to be fielded in the following FY send members to Fort Sill to receive four weeks of training on AFATDS. The individuals receive the full operator course and SISTIM training, start working on the unit's TACSOP and develop a unit master unit list (MUL) and a digital training scenario for SISTIM for use during NET. The individuals who attend the SME course serve as assistant instructors during NET.

AFATDS represents a unique opportunity for ARNG FA units to remain relevant on the battlefield of the future.

Major Richard H. Owens III, FA Title X Assistant TSM-FATDS, Fort Sill, OK

1-158 FA, 45th FA Bde, in AFATDS NET

Fielded 2001	Fielding 2002
45th FA Bde (OK) • 1-158 FA (OK) • 1-171 FA (OK)	57th FA Bde (WI) • 1-126 FA (WI)
196th FA Bde (TN) • 1-115 FA (TN) • 2-115 FA (TN)	130th FA Bde (KS) • 2-130 FA (KS) • 1-127 FA (KS)
197th FA Bde (NH) • 1-172 FA (NH) • 2-197 FA (NH)	138th FA Bde (KY) • 1-623 FA (KY)
2-111 FA (VA) (54th FA Bde)	147th FA Bde (SD) • 1-147 FA (SD) • 2-147 FA (SD)
1-152 FA (ME) (Separate Unit)	169th FA Bde (CO) (HHB)
2-222 FA (UT) (I Corps Arty)	1-214 FA (GA) (Separate Unit)
	C/2-131 FA (TX) D/2-131 FA (TX) (49th AR Div Arty)
	1-181 FA (KY) (196th FA Bde)
	1-182 FA (MI) (Separate Unit)

AFATDS Fielding to the ARNG through FY02. Depending on funding, the entire FA ARNG is projected to be fielded by 2007.

Triggers
A Lost Art

By Sergeant First Class Kenneth H. Lambert

At 0500, Stalker 04 begins to pick up vehicle noises from the primary axis of advance as anticipated. A quick recheck of the target list and map confirms that target AK2005, indeed, will be the primary means of attack on what promises to be the lead combat reconnaissance patrol as it enters the northern mouth of the valley below.

A whispered call comes over the radio from Stalker 03, a member of the forward scout team in a hide position, confirming an enemy 1/3 (one T-80 tank and 3 BMPs) moving forward down the dry river bed. Given the lay of the land, it's obvious the enemy is trying to gain entry into the task force's forward security zone.

The call to the battalion fire support element (FSE) requests, "Fire target AK2005, special instructions, 'At My Command'"; the call back relays, "Ready, AK2005."

At the established trigger, the command, "'Cancel At My Command'; fire target AK2005" will be relayed as soon as the enemy crests the inter-visibility (IV) line at 34 Northing. Suddenly the lead BMP is confirmed visually. The trigger command is given and immediately "Shot target AK2005" reports rounds on the way. The announcement of "Splash target AK2005" signals the initial volley of the battalion-six rounds of dual-purpose improved conventional munition (DPICM) is coming down onto the intercept point.

This scenario briefly describes the proper execution of triggers. It illustrates both the signal to ensure the guns are ready to fire (tactical trigger) and the signal to fire the target (technical trigger). Unfortunately, too many task force FSEs in rotations at the National Training Center (NTC), Fort Irwin, California, can't execute tactical and technical triggers.

The Tactical Trigger. The first element of an effective trigger is for something to happen tactically to get the firing unit ready to fire. There must be an identified, preordained event that sets the conditions for the technical execution of fires. Without a signal to get the firing unit ready, the technical trigger (the execution of the fires) will fail, leading to untimely fires and, potentially, friendly casualties. This cue, this tactical trigger, must mirror the concept of fires.

One of the most important aspects of implementing the tactical trigger is the need to incorporate additional assets—not just the shooter assigned to execute the target. This means observation in depth to hand off the target being engaged to the next element observing or to the shooter of the target. This need is due to the speed and depth of the modern battlefield coupled with the inability of the observer to see far enough into the battlespace to determine the relevance of a particular target.

A scout or combat observation lasing team (COLT) employed at a named area of interest (NAI) or target area of interest (TAI) is vital in determining which avenue of approach the enemy is taking or in initiating preparatory fires or smoke when conducting offensive operations. This determination of the enemy's approach requires close coordination between the various battlefield operating systems (BOS) of the brigade combat team (BCT) or battalion task force. Only with a combined arms commitment to identify and execute this tactical portion of a fire mission will the observer be able to focus and execute timely, accurate fires for maneuver.

Another important aspect of the tactical trigger is understanding battle rhythm in terms of the pace of a particular operation. This is, for example, knowing how long a particular company team will take to bound five kilometers into its support-by-fire position. Gaining such knowledge takes many hours of training—from the company fire support team's (FIST's) executing the trig-

gers to the battalion FSE's monitoring the fire mission progression and performing its battle tracking drill.

Of course, the breaching operation is still one of the "hardest nuts to crack" due, in large part, to timing the suppression and obscuration fires to coincide with the attempt made to reduce the obstacle by the breach team. Force protection measures, in terms of radar zones, also must be closely monitored and timed. These are all critical events set in motion by the identification of the tactical trigger as it relates to events unfolding on the battlefield.

The Technical Trigger. When does the unit fire? The answer lies in taking a closer look at technical calculations. By applying battlefield calculus—time-of-flight, transmission time, a reasonable estimation of the enemy's rate of travel, mission processing time and gun line reaction time—the FSO determines when and where to set the technical trigger. Identifying both triggers is "the trick."

In setting the technical trigger, the FSO defines the intercept point. This is the point where the rounds meet the enemy. Unfortunately, the rounds tend to fall everywhere but the intercept point, often due to the FSO's failing to incorporate battlefield calculus.

The identified intercept point based on the enemy's rate-of-travel is key to the equation. Time is of the essence; each second equates to a segment of ground traveled by the enemy. For instance, given a speed of seven meters per second, six seconds of transmission time, a 45-second processing time (assuming this is a pre-planned priority target) and a 33-second time-of-flight, the technical trigger must be a minimum of 588 meters out from the intended intercept point.

Variables come into play, such as whether or not the firing unit has had to move since the last time firing data was computed for a particular location or whether or not the established intercept point is a pre-planned target or a target of opportunity. Given the range to the intercept point as well as the two variables mentioned, the timeliness of the tactical trigger ensures the viability of the technical trigger. The FSO must compute the data quickly and accurately to implement the technical trigger.

Triggers in Offensive Operations. When considering tactical and technical triggers and how they relate to of-

fensive operations, the FSO must understand the battle rhythm of an operation. If smoke and suppressive fires of suspected observation posts (OPs) are required before the lead company team crosses the line of departure (LD), then the tactical trigger involves verifying that units are "ready" to fire on the appropriate targets as the company team approaches the LD. The technical trigger would be based on either the battalion FSE's or company FIST's verifying the time-of-flight with the firing unit fire direction center (FDC) and factoring in the smoke build-up time.

Suppressive fires involve the same types of considerations: time-of-flight, taking into account the attack criteria (destroy, neutralize or suppress) on the suspected OP and assets/volleys allocated. The implementation of these technical triggers necessitates close coordination with maneuver during the planning phase as well as demonstration of tactical patience during the execution phase.

Tactical and technical triggers during offensive operations involve more intangibles and require more flexibility. Fortunately, there is some tangible information available to alleviate much of the guesswork. Simply trying to execute fires on the move as an afterthought will prioritize the request for fires as just that—an afterthought. Serious consideration for a trigger as opposed to "As Acquired" will help keep the friendly lead company team from being the one that "is acquired."

There is no magic fix. More often than not, units get wrapped up in whether or not their "trigger kits" are up to snuff and what should be done about the lack of charcoal and a pot to burn it in.

In the old days, an observer had to be intimately familiar with his target area of surveillance. Given today's proliferation of laser and self-location devices, the limits of the surveillance area have greatly increased. When time is constrained, the observer can refine a target and trigger as long as he has a good visual of the area from his OP.

Ideally, the observer will walk or drive the engagement. He should reconnoiter the target area during optimum conditions to ensure he'll be totally familiar with and properly oriented on the area during hours of limited visibility. He should pay close attention to direction and vertical angle readings of specific target and trigger locations as well as the locations of maneuver troops.

Developing visibility diagrams along with a careful map reconnaissance will help validate the trigger and intercept points on the ground. The bottom line is the FA has more than enough equipment and techniques to preclude the use of the proverbial "burning bush" indicator on the battlefield. Tactical and technical triggers should be tactically and technically viable.

Planning and executing offensive and defensive triggers entail considerations peculiar to each. Implementation in the defense can be easier, considering the variables and computations involved. In the offense, observers need a more intimate knowledge of the supported maneuver force to integrate triggers into the overall scheme of maneuver.

Units must do away with the practice of "rubber stamping" the calculations used to incorporate and devise technical triggers. Execution matrixes that list "As acquired" as the trigger indicate a "hand wave" approach to the timely execution of a target. The improper use of priority-of-fires delegation also indicates a lack of understanding of how to implement the maneuver commander's intent for fires.

Without a methodical, logical succession of priority in the fire plan that mirrors the maneuver phases, there is no reason to execute triggers. If a unit has no fires, what good do well-executed tactical and technical triggers do?

Our units must deliver fires to the deadly accuracy and timeliness required and expected of America's Field Artillery.
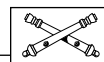
Sergeant First Class Kenneth H. Lambert is a Company/Team Fire Support Combat Trainer on the Scorpion Team at the National Training Center, Fort Irwin, California. His previous assignments include serving as a mechanized infantry Platoon Forward Observer and armor company Fire Support Team Chief for the 2d Brigade Combat Team of the 1st Armored Division in Germany. He also deployed to the Balkans twice: Operations Joint Endeavor and Joint Force, both in Bosnia. His first assignment was with the 10th Mountain Division (Light Infantry), Fort Drum, New York, where he deployed in Operations Uphold and Restore Democracy to Haiti. He has participated in a total of nine rotations to the Combat Maneuver Training Center, Hohenfels, Germany, and the Joint Readiness Training Center, Fort Polk, Louisiana. He holds a BS in English with a History Minor from the University of Massachusetts in Boston.

The Company FSO/FSNCO
To Brief, But Not *Too* Brief

By Sergeant First Class Stephen D. McCane

You are the fire support officer (FSO) for an infantry or armor company attending the company rehearsal or operations order (OPORD) briefing. The company commander is describing the mission's task and purpose, detailing the sub-tasks to the platoon leaders and clarifying the scheme of maneuver. He looks at the FSO and says, "FSO, brief fires. You have three minutes."

An FSO has to brief, but he can't be *that* brief. No one will know what his delegated responsibilities are. No one will understand the scheme of fires. Fires will not be synchronized with maneuver.

This article outlines and defines some things you or your fire support NCO (FSNCO) can do when briefing the fire support plan to make the plan more easily understood and synchronize fires with the company's maneuver plan.

Big Boys with their Toys. Many units use models of vehicles on the sand table to represent their platoon or other element. These are often plastic models of a Bradley fighting vehicle or Abrams tank. You should obtain some models (even an M113) to depict your vehicle location, so the maneuver platoon leaders and platoon sergeants can more easily understand where the fire support team (FIST) is in relation to the support or attack by fire positions. When the unit describes movement from one position to another, often by phases of the operation, you also show where your team will move or be located.

You must describe the FIST movement, especially if the FIST is not going to be traveling inside the company formation. Define the time you expect it to take the team to occupy the new observation post (OP) and what the task and purpose is at the new OP location. Because you can't see the entire battlefield, you must delegate responsibility to the maneuver platoon elements and describe these responsibilities phase by phase.

"X" Marks the Spot. FSOs often brief, "We have two planned targets, AE 2005 and AE2010. AE2005 is at grid NV123456, and AE 2010, the smoke target, is at NV234567." This information doesn't clarify anything for anyone.

You should have a visual marker to locate the target on the ground. Some units use index cards, some use four-inch square ceramic tiles and some use Popsicle sticks run through an index card. The second two models are better in that they are less likely to blow away in the middle of your briefing. The point is to have something on the ground to help the maneuver personnel visualize how fires are supporting them.

In the case of a linear target, such as smoke, use more of maneuver terminology in describing how the target supports them. Rather than saying the target is on an attitude of 2400 mils, tell them the direction in degrees because that is what they understand. Or tell them it runs in a south/southeastern direction and then show them visually on either a map or the terrain model. Clarity and understanding are your ultimate goals.

You also should have visual aides to depict planned OPs. Number them and point them out by phase as the rehearsal or OPORD is conducted.

Why There and Why Then? These are good questions about planned targets. The problem is, they are rarely asked. What is even worse is letting company leaders walk away from the rehearsal not understanding the plan.

Just as the maneuver companies know their task and purpose, you must know and then brief the task and purpose for
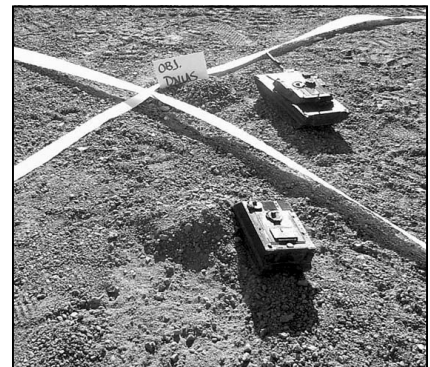
You should obtain some models (even an M113) to depict your vehicle location, so the maneuver platoon leaders and platoon sergeants can more easily understand where the fire support team (FIST) is in relation to the support or attack by fire positions.

each target the company is responsible for. Confusion enters when the task and purpose at your fire support rehearsal does not make sense to your maneuver companies.

You must know doctrine and be able to discuss the planned targets with respect to task, purpose, method and effects. And when discussing method, break it down further to define priority, allocation and restrictions. These are terms maneuver companies know and understand. Terms like "suppress" and "destroy" are defined differently by the fire support and maneuver communities.

Explain the purpose of the target. Be vehicle-quantity specific when expressing desired effects. Also, explain how long obscuration will last and what must happen during that time.

Explain priorities. This is your opportunity to cover the essential fire support tasks (EFSTs) for your maneuver company personnel in a manner they will understand. Describe who has priorities of fires, both artillery and mortar. It is at this point in the briefing that a platoon takes responsibility for targets, if any organic maneuver element is going to have responsibilities.

You don't explain allocation simply by describing how many battalions six-rounds of dual-purpose improved conventional munition (DPICM) missions are allocated to the targets. You don't tell the company how many smoke rounds are on hand. But do tell them in numbers how many fire-for-effect (FFE) missions they can expect or how many rounds will land when a target is fired. Tell them how long it really takes to fire a battalion six-round DPICM mission or how many minutes of obscuration they will have. You already will have done the time and distance analysis and backward planning for the trigger with the company commander and your task force (TF) FSO, so you will know that information.

When talking about restrictions, explain why certain targets will have high-explosive (HE) rounds fired instead of DPICM rounds. DPICM has an inherent two to three percent dud rate, so you won't want to fire DPICM where friendly dismounts will later have to walk and clear. "Lights will begin to go on," if you explain the task and purpose in terms maneuver can understand.

I Brought Presents for Everyone. When coming to the OPORD briefing or rehearsal, bring fires overlays for the

You should have visual aides to depict planned OPs. Number them and point them out by phase as the rehearsal or OPORD briefing is conducted.

maneuver elements. You need one for the commander, the executive officer and each platoon leader. The overlays need to be small enough to use but not so busy with data that they are confusing. On a small legend to the side, you can show the targets each platoon is responsible for.

Who….*Me?* The FIST can't be everywhere during the battle. It can't see every enemy vehicle. When its OP is off to a flank providing overwatch or scanning a targeted area of interest (TAI), it may not see the enemy platoon on the other side. The FIST needs the help of the maneuver unit to be his alternate set of eyes.

You must delegate alternate responsibility for observation of a target to whichever platoon is most likely to be in that area. The platoon is determined during the planning process. Target responsibility also must be assigned during planning. You verify understanding during the rehearsal. If the responsibility is assigned to a platoon, it assigns primary and alternate responsibilities within the platoon.

During the rehearsal, it is critical that platoons talk through this piece to ensure they understand their responsibilities in the event they need to fire the target. Each platoon must know the proper frequency and call signs. It must be intimately familiar with the terrain to identify the target and how to send a call-for-fire request. It also must know what type of ordnance will be coming and in what quantity. (This is the information you provide in your fire support rehearsals.)

Naturally, the rehearsal is not the time to discover maneuver's lack of training. It is incumbent upon fire supporters to train any soldier asked to help execute

fires. This is where the FSNCO plays the leading role. The FSNCO should offer to incorporate the Bradley commanders into his Sergeant's Time training whenever he conducts call-for-fire training. When he schedules time on the training set fire observation (TSFO) or Guard unit armory device full-crew interactive simulation trainer (GUARD-FIST), he should invite the maneuver element to the training. Whenever the FIST conducts mortar live-fire training, the FSNCO should consider asking the Bradley commanders to come along.

The more training maneuver personnel receive in calling for fires, the more comfortable they will become doing it. With time, training and that comfort, they will become proficient and even lethal.

Sounds Simple Enough. Life is difficult enough for a company/team FSO during the planning process. You have meetings to attend and rehearsals to prepare for. You have a lot of work to do. To help the plan succeed, you need an FSNCO helping so you can concentrate on the "meat and not the vegetables." Once you have your plan in mind, share it with your team and the maneuver elements that will be with you on the battlefield.

At the OPORD briefing, you need to step up and speak. Be clear, concise and ensure understanding by asking the right questions. If this isn't the way you've conducted the briefing before, be prepared for some resistance at first. People naturally steer clear of change. But don't allow your briefing to be skipped over or rushed. Persistence is the key.

After all, if you always do what you've always done, you'll always get what you've always gotten.
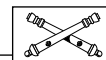
Sergeant First Class Stephen D. McCane, until recently, was a Company/Team Fire Support Combat Trainer on the Scorpion Team at the National Training Center (NTC), Fort Irwin, California. While at the NTC, he trained 19 units as both a Mechanized and Armor Company Team Trainer and served eight rotations as the Task Force Fire Support Element Trainer. He is now a Squadron Fire Support NCO (FSNCO) with the 3d Armored Cavalry Regiment at Fort Carson, Colorado. In previous assignments, he was the FSNCO at J3 Operations in the United Nations Command of the Combined Forces Command in Korea. He also was the Assistant Task Force FSNCO and a Company Fire Support Sergeant at Fort Carson.

82d Airborne Division
Maneuver and Fires Integration Program

By Major John P. Drago

The Combat Training Centers (CTCs) have identified many repetitive negative trends within the fire support battlefield operating system (BOS) in support of a brigade combat team (BCT). Foremost for all fire supporters is the trend identifying the failure to support forces in contact with responsive, accurate indirect fires. Many observations indicate that indirect fires often never make it into the fight.

There are many potential causes for these trends, not all of which are attributable solely to fire supporters. In planning, the importance of using indirect fires is seldom grasped. During rehearsals, calls-for-fire (CFFs) are seldom incorporated or their purpose accurately explained. During execution, communications routinely fail, CFFs are not processed or tactical patience is not practiced. Poor situational awareness causes slow clearance of fires in the company sector, and commonly, units become impatient and maneuver against the enemy without employing their indirect assets.

Squad leaders and platoon leaders often are not aware of or comfortable with CFF procedures and their employment. The result is that units fail to integrate indirect fires when in contact, thus reducing the combat power ratio. This allows the enemy to break contact on his terms.

Although most units recognize that in many cases infantry units should employ mortars and artillery before rushing into a direct firefight, they don't always integrate fires into training. Training is often "stove piped," rarely providing the opportunity to fully synchronize and employ all available assets.

Instead of resourcing training to replicate the true capability of the combined arms team, more often than not, fire supporters sit on the observation post (OP) calling for fires, and company commanders and platoon leaders receive occasional instruction on CFF procedures and indirect capabilities. In most units, rarely do these teams train and execute operations using live artillery and mortars in relatively free-play maneuver exercises. In essence, many of our maneuver brethren don't gain a full appreciation of the magnitude of indirect fire effects and what they can do for their fight.

In view of our no-notice contingency mission and the necessity to maintain proficiency in integrating maneuver and fires, the 82d Airborne Division BCTs at Fort Bragg, North Carolina, execute a maneuver and fires integration certification program—the subject of this article. This program is designed to train and certify maneuver-fires teams at the company and platoon levels to plan, coordinate, synchronize and execute integrated maneuver and indirect fires.

Focused on a phased approach to teach fire support fundamentals and tactics, techniques and procedures (TTPs) for execution, an integral part of the program is the Observation Post (OP) 13 fire control exercise (FCX) or combined arms live fire exercise (CALFEX). This realistic live-fire exercise provides an ideal setting for infantry company commanders, platoon leaders and their respective fire support officers (FSOs) and forward observers (FOs) to build trust and confidence within the teams. Ultimately, by executing danger close

fires, maneuver units gain an appreciation for the destructiveness of indirect fires and solidify the maneuver-fires relationship in planning and controlling these fires.

Preliminary Training. To ensure all teams are trained to a common level of proficiency before the mission cycle or before a live-fire exercise, units undergo preliminary training to provide the foundation for success and reinforce proper techniques. The first step in this process is instruction on fire support fundamentals.

Classroom Instruction. Brigade and battalion fire supporters provide classroom instruction to maneuver-fires team personnel. It includes fire support asset characteristics and capabilities, munitions characteristics and shell-fuze combinations, fire support coordinating measures (FSCMs), CFF procedures and when to use each mission, techniques for determining target and observer location and range and direction to a target, echelonment of fires, minimum safe distances (MSDs) and risk estimate distances (REDs), company fire support planning and execution procedures, clearance of fires and FO control options.

CFF Training. In this phase, units train the maneuver-fires team on conducting fire missions in the FO trainer simulator (FOTS) or Guard unit armory device full-crew interactive simulation trainer (GUARDFIST). Both infantry and artillery personnel meet minimum mission requirements on the training devices, primarily to reinforce the classroom CFF training and give company commanders and platoon leaders an appreciation for what their FSOs or FOs do to put rounds down range. Having the teams execute the training together also helps build a cohesive team.

If time and scheduling permit, a technique to improve this training is to include mortar and artillery fire direction centers (FDCs) and radios to work the entire fire mission processing chain on the appropriate radio nets.

Fire Support Planning/Rock Drill. The final phase in the program before the live-fire exercise focuses on training the team to plan and rehearse fires in support of maneuver operations. The company is issued a battalion order and allocated multiple fire support assets. The company commander and FSO then develop a concept of the operations and a fire support plan to support the commander's scheme of maneuver. This plan is briefed and rehearsed on a map or terrain board and then executed "dry" on the actual terrain or in a field location that provides the necessary maneuver space, if possible.

This training employs all teams operating on their standard radio nets and mortar and artillery FDCs replicating their procedures and radio transmissions. If the exercise is conducted on a terrain model, a useful technique is to include a howitzer section and mortar section in the training. This permits company commanders and platoon leaders to visualize the fire mission processing chain from the CFF through the section crew drill and understand the steps involved before receiving "Shot" and "Splash."

The infantry and artillery battalion commanders facilitate this exercise as senior observer/controllers (O/Cs), offering their insights and experience to improve execution.

Exercise Execution. After these preparation phases, the training culminates with the execution of an FCX, a live-fire tactical exercise without troops (TEWT), or CALFEX at OP 13. This exercise trains the combined arms team to execute a deliberate attack or movement-to-contact using multiple fire support systems. The event is a fully synchronized operation, employing every available asset and maximizing preparation,
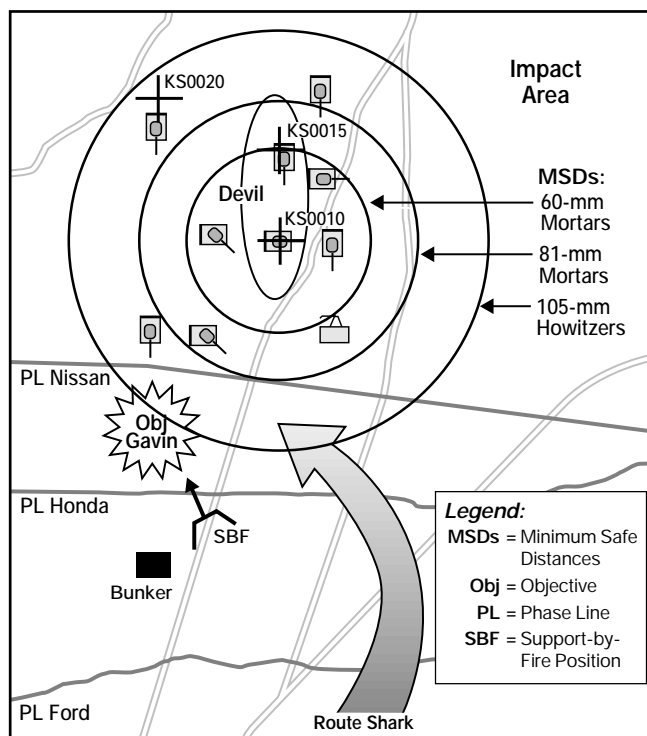

Figure 1: Training Lane Route Shark for the OP 13 Exercise. Targets KS0010 and KS0015 are in Series Devil.

planning and coordination. The goal is to make this exercise as free play as possible, allowing units to execute the echelonment of danger close fires.

OP 13 Scenario/Layout. The general layout of OP 13 provides the opportunity to create a realistic scenario to employ danger close fires (see Figure 1). The scenario can incorporate, in sequence, a deliberate attack, consolidation and reorganization, movement-to-contact, hasty attack and hasty defense.

A lane is established to allow the unit to move along an axis of advance toward and, if coordinated, into the impact. The enemy situation is developed and portrayed by existing targets in the impact area. The company commander's scheme of maneuver generates phase lines (PLs) used as control measures to help initiate, lift and shift fires.

Based upon the targets used to replicate the enemy engagements, MSDs for each weapon system are computed in accordance with AR 385-63 Policies and Procedures for Firing Ammunition for Training, Target Practice and Combat. These computations ensure the safe delivery of fires by identifying clearly on a map the point where targets become unsafe in relationship to the maneuver unit locations as the units assault the objective.

Figure 1 displays the MSDs plotted (not to scale) for several weapons systems on one target (KS0010). These same computations are developed by the FSO executing the lane, providing the basis for echeloning fires of different systems.

Exercise Control. Control is maintained via a separate control net linking the brigade commander, direct support (DS) artillery commander, battalion commander and S3 of the exercise company, and each O/C with platoon elements. The DS artillery battalion S3, infantry battalion assistant S3, battalion FSO and representation of any other assets, such as close air support (CAS) and attack aviation, man the OP bunker and monitor all respective fire support and maneuver nets. These nets allow the exercise controllers to drive the
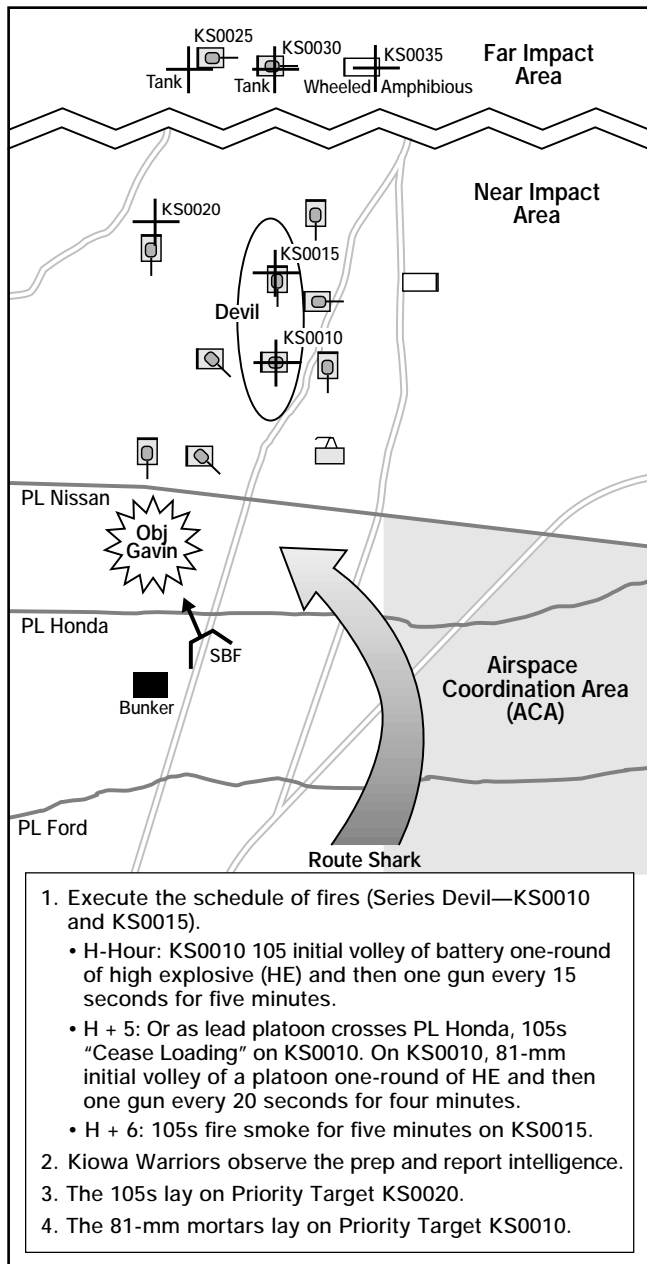
KS0025
KS0030
KS0035
Tank   Tank   Wheeled Amphibious
Far Impact Area

Near Impact Area

KS0020

KS0015

Devil

KS0010

PL Nissan

Obj Gavin

PL Honda

SBF

Bunker

Airspace Coordination Area (ACA)

PL Ford

Route Shark

1. Execute the schedule of fires (Series Devil—KS0010 and KS0015).
   - H-Hour: KS0010 105 initial volley of battery one-round of high explosive (HE) and then one gun every 15 seconds for five minutes.
   - H + 5: Or as lead platoon crosses PL Honda, 105s "Cease Loading" on KS0010. On KS0010, 81-mm initial volley of a platoon one-round of HE and then one gun every 20 seconds for four minutes.
   - H + 6: 105s fire smoke for five minutes on KS0015.
2. Kiowa Warriors observe the prep and report intelligence.
3. The 105s lay on Priority Target KS0020.
4. The 81-mm mortars lay on Priority Target KS0010.

Figure 2: Scenario for the Deliberate Attack in OP 13 Exercise

scenario, control the pace of the exercise and maintain the unit's safety.

Execution of Fires. During this scenario, when supporting the deliberate attack, the FSO's plan likely will include the use of pre-assault/preparatory fires. Timing the arrival of the maneuver forces just as fires are lifted and shifted is the key to this task. Synchronizing the arrival of forces with the end of pre-assault fires allows the company to take advantage of the devastation and confusion created by the preparation.

These fires usually signal the beginning of the attack. If they are delivered early and not fully synchronized, infantry could maneuver at the critical moment exposed, without indirect fires.

In the OP 13 exercise, either a time or an event, such as crossing a phase line, triggers this initial engagement. As the lead platoon crosses a particular phase line, the platoon FO reports to the FSO (depending on the type of FO control option) who initiates firing on objective targets.

Another task typically employed with this operation is the synchronization of fires with the breach through suppression, obscuration, security and reduction (SOSR) fires. Suppressing fires allow the breach element freedom of maneuver to the obstacle by echeloning fires with artillery and mortars. The company commander and FSO lift and shift fires based on the MSDs, allowing maximum effects on target while minimizing risk to friendly forces.

For example, the fire plan may include suppression by multiple caliber weapons in range of the breach (possibly 105-mm, 81-mm and 60-mm). As the lead element approaches the MSD for 105-mm, the company FSO and fire support NCO (FSNCO), in coordination with the company commander, trigger "Cease Loading" on this system and shift the 105s to a deeper target. As the force continues its movement, echelonment of fires continues with 105-mm transitioning to 81-mm fires and then to 60-mm fires.

The trigger to lift or shift some of these fires may be linked to a control measure, such as a phase line or terrain feature. The key is to ensure that delivery systems overlap with no gaps in suppression. An asset should never be turned off but, rather, shifted beyond the objective.

Obscuration denies the enemy visibility of the support-by-fire (SBF) position and the breach element reducing the obstacle. These fires are executed by delivering a predetermined duration of smoke synchronized with all maneuver elements.

Based on the timing of these efforts, the company commander and FSO control the delivery of smoke and shifting of fires to allow the assault force to attack through the breach and gain a foothold on the objective. Tied to the advance of the infantry, fires focus on the task of securing the firing area to prevent the enemy freedom of maneuver, either to counterattack or reposition his forces.

As assets echelon off the objective, fires are shifted either to enemy avenues of approach or onto an enemy withdrawal. If Kiowa Warrior helicopters are available, they are integrated to attack the objective on routes previously deconflicted with gun-target lines. Finally, fires reduce the enemy forces, allowing the assault force to pass through the lane, and then support the assault force's destruction of the remaining enemy forces. This scenario and associated fire plan may be developed many ways.

Figure 2 depicts one scenario option on the OP 13 lane for the deliberate attack. As the lead platoon crosses PL Ford, the prep (target Series Devil) is initiated on Objective Gavin. The purpose of the series is to neutralize the enemy platoon in the vicinity of the objective and to screen the breaching force. The Kiowa Warriors provide the observation for firing Series Devil. Once Series Devil targets are fired, the 105s will lay on Priority Target KS0020 and the 81-mm mortars on KS0010.

The final task in the deliberate attack is for fires to prevent the enemy from moving to and from the objective by using blocking fires or final protective fires (FPF). The FSO and FSNCO adjust 105-mm FPF on the mounted avenues of approach, while the platoon FOs adjust 81-mm and 60-mm FPF on dismounted avenues.

As the enemy counterattack begins, the company commander may direct the integration of CAS. The battalion FSO fires white phosphorous marking rounds for the CAS, while the battalion air liaison officer (ALO) directs aircraft to conduct strafing and bombing runs to defeat the enemy mounted counterattack.
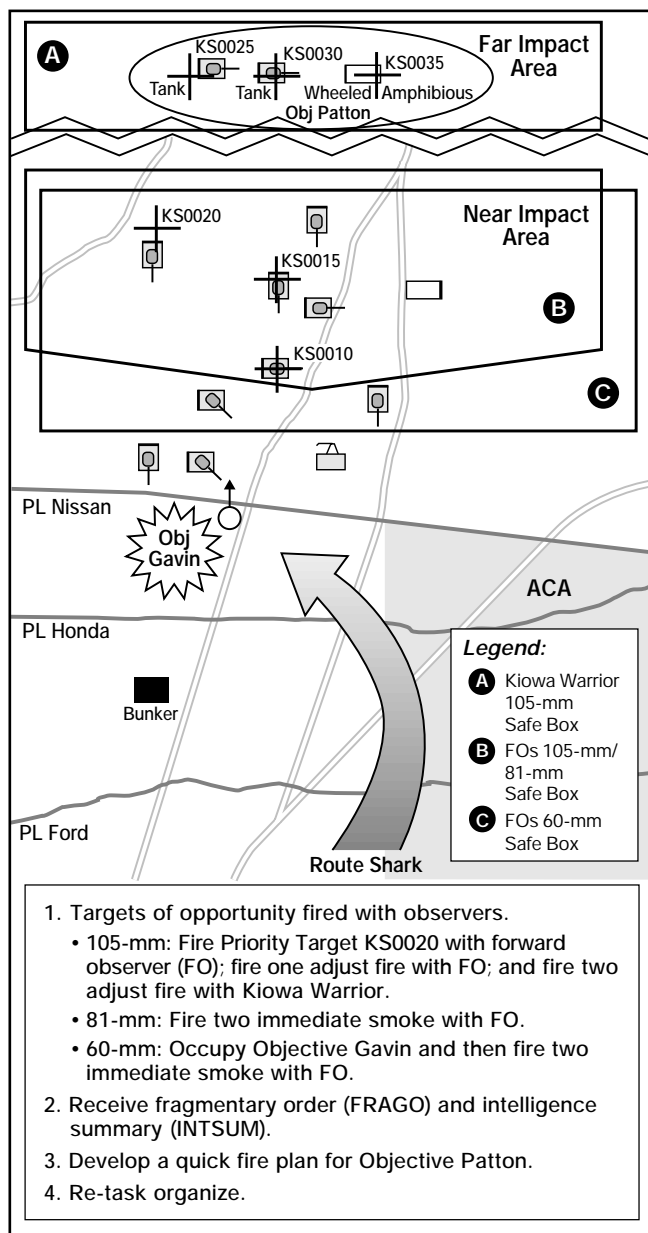
Figure 3: Scenario for Consolidate and Reorganize in OP 13 Exercise. After Objective Gavin is secured, fires disrupt and neutralize the enemy's ability to withdraw to supplemental positions. This phase ends when the lead elements cross PL Nissan. The safe boxes identify where in this scenario friendly forces can use indirect fires without endangering their troops.

Figure 2 shows the FSCM of an informal airspace coordination area (ACA) prohibiting the Kiowa Warriors from flying outside the designated area. The maximum ordinate of the 105-mm round is 850 meters; the maximum ordinate for the 81-mm mortar round is 1,100 meters. The A-10s for CAS will not fly below 4,700 feet above ground level (AGL).

When the remnants of the enemy formation approach (presented as targets of opportunity injects by the control cell), the company commander directs the FSO to fire the FPF. Moments later, the target erupts with a heavy volume of fire.

Once the objective has been secured, the company can reconstitute and reorganize (see Figure 3). During this phase of the exercise, the targets of opportunity can drive the integration and delivery of more indirect fires.

- Position firing units to avoid gun-target line conflicts with Army aviation and close air support (CAS).
- Select a lower charge to increase the angle of fall if aviation will fly under the gun-target line.
- Do not permit mortar overhead firing in peacetime.
- Ensure that coordination occurs for survey and meteorological data for battalion mortars.
- Coordinate with range control for a special impact zone and verify the target area survey from a surveyed laser position.
- Coordinate with explosive ordnance detachment (EOD) for a sweep of the maneuver areas if it extends into the impact area.
- Establish an administrative net to clear targets for firing to ensure absolute control of danger close fires.
- Compute the minimum safe distances (MSDs) by weapons system per AR 385-63 63 Policies and Procedures for Firing Ammunition for Training, Target Practice and Combat for each target to be fired to facilitate lifting and shifting of fires.

Figure 4: Training and Safety Considerations for Executing Live Fires in OP 13 Exercise

An example of some possible missions and the targets that are safe to fire (based on MSDs) are depicted in Figure 3. The consolidate and reorganization phase begins when Objective Gavin is secured. The purpose of fires is to disrupt and neutralize the enemy's ability to withdraw to supplemental positions. The FOs engage targets of opportunity with mortars and artillery. Kiowa Warriors fight the deep fight with 105-mm. Time and resource dependent, the lane can extend into a movement-to-contact, presenting targets of opportunity; and a hasty attack, requiring a quick fire plan; and culminate with a hasty defense.

Each of these scenarios can train the team to properly report, battle track, use priority targets and control the delivery, synchronization and echelonment of fires.

Safety. In an attempt to train as realistically as possible with danger close fires, the FCX and CALFEX present the potential for serious problems. Safety is vital to the successful execution of this exercise. There are several training and safety factors to consider when planning, coordinating and executing OP 13 exercise (see Figure 4).

Synchronizing fires and maneuver in the plan and ensuring the patience and discipline to execute the plan are the keys to employing effective indirect fires. Like no other exercise, OP 13 FCX/CALFEX provides this invaluable training. Working together, the combined arms team delivers timely, accurate, danger close fires and infantrymen gain an appreciation for what a devastating combat multiplier indirect fires are in the fight.
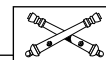
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Accurate Target Location and the Maneuver Shooter:

Are We Ready to Shoot?

By Sergeant First Class
Marshall Teague, Jr.

Today's Army has the technology to achieve first round effects on the enemy with fire support systems. Yet maneuver commanders don't trust indirect fires because the majority of fire missions are ineffective. Why?

In analyzing the missions called by forward observers (FOs), scouts and maneuver shooters, the ineffectiveness is frequently due to inaccurate target location. Operator knowledge of equipment, improper pre-combat checks (PCCs) and pre-combat inspections (PCIs), and poor synchronization of fires with the scheme of maneuver contribute significantly to target inaccuracies.

All fire supporters are familiar with the five requirements for accurate, predicted fires: (1) accurate target location, (2) accurate firing unit location, (3) accurate weapon and ammunition data, (4) accurate meteorological information and (5) accurate computational procedures. As fire supporters, we start the process by calculating accurate target location and size. Regardless of the type of observer, the steps to calculating an accurate target location must be performed correctly or the possibility for error increases.

Accurate target location begins with home station training. Too many times soldiers arrive at the National Training Center (NTC) at Fort Irwin, California, unprepared to perform at their respective skill levels. This is unacceptable and unfair to our soldiers who depend on their chain of command to train them for combat. At the NTC, sometimes soldiers

can't operate their equipment or even read a map.

By developing an effective training program, properly conducting PCCs/PCIs and ensuring soldiers thoroughly understand how to use their equipment, maneuver shooters and fire supporters alike can locate and engage targets with accurate, devastating indirect fires.

This article focuses on conducting proper PCCs and PCIs to ensure shooters locate targets accurately when they call for fires and outlines the results of a study at the NTC that shows why targets are often located inaccurately.

Improper PCCs/PCIs. This is a negative trend we see in the performance of junior leaders. NCOs and junior officers must conduct these checks and inspections before each mission to ensure soldiers can accomplish their assigned tasks.

Fire Support Equipment. All too often we see a fire support team (FIST) occupy its observation post (OP) only to realize it has no charged batteries for its ground /vehicular laser locator designator (G/VLLD) or mini eye-safe laser infrared observation set (MELIOS), no electromagnetic interference filter (EMI), a broken piece of equipment that could have been exchanged with another team for the mission, a MELIOS improperly calibrated and (or) the FIST vehicle (FIST-V) north-seeking gyro (NSG) misaligned

Failure to conduct proper PCCs/PCIs causes observers to rely on a less accurate means of target location, such as

binoculars and compass, thus increasing the likelihood of error.

The equipment most units use are the FIST-V, G/VLLD and MELIOS. This equipment requires initialization, calibration and boresighting before it tracks, lases and calculates correct target location data.

The FIST-V (M981) has a targeting station control display (TSCD) and a NSG. The TSCD must be initialized with a universal transverse mercator (UTM) and a 10-digit grid with altitude. The NSG will not complete initialization until the vehicle easting, northing and altitude have been entered manually. If the TSCD is not initialized and the TSCD test is not complete, the TSCD will apply the wrong azimuth when lasing a target, resulting in an inaccurate target location.

Maneuver Equipment. Maneuver shooters use similar equipment in the M1A1, M1A2, M1A2 tank with separate enhancement program (SEP) and the M2A2 and M2A2 Operation Desert Storm (ODS) versions of the Bradley infantry fighting vehicle. Each of these systems differs in its capabilities, and soldiers must be familiar with them to use the equipment most effectively.

The M1A1 Abrams tank uses a precision lightweight global positioning system receiver (PLGR) to track its location on the battlefield. Its laser rangefinder (LRF) will provide only the range to the target. However, M1A1s can't lase with the multiple integrated laser engagement system (MILES) installed,

forcing crews to operate in a degraded mode. At the NTC during force-on-force, all Abrams calls-for-fire are requested using a map without taking advantage of the tank's technology.

The M1A2 has a positive navigation (POS/NAV) system that must be initialized by manually inputting a known grid generally taken from a PLGR. This should be inputted when the tank is powered up. The POS/NAV will initialize with the last position and heading stored. If the tank is powered up without a POS/NAV installed or with the POS/NAV circuit breaker set to "Off," the tank position displayed will be incorrect.

Although the system is quite accurate, periodic updates may be required to maintain current position and heading data during operations. To update POS/NAV data, the tank position and (or) heading must be determined; the data can be taken from the PLGR or by lasing a target to calculate self-location. Finally, correct data must be entered to adjust for track slippage in theater, thereby maintaining an accurate grid location.

The M1A2 SEP has a PLGR to help run the POS/NAV and the LRF, which is eye-safe. This enhancement negates the necessity of adjusting for track slippage.

All of these systems should be initialized as prescribed by their technical manuals (TMs) during PCCs. If a maneuver soldier lases a target with the LRF and the POS/NAV has not been initialized, he will calculate an inaccurate target location.

The M2A2 ODS Bradley fighting vehicle has an integrated sight unit (ISU) and Bradley eye-safe laser rangefinder (BELRF). The ISU and BELRF should be boresighted as outlined in the TM.

The M2A2 ODS PLGR is hooked into the system with the POS/NAV. When a soldier turns the system on, he must initialize the POS/NAV with his location. This information is received from the PLGR. Once the system is initialized, he must calibrate the digital compass system (DCS) to the area of operations. If the DCS is not calibrated, he must conduct the calibration steps outlined in the TM. If the PLGR is not set up properly or if the DCS has not been calibrated, the soldier will calculate an inaccurate target location.

The M2A2 has no eye-safe laser rangefinder and no POS/NAV. Its position is tracked with a PLGR; therefore, the call-for-fire coming from this shooter will be conducted with a PLGR and map,

most likely by an untrained observer.

For all these pieces of equipment, the PLGR must be set up correctly and have the current crypto daily key loaded to achieve maximum accuracy.

NTC Target Location Error Study. Through research conducted at the NTC using target accuracy tracking sheets over a six-month period, we determined many causes of target location errors. The observer/controllers conducting the study randomly picked different observers to lase a known target. These observers consisted of scouts, an M1A1, an M2A2, FIST-Vs and dismounted observers.

The results showed that 80 percent of scout fire missions were ineffective due to their MELIOS not being calibrated properly or having inadequately charged batteries.

During force-on-force, most observers in the M1A1 operating in the degraded mode called for the wrong mission—they requested fire-for-effect missions instead of adjusting fires.

We have not collected data on the M1A2 and M1A2 SEP for target accuracy at the NTC.

The observers operating out of M2A2 ODS gave inaccurate target locations because, in most cases, the crews didn't calibrate properly. For example, if an M2A2 ODS were calibrated at home station with a declination of zero degrees, then when deployed to the NTC with a declination of 17 degrees and without new calibration, the vehicle would apply the wrong azimuth when lasing a target.

Because the NTC does not have a suitable calibration site, most calibrations are not conducted. It is hard to find terrain that is suitable for each step of the calibration; therefore, we generally receive inaccurate target locations from the M2A2 ODS.

The FIST-Vs most often provide inaccurate target locations because the FISTs have been initializing the TSCD incorrectly. These observers are not re-initializing the NSG, which must be done if realignment has not been conducted in the last four hours or if an error of three mils has been found during realignment. Realignment should occur every hour of operation in an observation post (OP) or after arriving at a new location.

If FISTs do not re-align or re-initialize the NSG and lase targets, the FIST-Vs will apply the wrong azimuths, producing an inaccurate target locations. TM

9-2350-266-10, Page 2-321 provides step-by-step procedures for conducting these tasks.

Dismounted observers are providing inaccurate target locations because FISTs/FOs aren't placing the correct azimuths on their tripods, have not declinated their M2 compasses, aren't applying the proper declination to their lensatic compasses or are forgetting to apply any of these steps. If the observer realizes his equipment isn't working properly, he should be prepared to conduct a fire mission using his map.

Most FOs don't have an observed fire fan, protractor or PLGR with batteries to help them locate targets. They then must use a map spot, just like maneuver shooters. Additionally, most of the dismounted observers call for fire-for-effect missions instead of adjusting fires on to the target.

The result of this data collection reinforces the importance of conducting proper PCCs/PCIs. Because PCCs/PCIs are not being performed correctly, observers are resorting to using maps and compasses that, nine times out of ten, will be inaccurate.

During home station training, units must use all their TMs, develop fire support and maneuver shooter crew drills, train maneuver and fire supporters on their equipment during command maintenance or opportunity training, and update unit tactical standing operating procedures (TACSOP). By doing so, indirect fires can achieve first round effects on the enemy and regain the respect and confidence of our maneuver leaders.
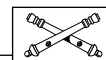
Sergeant First Class Marshall Teague, Jr., is a Fire Support Element (FSE) Combat Trainer on the Scorpion Team at the National Training Center, Fort Irwin, California. He has trained 11 units as both a Mechanized and Armor Company Team Trainer and as a Task Force FSE Trainer. In previous assignments, he was a Platoon Sergeant in D Troop, 4th Cavalry, 1st Infantry Division (Mechanized) at Fort Riley, Kansas; Striker Platoon Sergeant in Headquarters and Headquarters Battery, 1st Battalion, 5th Field Artillery, also in the 1st Infantry Division at Fort Riley; and Company Fire Support Sergeant and Platoon Forward Observer in D Battery, 319th Field Artillery in Vincenza, Italy. Prior to that, he was the Assistant Brigade Fire Support Sergeant for 4th Battalion, 1st Field Artillery, 1st Armored Division at Fort Riley.

FATC

Unique Training for Next-Generation Artillerymen

By Colonel Thomas J. O'Donnell

The changes underway in one-station unit training (OSUT) at the Field Artillery Training Center (FATC), Fort Sill, Oklahoma, will produce soldiers who are more proficient in their FA skill level 10 tasks, making Cannoneers, FISTers and Fire Direction Specialists better prepared to perform in units from day one. The FATC trains all US Field Artillerymen: Army active and National Guardsmen, and Marine Corps active and Reservists.

This article introduces the FATC's unique design of one-station unit training (OSUT)—combined basic training (BT) and advanced individual training (AIT)—that adds FA military occupational specialty (MOS) tasks early and reinforces them often throughout training. In addition, another OSUT change in FY03 will integrate the "Gunnery" MOS into one OSUT program, simultaneously training and building a cohesive team.

But first, I discuss what has not changed—the drill sergeant—and then what has changed—the new recruit.

Today's Drill Sergeant. Today's drill sergeant is a staff sergeant or sergeant first class who faces one of the most demanding jobs in the Army: transforming a volunteer civilian into a soldier. After being Department of the Army (DA) selected from the top 10 percent of their MOS, drill sergeants graduate from the nine-week Drill Sergeants School at Fort Bliss, Texas, highly motivated to train new soldiers.

A quick profile reveals that the vast majority of drill sergeants have Type A personalities, are extremely dedicated with a high sense of duty, are bright and articulate, and generally score on the extended scale of the physical training test. These NCOs face 18-hour workdays in all conditions to ensure their soldiers meet the standards and wake up the next morning ready to begin again.

While the FATC maintains its drill sergeant strength at or near 100 percent, additional duties, illnesses, emergency leaves, DA schools and taskings (just like in other units) keep the present-for-duty drill sergeant population extremely busy during their two-year tours. When these professional, dedicated NCOs return to the field, they have a positive impact on any unit or organization fortunate enough to get them.

Today's Recruits. Like those of the past, today's recruits are products of our society. As our society has changed, so has the typical Army recruit.

Our recruits come from the so-called "Generation X." They are very inquisitive, more self-reliant and computer savvy.

However, generally speaking, these volunteers are less fit and less active than those of previous generations. This shortcoming provides unique training challenges in that all must rise to meet the standard. About 12 percent of male recruits fail the initial assessment of performing 13 push-ups, 17 sit-ups and a minimum of an eight and one-half minute mile.

Another new characteristic of the enlistees is the fact that the average age is creeping higher. The average age of these recruits is now 21 years old; just a few years ago, the average age hovered around 18.

Additionally, the level of education seems to be edging higher. About 90 percent of today's recruits have a high school education and about six percent of those have some college credits or degrees. This higher education level fits nicely with the Army's ever-advancing equipment technology and increasing sophistication.

Just as the Army adjusts to accommodate its new technology and weapons development advances, the Army must accommodate the changing profile of its recruits. Without question, we need to take full advantage of their talents, but we also must address their shortcomings. Overall, the recruits of today require more attention to get the job done and present a unique challenge for drill sergeants.

In IET, which includes BT and AIT, new recruits encounter the highest stan-

Davis Bay Named After MOH Recipient

On 19 October 2001, the Field Artillery Training Center and its 1st Battalion, 78th Field Artillery, Fort Sill, Oklahoma, dedicated its howitzer crew training bay in honor of the Sergeant First Class Sammy L. Davis, a retired Field Artilleryman who was awarded the Medal of Honor (MOH) for actions in Vietnam. This facility is the perfect match for association with SFC Davis. He often mentions the importance of his training in crew drill when he speaks, and it is in this facility that our newest Cannoneers are first introduced to crew drill.

On 18 November 1967, then Private First Class Davis distinguished himself while serving with C Battery, 2d Battalion, 4th Field Artillery, part of the 9th Infantry Division, at a remote firebase in Vietnam. Facing a reinforced Viet Cong battalion and with extensive injuries, he not only fired a burning howitzer repeatedly under a withering hail of enemy fire directed at his position, but also, unable to swim, used an air mattress to cross a deep river to rescue three injured comrades on the far side and stood against the Viet Cong while firing to protect them. Refusing medical treatment, he then joined other howitzer crews and fired until the enemy fled.

Davis Bay has six of the M109A5 howitzer crew trainers (HCTs), two Guard unit armory device full-crew interactive trainers (GUARDFISTs) for forward observers and six sets of fire direction center (FDC) support systems. This provides the ability to train a complete gunnery team on every type of fire mission—howitzer crews, fire support teams (FISTs) and FDC sections.

The HCT is a first in training entry-level Field Artillery cannon crewmen using simulator technology. Each HCT is a working replica of an M109A5 howitzer, allowing the howitzer crew to perform all tasks to fire the howitzer—no other method of training except live-fire can duplicate this training value.

The majority of training in Davis Bay is on the HCTs. The facility can train 60 soldiers at one time in the HCTs and, simultaneously, an additional 120 soldiers in classrooms on ammunition handling.

MAJ Michael J. Dvoracek, FA
Executive Officer, 1-78 FA
FATC, Fort Sill, OK

MOH recipient SFC Sammy L. Davis (left) speaks at the dedication of the Field Artillery Training Center's 1st Battalion, 78th Field Artillery's Davis Bay, 19 October 2001. To the right is CSM Morgan B. Reed of 1-78 FA.

dards of their young lives. They come face-to-face with training professionals committed to high standards to transform them from civilians to soldiers. FATC adheres to an assist/insist philosophy during initial entry training: *assisting* soldiers while *insisting* they meet high standards. They get an unprecedented level of support and assistance from their drill sergeants and training cadre and daily gain confidence in their growing achievements.

Today's drill sergeants rely less on harassment and demeaning drills to instill discipline and place more emphasis on corrective training that suits the task being trained and (or) physical exercise. Since 1998, the requirement to graduate from basic training has increased from passing four major tasks to 11—there is no time for poor leadership techniques.

The transformation is dramatic. Between their initial oath of enlistment and their first unit of assignment, recruits rapidly progress from being physically unfit to physically fit, from undisciplined to disciplined to self-disciplined and from operating as individuals to performing as a team to becoming leaders. They are transformed from individuals with varied backgrounds and views into soldiers who live the Army core values.

IET Models. Most training today is conducted in standard BT at five training centers: FATC at Fort Sill; Fort Knox, Kentucky; Fort Leonard Wood, Missouri; Fort Jackson, South Carolina; and Fort Benning, Georgia. After BT, AIT can take up to a year at one of

26 installations, depending on the MOS.

MOS with a large annual throughput, such as combat arms specialties, train in a single unit for both the BT and AIT, called OSUT. The initial nine weeks of OSUT follows a similar program of instruction (POI) as all BT. The final weeks are geared specifically toward the skill level 10 tasks trained in AIT needed by new soldiers at their first assignments.

Ideally, OSUT drill sergeants are the same MOS. The ratio of drill sergeants to soldiers is an advantage in OSUT (17:1) versus AIT (35:1). More direct supervision by expert leaders who know what "Right" looks like is key to success in OSUT.

OSUT reduces IET training time and other resources. On the average, combining BT and AIT reduces soldiers' IET by eight days. The majority of time saved is in in/out processing and other administrative necessities. The bottom line is that OSUT training is more continuous and MOS-qualified soldiers are integrated into the force more rapidly.

FATC OSUT Models. Some Field Artillery training will start in the BT phase of FATC OSUT and continue for the 15-week training—not waiting to be introduced in the "AIT" phase of OSUT.

13B OSUT Model. Starting with an FATC pilot program in February, 13B OSUT soldiers will be exposed to one or two artillery tasks each week in the first nine weeks (BT). Through reinforcement training and a building-block approach, the result will be a better-trained Cannoneer who will retain most of his newly acquired skills. In addition,

he will "become" a Field Artilleryman from the beginning of IET.

For example, starting with the second week of OSUT, the 13B trainee will be introduced to tasks associated with advanced party operations or ammunition handling, some of his most challenging skill level 10 tasks. He will train on MOS-related tasks at the rate of about two to four hours per week. Throughout OSUT, the 13B will receive reinforcement training on those difficult tasks introduced at the beginning.

This FATC 13B OSUT design—introducing trainees to MOS tasks in the first nine weeks—is a new concept for OSUT in today's Army.

Gunnery Team OSUT Conversion. The FATC will expand the new OSUT model to key MOS. In FY03, we will introduce MOS 13D Field Artillery Tactical Data Systems Specialist and MOS 13F Fire Support Specialist to the OSUT model. Even though these two MOS are not high-density and would not normally fit the OSUT model, the benefit of integrating these MOS with 13B Cannoneers into a "Gunnery Team" OSUT unit is a positive step for the Field Artillery.

In this new OSUT model, the Gunnery Team soldiers will train together from day one of IET. Each MOS will maintain platoon or section integrity, so the MOS-specific drill sergeants can continue to shape the MOS. But overall, these soldiers will gain a greater appreciation of the role that each MOS plays on the team.

Under the current recruiting methodology, training as a Gunnery Team presents a challenge. Based on our divisional artillery unit composition, we need five times more 13Bs than 13Ds and 13Fs. Hence, this is how the Army recruits and, consequently, flows 13Bs into the training base—throughputting a battery fill (240 soldiers) approximately every three weeks.

We do not need the same volume of 13Fs and 13Ds in the force. At the same interval (every three weeks), we fill a platoon (60 soldiers) of 13Fs and a section (20 soldiers) of 13Ds. Additionally the size of an OSUT battalion is limited to the size of facilities and equipment available for training.

Beginning in FY03, the FATC will reconfigure two battalions to integrate the additional members of the Gunnery Team (13Ds and 13Fs) into the OSUT program. As the figure shows, the integration is accomplished at the battery level, keeping either section or platoon
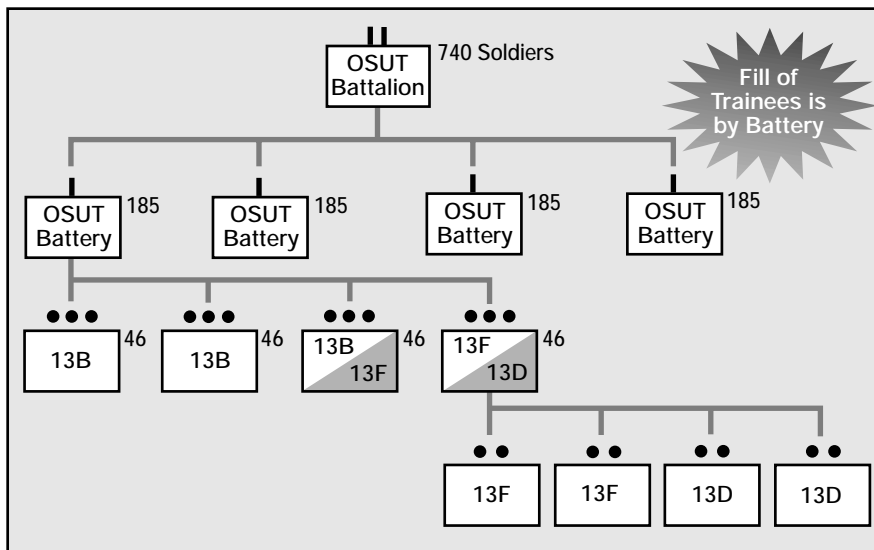
Gunnery Team One-Station Training Unit Training (OSUT) Structure: 13B Cannoneers, 13D Tactical Data Systems Specialists and 13F Fire Support Specialists

integrity for a specific MOS. Adjustments will have to be made in the POIs as the course lengths for 13B, 13D and 13F are different.

Integrating the three principal MOS of the Gunnery Team into the same unit for training will reinforce the concept of "train as we fight." It will be up to the drill sergeants and training cadre to instill a new culture in the Gunnery Team, one that promotes the unity of effort necessary to put steel on target.

The first event for the OSUT Gunnery Team will be to participate in a live-fire demonstration where the new soldiers will observe the capabilities of most weapons—from the use of the bayonet to the firing of the Paladin M109A6 howitzer. They will see the tactics and techniques necessary to employ each system. In the following weeks, they will receive common core BT training, except for the two to four hours of MOS-specific training, and then move into the more MOS-intensive, AIT-equivalent training.

The capstone event for this new OSUT program will be a field training exercise (FTX) in the 14th week of training designed to exercise the entire Gunnery Team. The FTX will combine and evaluate both BT and AIT tasks in a realistic artillery setting.

This new FATC OSUT will incorporate a logical progression of training to transition civilians into artillery warriors. Each OSUT recruit will be trained in those individual skills and tasks essential for developing a well-disciplined, highly motivated, physically fit and technically qualified Field Artilleryman.
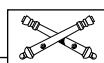
Colonel Thomas J. O'Donnell commands the Field Artillery Training Center, Fort Sill, Oklahoma. Also at Fort Sill, he commanded the 2d Battalion, 2d Field Artillery, part of the 30th Field Artillery Regiment of the Training Command. In other assignments, he was the Field Artillery Officer Branch Chief in the Total Army Personnel Command, Alexandria, Virginia; Executive Officer to the Assistant Deputy Chief of Staff for Operations and Plans at the Pentagon; G3 Training Officer for the 25th Infantry Division (Light), Schofield Barracks, Hawaii; and S3 and Battalion Executive Officer for the 3d Battalion, 7th Field Artillery, also part of the 25th Division. He commanded C Battery, 1st Battalion, 22d Field Artillery, part of the 1st Armored Division in Germany. In 1974, he enlisted in the Army and attended Basic Training at Fort Dix, New Jersey. He was commissioned a Second Lieutenant in the Field Artillery in 1979 after graduating from the US Military Academy at West Point. Colonel O'Donnell holds three master's degrees, including a Master of Strategic Art and Policy from the National War College in Washington, DC.

Fort Sill Now Has a National Cemetery

On 2 November 2001, the Fort Sill National Cemetery held its opening ceremonies in Elgin, Oklahoma. It is the Department of Veteran Affairs' (DAV's) 120th national cemetery. Members of Congress, local legislators, representatives of local veterans organizations, military officials and DAV employees attended the ceremonies, which included a keynote address by Secretary of Veterans Affairs Anthony J. Principi.

The new 391-acre cemetery site is rolling prairie on land that was donated to DAV by Fort Sill. The cemetery is accessed from Elgin, just north of Fort Sill, off of Interstate 44. It will serve veterans and their family members within 75 miles of the new facility, including the Oklahoma City area, currently estimated at approximately 166,000.

Burials began on 5 November in the first burial area, a three-acre section. This allowed the cemetery to serve veterans burial needs before major construction begins.

Although initial operations are being conducted from temporary facilities, a contract for $12 million was awarded for Phase I construction of the site, which should be completed in two years. In addition to the entrance area, a permanent administration and maintenance complex will be built in Phase I along with a public information center and two committal service shelters. This first phase of construction will include 10,270 full-casket gravesites, 1,000 in-ground sites for cremation remains and 1,000 columbaria niches for cremation remains. Future construction will develop further acreage, enabling the cemetery to provide for the burials needs of veterans for the next 100 years.

The Oklahoma City area was one of 10 areas identified in a report to Congress in 1987 as having a large veteran population not served by either a national or state veterans cemetery within reasonable driving distance. In addition to the Fort Sill National Cemetery, DAV is developing national cemeteries near Atlanta, Detroit, Miami, Pittsburgh and Sacramento.

For more information on the DVA's National Cemetery Administration, see the web site www.cem.va.gov. Veterans can contact the Fort Sill National Cemetery at Route 1, Box 5224, Elgin, Oklahoma 73538 or 580-492-3200; to reach the cemetery, follow the signs in Elgin.

Department of Veterans Affairs
Dallas Regional Office of Public Affairs
Dallas, TX

MOS 13F Fire Support Specialists

CMF 13 Field Artillery
School Course Update

By Command Sergeant Major Ricky L. Hatcher

In the Army, change is all around us, and the Field Artillery School, Fort Sill, Oklahoma, is no different. In addition to supporting Army Transformation initiatives and the reorganization of the FA School, many of our departments have implemented changes to programs of instruction (POIs).

This article addresses the most significant changes to institutional training for Career Management Field (CMF) 13 in the FA School in the past year.

Fire Support and Combined Arms Operations Department (FSCAOD), Sergeant Major Jihad Z. Ali, DSN 639-6424 (580-442-6424), jihad.ali@sill. army.mil. FSCAOD's POIs have un-

dergone several changes to facilitate instruction for new equipment platforms, changes in doctrinal applications or increased personnel training requirements.

Fire Support. Perhaps some of FSCAOD's most significant instructional changes have been the results of fielding two new warfighting vehicles: the M7 Bradley fire support team vehicle (BFIST) and the M707 Striker high-mobility multipurpose wheeled vehicle (HMMWV).

The BFIST's turret-mounted weapon systems, the M242 25-mm Bushmaster and M240C co-axial machine gun, allow the crew to provide its own defen-

sive direct fires. Another important aspect of the BFIST's technology is its ability to provide precise targeting data while stationary or moving. The M707 Striker is a HMMWV with a modified cupola designed to accept the ground/vehicular laser locator designator (G/VLLD). Other improvements to both vehicles include the addition of the lightweight computer unit (LCU) and the hand-held terminal unit (HTU).

BFIST training began in June 2000 with the BFIST Commanders Course. This is a three-week course for second lieutenants and staff sergeants who will be Bradley commanders and gunners in the BFIST turrets. FSCAOD will offer

four BFIST Commanders Courses in FY02, five in FY03 and seven in FY04.

In December 2001, the BFIST Operators Course began. It is a four-week POI designed for privates through specialists being assigned to BFIST-equipped units. FSCAOD is offering four courses in FY02, five courses in FY03 and eight in FY04.

Striker training was integrated into the 2002 Military Occupational Specialty (MOS) 13F Fire Support Specialist Advanced Individual Training (AIT) POI and also will be part of the 13F Basic NCO Course (BNCOC), Phase II.

Command, Control and Communications (C³). The most significant POI C^3 changes were in the Transition Course for 13C Tactical Automated Fire Control Systems Specialists' and 13 E Cannon Fire Direction Specialists' transitioning to 13D FA Tactical Data Systems Specialist and in the 13D AIT.

The Transition Course time increased to allow for manual gunnery instruction, resulting in 13Cs' transitioning to 13Ds. The student load is anticipated to increase from 300 students in FY01 to more than 2,000 in FY02.

Course lengths are as follow: Advanced Field Artillery Tactical Data System (AFATDS) Transition Course (seven weeks), AFATDS Command and Staff Course (three weeks), 13D AIT (seven weeks), Initial Fire Support Automation System Course (three weeks), 13C AIT (three weeks), Tactical Communications Course (one week).

Target Acquisition. These courses have had minimal changes, with the exception of a reduction in the scheduled training time for 13R Firefinder Radar Operator AIT. The POI has been trimmed down from 10 to eight weeks.

Many don't realize that AIT for 13R is the most technically demanding MOS-producing course in the Field Artillery. A reduction in scheduled training time equates to an increase in the amount of "midnight oil" students must expend.

The 93 F Meteorological Crewman AIT—the Meteorological Operator's Course—also has been decreased from nine to seven weeks. Additionally, in an effort to provide soldiers with more realistic training, the 93F AIT now has a tactical field training exercise (FTX).

Gunnery Department—Sergeant Major Allen R. Stokes, DSN 639-2400 (580-442-2400), stokesa@sill.army.mil. The most significant changes in the Gunnery Department involve MOS 13E and 13C along with an additional course.

Cannon. The 13E AIT has dropped one week of instruction in the area of communications. There are several reasons for this change. One is the MOS was directed to cut training in an ongoing effort to reduce the time a soldier is in institutional training and get them to the field as soon as possible.

Communications was omitted because units can easily train the tasks. Initial entry soldiers get basic communications skills while in basic training (BT). A new soldier in a unit will not be communicating significant information or troubleshooting radios.

The 13D AIT has one major training change with the completion of A99 Version software in January. This software also will be trained in the technical portion of the 13D Transition Course (13C/E). In the transition course, 13Cs receive training on manual gunnery and technical fire direction skills, while 13Es receive only the technical fire direction portion of the training.

Multiple-Launch Rocket System (MLRS). During FY01, the 13P MLRS Fire Direction Specialist AIT went from 13 to 11 weeks. Selected graduates of the 13P AIT course also began attending the AFATDS Operator's Course.

Critz Hall has undergone several facility upgrades that will continue through the near future to accommodate training for two new pieces of equipment as they are fielded: the M270A1 launcher and high-mobility artillery rocket system (HIMARS). The newest upgrade is 20 fire control panel (FCP) trainers for the M270A1 FCP.

The major changes in the 13M MLRS Crewman courses in the near future will be the addition of the M270A1 Transition Course. This two-week course will be for specialists (promotable) to sergeants first class and will award the Additional Skill Identifier (ASI) of A1. The first M270A1 Transition Course is scheduled to begin in April. The 13M AIT with M270A1 instruction will begin in FY04.

NCO Academy—Commandant Command Sergeant Major Carl B. McPherson, Sr., DSN 639-2417 (580-442-2417), carl.mcpherson@sill.army.mil. The most significant changes recently in the advanced NCO course (ANCOC) and BNCOC POIs is that the common core instruction became two-week stand-alone Phase I portions of the respective courses, which is required before students can take the MOS-specific Phase II portions in residence. Branch-spe-

cific NCO Academies began teaching the common core tasks last October.

NCOs selected for ANCOC or BNCOC may take the stand-alone course at any location in the Army school system (TASS) that teaches it. Active duty soldiers cannot take the core course at Reserve Component (RC) schools unless the training is conducted as a two-week block of instruction—not conducted over weekends, at night or during other RC training periods. For soldiers in Europe, the common core courses are available through distance learning.

The Phase I common core course is taught at Fort Sill by any small group leader (SGL) at the NCO Academy. Phase II is taught by MOS-specific SGLs and covers the track/MOS-specific portions of ANCOC and BNCOC. There are limited honors and evaluations due to the fact that students no longer instruct each other.

For ANCOC, the Military Briefing is now a graduation requirement. This means students must get "Satisfactory" on all measures. Previously, students could have three measures rated as "Unsatisfactory" and still receive a "Go."

For the 13D BNCOC, students must have AFATDS training before attending Phase II. Failure to have this prerequisite will prevent the soldier from being enrolled for Phase II, the track portion of the 13D BNCOC.

The Primary Leadership Development Course (PLDC) has had several changes. The evaluation system now is based on points rather then "Go" or "No Go."

The Sergeants Major Academy at Fort Bliss, Texas, has clarified the PLDC Army physical fitness requirements. A student must be able to conduct, demonstrate and lead drills, ceremonies and physical fitness training. The student must be able to walk a minimum of 3,200 meters with load-carrying equipment (LCE) and kelvar helmet in three hours. The student must be able to carry 50 pounds during FTXs for extended distances and all required packing list items for short distances (in transit and in in-processing).

PLDC academic evaluations and honors have new criteria. There is now a Commandant's List. Achieving "Exceeded Course Standards" on the service, school, academic, evaluation report (DA Form 1059) requires "Superiors" in all evaluated areas.

Field Artillery Proponency Office (FAPO)—Sergeant Major Roy A.

Greenwood, DSN 639-4970 (580-442-4970), greenwoodr@sill.army.mil. Although FAPO is not a teaching department, the work done in this office has a significant impact on the training and future structure of CMF 13.

No decision has been made as to whether or not Crusader will have a separate MOS or ASI. The current plan has Crusader replacing cannons in 13 of the 21 Active Component (AC) heavy cannon battalions and five Army National Guard (ARNG) heavy battalions. Crusader is projected to start fielding in 2008.

The lightweight 155-mm howitzer (LW 155) is projected to enter the inventory in FY04, replacing the M198 by FY12. M102 and M119 cannons should be phased out around FY14 with no replacement identified at this time. A new future combat system (FCS) is currently scheduled for fielding in FY10; decisions about its capabilities are due in FY03.

The 13D conversion is going according to schedule. Soldiers in the field who have received the required training for conversion to 13D should follow the guidance provided in the Military Personnel Message 01-163 as soon as possible; soldiers can access the message on line at http://perscomnd04.army.mil. By FY04, the AC will have only two fire control/direction MOS (13D and 13P). (For ARNG units, the schoolhouse will continue to teach MOS 13C, 13D, 13E and 13P until the ARNG fire direction conversion to 13D is completed in about FY08.) The proposed plan is to look at 13P in FY04 for possible conversion over to 13D in FY07.

As each new interim brigade combat team (IBCT) comes on board, it will increase the 13F structure. A new ASI has been approved for the BFIST (M7). The ASI for enlisted soldiers will be D3, and the Skill Identifier (SI) for officers will be 3X.

ASI A1 will identify the soldiers trained on the new M270A1 launcher. The current plan is to field 327 M270A1 launchers from the Second Quarter of FY02 to the Fourth Quarter of FY09.

HIMARS is to replace some M198s and M270 and M270A1 launchers in FA brigades. The proposed plan for HIMARS is to field 815 launchers, starting in the Second Quarter of FY05 and ending sometime in FY18.

For the new Q-47 Firefinder radar (maximum range of 300 kilometers), the

- Help manage individual and crew training.
- Certify programs for all delivery systems.
- Maintain maximum readiness and the operational status of all delivery systems.
- Troubleshoot problems on primary weapons systems, ammunition vehicles and fire direction centers (FDCs).
- Maintain the most current information and training packages on all primary weapons systems, their supporting ammunition vehicles and FDCs.
- Maintain a dialogue with all division artillery and FA brigade and battal ion Master Gunners to ensure rapid identification of new issues and rapid dissemination of all critical information concerning the FA.

The Duties of the FA Master Gunner in the Field Artillery School

plan is to award ASI F9 to MOS 13Rs who have received training on the system. The ASI will qualify them for assignments in division and corps level radar sections. The Q-47 tentatively will start fielding in FY06.

The current plan is to bring all FA MOS under the one CMF 13 umbrella. In implementing this administrative change, MOS 93F will be renamed 13W Meteorological Crewman in FY04. The Army is reviewing a proposal to rename MOS 82C as MOS 13S Surveyor.

In FY05, the new improved position and azimuth determining system (I-PAD) will start fielding. In the First Quarter of FY04, the new meteorological measuring set-profiler (MMS-P) will start fielding.

Master Gunner—Field Artillery Master Gunner Master Sergeant Arthur D. Hawkins, DSN 639-2204 (580-442-2204), hawkinsa1@sill.army.mil. In 1995, the position of Master Gunner was authorized in all division artilleries and Field Artillery brigades and battalions. In early 1999, The Chief of Field Artillery tasked the Gunnery Department and Warfighting Integration and Development Directorate (WIDD) to develop a Master Gunner Program. The Field Artillery Master Gunner position in the Field Artillery School was approved, and the concept was presented

to commanders and command sergeants major during the Senior Fire Support Conference at the Field Artillery School in April 2001.

The Master Gunner in the Field Artillery School job entails a variety of tasks that include those listed in the figure. This position has become a central point of contact for questions from the field.

The Master Gunner web site is http://sill-www.army.mil/mg. This site allows soldiers to access support packages and standards for establishing a program for a Paladin, M119/M198 towed howitzer or MLRS unit certification program. The site is being updated to include "Frequently Asked Questions" to help disseminate information.

Currently the FA Master Gunner is working on the standardization of all safety/certification testing for the FA community. This will provide the basic safety requirements that the field should be training on. Each unit will be able to add to the testing package according to its needs and mission.

If readers have questions about any information in this article or related information, they can contact the sergeants major from the respective departments listed in this article with their telephone numbers and email addresses.

CMF 13 is the core of the Field Artillery. The Field Artillery School is responsible for training and designing and managing the career progression of these critical MOS—not just critical to the Field Artillery, but also to the entire Army.
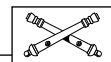
Command Sergeant Major Ricky L. Hatcher is the CSM for the Training Command, Fort Sill, Oklahoma, DSN 639-6935 (580-442-6935), hatcherr1@sill.army.mil. In his previous assignment, he was the 19th enlisted Commandant of the NCO Academy, Fort Sill, where he had been a Senior Instructor. He also served as the CSM for the 1st Battalion, 40th Field Artillery in the Field Artillery Training Center (FATC), and CSM of the 3d Battalion, 18th Field Artillery, III Corps Artillery, both at Fort Sill. In other assignments, he has been a Mortar Section Chief, Forward Observer, Company Fire Support Sergeant, Battalion Fire Support Sergeant, Drill Sergeant, Platoon Sergeant, First Sergeant and Battalion Intelligence Sergeant. During a tour with the FATC in 1985, he was selected as the 7th Training Battalion Drill Sergeant of the Year. He holds an Associate of Arts in Business from the University of Phoenix.

Distance Learning
Keeping Soldiers in Units

MLRS Training for C/1-133 FA, 49th Armored Division, TXARNG

To meet training challenges, the Army is implementing a distance learning system to support individuals, schools and units. There are four primary distance-learning initiatives: the Army Distance Learning Plan (ADLP), Classroom XXI, the Army Doctrine and Training Digital Library (ADTDL) and Army University Access On Line.

In April 1996, the ADLP was published. It will provide standardized training and educational opportunities to soldiers and civilians anytime and anywhere by exploiting current and emerging distance-learning technologies.

Classroom XXI, high-tech classrooms in the schoolhouses, leverages technology to use information in a variety of ways. ADTDL, the information foundation for Classroom XXI, provides an interactive library for trainers, training and combat developers, resource managers and Active and Reserve Components soldiers worldwide. Readers can view the FA ADLP and Classroom XXI Operations Plan (OPLAN) at the web site in the box.

In July 2000, the Secretary of the Army introduced Army University Access On Line, which will provide distance learning to an estimated 80,000 soldiers in the next five years. Army National Guard (ARNG) soldiers and Coast Guardsmen can take courses and get degrees on line via Capella University, Minneapolis, Minnesota, at www.capellauniversity.edu or call 1-888-227-3552.

Since the inception of the program, ARNG soldiers have been receptive to distance learning—including those in the FA ARNG, which comprises about two-thirds of the branch. Distance learning allows them to receive training at home and earn promotion points.

However, the numbers and types of distance learning courses are expanding and soon will service many more active soldiers as well. More distance learning will be required in the educational systems for officers (OES), NCOs (NCOES) and warrant officers (WOES) that currently are being redesigned.

For the FA, one of the leaders in Training and Doctrine Command (TRADOC) distance learning, several courses are already developed.

Captains Career Course (CCC). FA CCC Phases IA and IB are for ARNG students. Phase IA is self-paced computer-based instruction via the Internet that takes nine months. Phase IB is a mix of computer lessons on the Internet and live instruction from Fort Sill. It takes six months of weekends in residence at the officer's home computer. Students view the teaching materials on the Internet and interact live with the instructors using audio-based software.

Sergeants Major Academy Training. Senior NCOs can take the First Sergeant and Battle Staff NCO Courses, which are taught by the Sergeant Major's Academy, at Fort Sill and other distance learning facilities.

FA Military Occupational Specialty-Qualifying (MOSQ) Training. The Field Artillery has been providing the first phase of MOSQ training via distance learning for ARNG unit conversions to the multiple-launch rocket system (MLRS) since 1999. To date, the FA MOSQ distance learning has trained 595 soldiers in four states and will train 296 more soldiers in the spring.

13M MLRS Crewman MOSQ Phase I is taught in distance learning using a combination of media. The CD-ROM that 13Ms use tracks everything they do from starting the training, turning the pages and completing the practical exams, including whether or not they receive a "Go" or "No Go" on the training. The course manager oversees the students' self-paced learning and tracks their progress for each training event via a controlled floppy disk.

After the CD training, a Fort Sill instructor reinforces the training by video teleconference and asks soldiers questions about their training. This process is repeated during the soldiers' drill weekends for three months. After completing Phase I, soldiers go to active duty training in the field (Phase II).

13P MLRS Fire Direction Specialists complete their training via the Internet. After each block of instruction, they also receive reinforcement training and questions from Fort Sill instructors.

Other Distance Learning Courses. In addition to CCC and MOSQ training, the FA has distance learning CD training for several MOS, including the warrant officer 131A MOS, and other distance learning courses as listed on the web page. (See the "DL Catalog" and "DL Courses.") For registration information, contact Tim Austin, austint@sill.army.mil or call DSN 639-4225 or commercial (580) 442-4225. Students enroll in distance learning courses by the Army training requirements and resources system (ATRRS).

The Army has some 500 distance learning facilities around the world and will add about 200 more by FY07. ARNG soldiers who are not near one of these sites can use universities, community colleges, technology centers, and computer labs in high schools and libraries and (or) bring computers to their headquarters.

Saving time and money and keeping soldiers in units, distance learning is the wave of the future.

This article was taken in part from "Achieving Quality in Distance Learning" by Lieutenant Colonel Paulette A. Mittelstedt published in the July-August 2001 Army AL&T and from information provided by Ellouise H. Love, Chief of the Staff and Faculty Training Division of the Futures Development Integration Center (FDIC) at Fort Sill.

FA Distance Learning Web Page: http://155.219.39.98

2-110 FA, MDARNG

ARNG Battalion Annual Training Rotation at Fort Sill

By Lieutenant Colonel William J. O'Neill, MDARNG

FA Army National Guard (ARNG) units comprise almost 70 percent of the branch, and the Army is relying more on ARNG FA to accomplish its missions. With this expanded role, it is imperative the Field Artillery School at Fort Sill, Oklahoma, play a more active role in ensuring all ARNG FA units maintain their skills, readiness and professionalism.

This article provides a blueprint for ARNG FA units to coordinate and prepare for annual training (AT) at Fort Sill on a rotational basis, making the most of the Home of the Field Artillery's professional resources.

Currently, ARNG units travel to the same local training areas to conduct AT year after year—which does not challenge their FA skills, such as terrain association, calls-for-fire, fire solution problems, etc. In many instances, ARNG soldiers completed their latest NCO educational system (NCOES) course 10 or more years ago and have not had the opportunity to return to the schoolhouse for refresher training.

A parallel issue concerns training with new equipment fielding and updates—the initial fire support automation system (IFSAS), gun laying and positioning system (GLPS), etc. Many times this training is accomplished on alternate weekends, further spreading the unit thin and diminishing its most precious resource: time.

Vision for Training at Fort Sill. The section capabilities of the 2d Battalion, 110th Field Artillery (2-110 FA), MDARNG, part of the 29th Infantry Division (Light), were meeting the standards. However, the gunnery team lacked the ability to synchronize the fire support element (FSE), fire direction centers (FDCs) and batteries to provide timely, accurate fires.

Based on this lack of synchronization, we developed a plan for the battalion to deploy to Fort Sill for schoolhouse instruction and a 72-hour live-fire exercise (LFX) during the two-week AT. The plan called for sending each section to it respective part of the FA School for a week of refresher training from the experts. After the refresher training, the battalion then would certify the FSE, FDCs and gun crews. Finally the LFX would be a practical exercise for battalion collective tasks that also would indicate areas in which to focus future training.

The FA School said that a mobile training team (MTT) could help with training at home station; however, we decided the size of an MTT was not large or diverse enough to provide the comprehensive training this program entailed. So planning and coordination for the battalion's AT in April 2001 at Fort Sill began, the battalion's first full deployment outside of the Mid-Atlantic region in 25 years.

Planning and Coordination. In September 2000, the battalion commander, executive officer (XO), logistics NCO and the headquarters and headquarters battery NCO went to Fort Sill to coordinate with post agencies: the Directorate of Logistics (DOL), Range Operations, Fire Support and Combined Arms Operations Department (FSCAOD), the various military occupational specialty (MOS) advanced individual training (AIT) instructors, OKARNG Mobilization and Training Equipment Site (MATES) and Directorate of Plans, Training and Mobilization (DPTM). Once the FA School agreed to the battalion's AT at Fort Sill, we tasked the battalion staff elements and began the coordination process.

In January 2001, the XO, S3 and the logistics and operations NCOs returned to Fort Sill for the Reserve Component (RC) Resource Conference. This allowed the battalion to revisit the coordination agencies, check on the status of our Fort Sill Forms 104 Request for Support and resolve any open issues.

In the same time frame, the battalion staff submitted requests for military aircraft to transport the battalion from Martins State Airport in Maryland to Fort Sill. We also requested military ground transportation; however, due to AT scheduling conflicts, we had to use commercial transportation.

The S3 section tracked the status of all Fort Sill 104s and air and ground transportation requests every two weeks, starting in January. The regular updates allowed the staff sections to react in a timely fashion to issues that presented themselves.

The S4 section was in contact with Fort Sill DOL agencies, the OKARNG and our Virginia State Transportation Office weekly to ensure we had adequate assets for movement. The S4 section also submitted ration requests to Fort Sill and requested catered meals for deployment and redeployment.

Battalion staff and training meetings were every two weeks during drill and on alternate Tuesday evenings to ensure each staff element remained focused and engaged.

Our close coordination with the FA School ensured the battalion's AT was successful. The level of detail of the coordination and questions that arose from the battalion staff drove additional coordination with Fort Sill that proved significant. For example, the staff at Fort Sill knew the battalion was deploying the single-channel ground and airborne radio system (SINCGARS). This led to discussions about SINCGARS versions, ensuring Fort Sill loaded the proper version on the classroom radios to make the most of the training. The same discussions took place with respect to which version of IFSAS the battalion used.

The battalion sent an advance party from the S3 and S4 sections 10 days before the battalion deployed to Fort Sill. The advance party made final arrangements for training areas, ensured instructor support was locked in, drew billets/mess hall and received the howitzers arriving by flatbed trucks.

The battalion augmented the advance party with another team from the S1 section five days before the deployment. Its purpose was to close on coordination with the hospital and lock in a troop medical clinic (TMC) for sick call; finalize articles with the Fort Sill newspaper, the *Cannoneer;* and secure the FSE team arriving from Fort Polk, Louisiana, that had been at the Joint Readiness Center (JRTC) supporting one of our maneuver battalions.

The Training. The day before deploying, the battalion conducted a multiple unit training assembly (MUTA) with the batteries at their respective armories to tighten up manifests; issue weapons and nuclear, biological and chemical (NBC) masks; and resolve any personnel and administrative is-

sues. Each battery then reported to the battalion headquarters and remained overnight so personnel could be broken out by chalk for air transport via Air National Guard C-130 aircraft to Fort Sill.

Day 1: Battalion Run and Vehicle Issue. The battalion conducted its traditional run and established garrison at Fort Sill, issuing vehicles and unloading section equipment from the shipping containers.

Day 2: Maintenance. Battery Commanders finalized equipment maintenance and preparations for classroom instruction, conducted Army physical fitness tests (APFTs), received range safety briefings, etc.

Days 3-6: Section Training. Each MOS reported to its particular portion of the schoolhouse to begin training.

• The 31U Signal Support Systems Specialists from the communications section received a day of familiarization on SINCGARS. Then with the 13E Cannon Fire Direction Specialists and 13F Fire Support Specialists, the 31U received two days of installation, implementation, troubleshooting and maintenance training with SINCGARS. This training paid dividends during our LFX because the OKARNG vehicles we used had SINCGARS.

For an additional day, the 31Us learned the installation, implementation, troubleshooting and maintenance of mobile subscriber equipment (MSE).

• 13Fs received the one day of familiarization on SINCGARS then three days of training in an exercise driven by an IFSAS scenario. The exercise was designed to test current abilities and teach advanced fire mission planning skills.

An additional day of forward entry device (FED) training was conducted in conjunction with the 13F AIT class in session. One of our FSE staff sergeants served as an assistant instructor for the AIT training. We sent nine students to this step-by-step training that culminated with a communications exercise (COMEX) and FSE certification before the LFX.

• 13Es, after one day of familiarization on SINCGARS, received three days of training driven by light tactical fire direction system (LTACFIRE) scenarios. The training tested fire-mission processing skills and was facilitated by a III Corps Artillery instructor. After classroom training, the FDCs moved into a COMEX and certification before the LFX.

• 13B Cannoneers reported to 13B AIT by howitzer sections. The sections received a modified version of AIT geared toward certifying the section. Added training encompassed shell-fuze classes with hands-on training. Once the training was completed, the sections moved into crew certification based on the 29th Division Artillery Bluebook Certification procedures.

• 13R Firefinder Radar Operators in the target acquisition platoon worked with their radar warrant officer section leader who was in the final phase of the Target Acquisition Warrant Officer Advanced Course. The 13Rs were trained on conducting Q-36 preventive maintenance checks and services (PMCS) and testing. In addition, they received training on the current software version as well as an NCO professional development session (NCOPD) on the Q-36 software version the battalion will field in the near future.

• 63B Light Wheeled Vehicle Mechanics were under the operational control of the OKARNG MATES personnel for the two-week period. Because RC mechanics are often limited to working with specific weapons systems, the training was designed to expose the soldiers to different types of equipment—in some cases, direct support (DS) level maintenance.

The training on unfamiliar wheeled and tracked equipment was invaluable. The MATES had additional manpower available to prepare the 63Bs for JRTC rotations they would be supporting. For the 72-hour LFX, our mechanics provided maintenance via contact teams dispatched by the administrative and logistics center (ALOC).

• 91B Medical Specialists in the medical section were under the operational control of Reynolds Army Hospital at Fort Sill. During the first week, they helped in sick-call evaluations and taught CPR classes. The medics then deployed to the field with the battalion for the LFX. The medics supported the HIV, DNA and PANO testing the second week.

• 75B Personnel Administration Specialists from the S1 section processed pay, awards, promotions and extensions for the battalion. The S1 section also worked with a protocol officer as our Maryland Assistant Adjutant General, 3d Brigade Commander, 29th Division Artillery Commander and 29th Division Chief of Staff came out to observe training. Additionally, the 75Bs coordinated with the hospital for Title XI personnel and the *Cannoneer* for news coverage.

• 13A Field Artillery Officers attended a seminar on fire support planning in the offense and defense taught by FSCAOD. The officers also received a Futures Briefing from the Directorate of Combat Developments (DCD), instruction and a practical exercise on the precision lightweight global positioning system receiver (PLGR) from the Survey Department, and a Target Acquisition Capabilities and Employment Seminar from the Target Acquisition Department. When not in 13A-specific seminars, all fire direction officers (FDOs) and fire support officers (FSOs) stayed in 13E and 13F training, respectively.

In addition, the battalion staff participated in a tactical exercise without troops (TEWT) encompassing nine different locations on the Fort Sill range. This

Field Artillery School

• Fire Support and Combined Arms Operations Department (FSCAOD) provided instructors for the type and level of training the battalion needed, including modifying the standard instruction.

• FSCAOD provided the equipment and software the battalion has on it modified table of organization and equipment (MTOE).

• Gunnery Department trained 15 soldiers in the unit-level logistics system (ULLS).

• Deputy Assistant Commandant for Army National Guard (DAC-ARNG) coordinated extensively to ensure the battalion received the right resources at the right time.

Oklahoma Army National Guard (OKARNG)

• Provided support from the Mobilization and Training Equipment Site (MATES) 72, including 25 high-mobility multipurpose wheeled vehicles (HMMWVs), forklifts and other assistance.

• MATES 72 signed for the battalion buses and loaded them after the commercial flatbed trucks did not arrive in time for the battalion's departure.

• MATES 72 trained the battalion's 63B Light Wheeled Vehicle Mechanics.

• Other Guardsmen loaned the battalion tables, chairs, etc., from their armories because the Fort Sill billets did not have the furniture necessary for a battalion staff to conduct planning and administrative operations.

III Corps Artillery

• Provided three heavy expanded-mobility tactical trucks (HEMTTs) and three 13Ms to help with ammunition supply during the 72-hour live-fire exercise (LFX)—to save money, the battalion left its MTOE 5-ton trucks at home station.

• Provided an advanced gunnery instructor for 13E Cannon Fire Direction Specialist training and two combat lifesaver trainers who re-certified 10 soldiers.

• Provided meteorological support during the LFX, enabling the battalion to meet the five requirements for accurate, predicted fire.

Fort Sill Post Support

• Reynolds Army Hospital provided 17 HIV tests and six DNA documentations.

• Directorate of Logistics qualified 29 battalion soldiers as HMMWV operators, 12 as Government Service Accounting (GSA) bus drivers and two as 1,000-pound forklift operators.

• TSC took official photos of all commanders in the battalion.

• Range Operations provided a location for the battalion to conduct Army physical fitness testing for 44 battalion personnel.

• Fort Sill Transition Point notified the battalion of active duty personnel who are leaving service and coming to the MDARNG area.

• Post Transportation Office helped transport the battalion from/to the airfield to the C-130s.

• Directorate of Information Management (DOIM) installed telephone lines to the billets and coordinated for the use of the repeater system on post to allow the battalion to use its PRC-127 radios to coordinate across staff and school elements.

• Post Chaplains worked with the battalion's Chaplain's Assistant; the Fort Sill Chaplain provided services in the field during the LFX.

List of the Most Significant Support for 2-110 FA's Annual Training Rotation to Fort Sill

allowed the staff to plan for diverse terrain and walk the terrain before beginning the military decision-making process (MDMP). The staff also developed the tactical scenario and operations order for the FTX.

The TEWT helped the staff prepare for the upcoming Brigade Command Battle Staff Training (BCBST) and Battle Command Training Program (BCTP) Warfighter scheduled for the next training year. RC staffs rarely have the opportunity to train as a functioning staff because of the realities of training—e.g., staff spread around the state, troops having to work on drill weekends, loading up and deploying in the same day with three hour's driving to firing point training sites, strength maintenance priorities, etc.

Days 7-9: LFX. The exercise measured the combat readiness of battalion and battery levels of operations. The focus was on the integration of the total fire support team.

During the LFX, the S3 allotted additional time to improve the effects on target by focusing on the five elements of accurate, predicted fire. The S3 section drove the schedule of events to ensure each task was achieved before moving on. The battalion fired 600 rounds in the exercise.

Days 10-11: Maintenance, Uploading and Clearing Post. These two days at Fort Sill were spent preparing the equipment for redeployment and loading it into military vans or loading the vehicles and guns on flatbed trucks. The batteries had to go through the usual process of clearing post. But part of the time was spent processing through Title XI stations set up at Reynolds Army Hospital.

Day 12: Artillery Day. Leveraging an artillery history session scheduled for the FA Officer Basic Course, the Command Historian briefed the battalion about the history of the artillery from black powder to the present. The battalion then divided up into 40-man sections and toured the Fort Sill Museum, Old Post Quadrangle, Old Quartermaster Post, Desert Storm Park and Artillery Row. The battalion also toured Medicine Park and the Wichita Mountains Wildlife Refuge.

The next day, the battalion redeployed to home station and began inventory and clean up.

Lessons Learned. The costs of the battalion deploying to Fort Sill for AT were minimal. The battalion will incur costs associated with Class I, II, III, IV, V, VIII and IX wherever it deploys on AT. The airframes were training opportunities for the Air National Guard. The one cost associated with our deployment that was unusual was the cost of the flatbeds used to transport our guns and FSE vehicles because the battalion could not borrow M102 howitzers from Fort Sill or the OKARNG.

Fort Sill could minimize ARNG unit expenses by creating a pool of the most common equipment ARNG units use to conduct training. An ARNG MATES site at Fort Sill could maintain this equipment.

During AT, Fort Sill needs to augment instructors in the school cadre. We don't recommend an RC training brigade come in to conduct ARNG AT training because these units experience the same shortcomings in expertise and readiness as other RC units.

The type of Title XI assistance received during AT enhanced unit readiness immediately with respect to determining deployable assets on the unit status report as well as enabling a unit to focus on training during the other 24 training days in a year. Title XI requirements are the "Achilles' heel" of RC units.

By providing section-specific training to non-13Bs, soldiers received hands-on instruction that is rarely available in RC units where experts for these low-density MOS are in short supply. Sections also received updates on upcoming changes to training and field manuals as well as software versions for unit equipment. Each section obtained the program of instruction (POI) and manuals to use in its training during upcoming drill weekends.

Commercial trucking assets proved to be a limitation not only from the standpoint of the total number of frames authorized, but also from an on-time standpoint. In the future, commercial trucks should report the day before the deployment. Also units must ensure the right types of trailers arrive so soldiers don't have to reconfigure loads for transit, another problem for the advance party at the other end.

Fort Sill needs to minimize the distances between the billets, and the mess hall, and the training sites and the motor pool—moving troops to the correct location with the limited number of transportation assets proved challenging.

The September pre-coordination trip was essential. The time lines the National Guard operates on are very different than those of active units. Fort Sill approves training on its ranges 45 days out; this caused significant concern for our state, brigade and division artillery headquarters that were committing considerable effort and allocating limited resources for the battalion's 2001 AT and wanted assurance the training was locked in well in advance.

An AT rotation to Fort Sill is highly recommended to other ARNG FA battalions. Further, it is conceivable that other branches could benefit from a similar training model. If readers would like more details on the planning, costs and coordination necessary for an ARNG battalion AT rotation to Fort Sill, contact the 2-110 FA's Operations Section at (410) 653-6771.

The 2001 AT at Fort Sill required a lot of planning and coordination (see the figure), and there were many glitches along the way. But the training for 2-110 FA was more than worth the effort—AT 2001 was a huge success.

It is clear that resourcing this type of training is taxing on Fort Sill agencies, especially FSCAOD. However, with 70 percent of the FA in the ARNG, can Fort Sill afford *not* to maintain an adequate base to train at least one ARNG battalion each year?
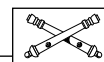
Lieutenant Colonel William J. O'Neill, Maryland Army National Guard (MDARNG), commands the 2d Battalion, 110th Field Artillery in direct support of the 3d Brigade, 29th Infantry Division (Light). Also in the 29th Infantry Division, he has served as a Brigade S3, Brigade Fire Support Officer (FSO), Battery Commander, Battery Executive Officer and Battalion and Company FSO. He has participated in three rotations at the Joint Readiness Training Center, Fort Polk, Louisiana, and, during a rotation to the National Training Center, Fort Irwin, California, served as Chief of Rockets and Artillery in the Opposing Force (OPFOR). Lieutenant Colonel O'Neill is a graduate of the Command and General Staff College, Fort Leavenworth, Kansas; Ranger School, Fort Benning Georgia; and other military schools. He earned an MS in Administration from Central Michigan University and an MS in Telecommunications and Engineering from George Washington University in Washington, DC, and is enrolled in the Naval War College by correspondence from Newport, Rhode Island. In his civilian job, he is a Satellite Communications Engineer with a consulting firm in McLean, Virginia.

Revised Staff Duty Log

Managing Info for Battle Tracking

By Lieutenant Colonel Scott G. Wuestner

Information management and battle tracking are keys to a tactical operations center's (TOC's) or administration and logistics operations center's (ALOC's) success. The TOC or ALOC should know most information units need or request.

Journals or logs are more than a record of radio messages. Staff officers or NCOs must be proactive in getting critical information in the messages out to the right people in a timely manner.

Units currently require staffs to maintain the outdated DA Form 1594 Staff Duty Log, dated Nov 1962. This form is a permanent record for training operations, operational reviews and historical research.

The figure shows the recommended new Staff Journal or Duty Log, which is similar to the old form in its administrative data; for example, both cover a 24-hour period. What is new is the process of recording and disseminating information. The process represented on the form helps answer three questions: *What do I know? Who do I tell (or what do I do)?* and *Did I tell them (or do it)?*

The following are the changes to the original form and a brief explanation as to how you, the battle captain or NCO, fill it out. (All other admin data is filled out according to *FM 101-5 Organization and Operations.*)

"From" Column. This column is added to quickly identify the source of the information received. If you use call signs in the "From" column, ensure you include a copy of the signal operating instructions (SOI) so that the source of the info can be identified.

"Topic/Issue/Action/Message/Order/Etc." Column. This remains essentially the same. It is a brief synopsis

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Daily Staff Journal or Duty Log

Page No. 1	No. of Pages

Location	Organization or Installation	Period Covered From:		To:	
JRTC	ALOC—1-11 FA, Fort Ord, CA	Hour 0600	Date 14 Jan 02	Hour 0600	Date 15 Jan 02

Line #	DTG In	DTG Out	From	Topic/Issue/Action/Message/Order/Etc.	Battle CPT	PIR	Sig Act	Graphics	Status Bd	Bn Cdr	XO	S1	S4	HSB Cdr	HSB 1SG	SPL	Spt PSG	A Btry	B Btry	C Btry	R FA	TOC	Chap	PA	CSM	Remarks	Initials
1	0710		Bn Cdr	During A.M. Cdr's conference call, Bn Cdr wants to add 1 bundle of HE to emergency resupply plan.	X		X	X			X		/	/	/	/									XO directed 10K sling.	SH
2	0745		Bn TOC	2-22 IN convoy ambushed on Route Red.	X	X	X	X																			SH
3	0750		Bn XO	LOGPAC will use alternate Route Blue & depart BSA at 1000 to C Btry.	X										/	/	/										SH
4	0804		Bn S3	Bn CSM needs to escort engineers from A Btry to B Btry at JAN141700.	X			X			X		/	/	/	/								X				SH
5	0830		Bn TOC	FRAGO #4 received from TOC.	X		X	X			/			/	/							X	X				In Bn Orders Bk NLT 16 Jan.	SH
6	0837		BSA TOC	Red Cross message for A Btry.	X		/								/	/						/							SH
7	08..		Bn	Need A & B Btry to																									

Symbols:

X = Talked To/ Action Completed

/ = Need to Talk To/ Needs Action

Legend:

Bn Cdr = Battalion Commander	**HE** = High-Explosive Ammunition	**PIR** = Priority Information Requirement
Btry = Battery	**HSB Cdr** = Headquarters and Service	**R FA** = Reinforcing Field Artillery
BSA = Brigade Support Area	Battery Commander	**Sig Act** = Significant Activity
Chap = Chaplain	**IN** = Infantry	**Spt PL** = Support Platoon Leader
CSM = Command Sergeant Major	**LOGPAC** = Logistics Personnel and	**Spt PSG** = Support Platoon Sergeant
DTG = Date/Time Group	Administration Center	**TOC** = Tactical Operations Center
FRAGO = Fragmentary Order	**PA** = Physician's Assistant	**XO** = Executive Officer

Info Management: 1. What do I know? 2. Who do I tell (or what do I do)? 3. Did I tell them (or do it)?

Typed Name and Grade of Officer or Offical on Duty	SIGNATURE
CPT Ed Harris, Battle Captain	*Ed Harris*

Sample Revised Form 1594 Daily Staff Journal or Duty Log. This example is filled out by personnel in an administration and logistics operations center (ALOC).

of all the important details of the incident, message or order, etc., and is the *What do I know*? portion of the process. Information should be very specific. This column also can record follow-up information or directives to a previous message that requires different staff actions or notification.

"Personnel Notified/Action Taken" Column. This column is where the greatest change has occurred. It provides guidance for *Who do I tell (or what do I do)?* and *Did I tell them (or do it)?* The form eliminates some of the guesswork that battle captains and NCOs have in determining who was notified about what or what actions still need to be taken. It also can eliminate the seldom-used standard message form (field use only).

"Remarks" Column. This column identifies the location of operations orders (OPORDs), memorandums of instructions (MOIs), tasking letters, reports, etc., that are highlighted in the message block. The item number assigned to an entry in the journal is placed on the corresponding supporting material, and the material is filed in chronological sequence. Journals and journal files are permanent records and are disposed of in accordance with AR 340-18-2.

The remarks column also can be used to provide additional info in reference to the information identified by line number.

The Process. Once the radio telephone operator (RTO) records the info in the message column, he gives it to battle captain or NCO who analyzes it and determines what needs to be done.

The battle captain/NCO places a "/" hash mark on each person to be notified or action required. For example, if the information meets or affects a priority intelligence requirement (PIR), then a hash mark is placed in that box. The unit should have standing operating procedures (SOP) for who needs to be notified or what action needs to be taken for each item listed in the contact/action column. For example, some units call, "Attention in the TOC," and read the message when critical events happen or info affecting a PIR comes in. The SOP should establish what constitutes a "Significant Activity" or when to update the "Status Board" or charts.

The process is completed when the battle captain/NCO or other person completes the notification of personnel (or the actions) indicated by the hash marks and then marks each hash mark into an

Managing information and battle tracking accurately and correctly are what make TOCs or ALOCs successful.

"x." If duty officers/NCOs change shifts and a box is not closed out with an "x," the RTO or battle captain/NCO have an established priority of work to be able to mark an "x" in each box with a hash mark.

The *Did I tell them (or do it)?* part of the process is now complete, and the unit is managing its info and battle tracking.

Conclusion. Using the old DA Form 1594 and message formats, units typically lose track of information during high-surge periods of operations. This new form enables staffs to track the info flow during up-tempo operations and, also, after shift changes.
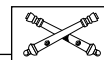
Additionally, this new column system is flexible. Units can use Excel spreadsheet software to change the fields in the person-to-notify/action-to-take column to meet their specific needs. Staff duty officers/NCOs, officers-in-charge (OICs)/NCOs-in-charge (NCOICs) and staff sections can use the form in garrison not only to perform administrative duties, but also to track daily operations.

Managing information and battle tracking accurately and correctly are what make TOCs or ALOCs successful. How the TOC or ALOC manages and disseminates information affects the success of units in battle.

This new form is one tool to help TOCs and ALOCs be more efficient and effective. However, as with any process, units must train using this form

at home station and ensure all key leaders and RTOs understand their roles and responsibilities.

The key to recording and disseminating essential information is to ask three questions: *What do I know? Who do I tell (or what do I do)?* and *Did I tell them (or do it)?*

Lieutenant Colonel Scott G. Wuestner is the Senior Brigade Fire Support Observer/Controller (O/C) at the Joint Readiness Training Center (JRTC), Fort Polk, Louisiana. Also at the JRTC, he was the Senior Fire Support Combat Service Support (CSS) O/C. He served as S3 for the 3d Battalion, 319th Airborne Field Artillery Regiment and Brigade Fire Support Officer (FSO) for the 504th Parachute Infantry Regiment, both in the 82d Airborne Division, Fort Bragg, North Carolina. He also served as an FSO for the 1st Special Forces Operational Detachment-D, Fort Bragg; the Battalion FSO for the 2d Battalion, 75th Rangers at Fort Lewis, Washington; and the Battalion FSO for the 3d Battalion, 17th Infantry, part of the 7th Infantry Division (Light) at Fort Ord, California. He commanded A Battery, 5th Battalion, 15th Field Artillery, also in the 7th Division. Lieutenant Colonel Wuestner was a Fire Support Instructor for the Field Artillery Officer Basic Course at the Field Artillery School, Fort Sill, Oklahoma. He is a graduate of the Command and General Staff College, Fort Leavenworth, Kansas, and holds a Master of Arts in Management from Webster University in Missouri.