Fires

The future of Fires begins here

Fires

A Joint Professional Bulletin for US Field & Air Defense Artillerymen

sill-www.army.mil/firesbulletin/ • September - October 2009

ARTICLES

FIRES DEPARTMENTS

COVER: A Vehicle Mounted Guided Missile Battery Control Central, better known as the Avenger, fires a Stinger missile at a drone during a live-fire exercise conducted by the 1st Battalion, 188th Air Defense Artillery, 40th Infantry Division (Mechanized), North Dakota Army National Guard, at Fort Bliss, Texas, Sept. 20, 2008. (Photo by SGT Jonathan Haugen, U.S. Army)

ADA 24/7 Hotline & Email	FA 24/7 Hotline & Email
(Organization, Doctrine, Material, Training)	(Organization, Doctrine, Material, Training)
DSN 978-5312 or (915) 568-5312	DSN 639-2204 or (580) 442-2204
ada_fires@bliss.army.mil	redleg@conus.army.mil

Fires Transformation:
Engage and invest in our future

By MG David D. Halverson,
Commanding General of the Fires Center of Excellence

"We know what we are, but know not what we may be."
William Shakespeare

Fires Soldiers, leaders and families — I am humbled to be the new commanding general of the Fires Center of Excellence and Fort Sill. The next two years will see Fort Sill and our support of the Fires Soldier transform. Our roadmap for transformation is the Fires Strategy which guides us to our end state of a sustainable, agile, adaptive Fires force for the joint commander. MG Peter M. Vangjel, the staff and commanders put in countless hours crafting the Fires Strategy and nesting our vision with that of the Army and Training and Doctrine Command, and I fully endorse where we are headed — it is our future.

We have a strategy, and now we have two years to craft a Fires Campaign Plan, put it into action and move the Fires force down the road toward our end state. Time is short, and we must move out now as the Army transforms to meet the challenges of this era of persistent conflict and the hybrid threat. The FCoE's commitment to you is — we will do everything in our power to provide you with the best support, training and reach back capabilities possible. Do not hesitate to contact us or ask for assistance — we are available 24/7.

Versatile and adaptive. Those words have guided us for the past few months as a lot of changes have taken place not only here at Fort Sill, Okla., but at Fort Bliss, Texas. The collocation of the Field Artillery and Air Defense Artillery Schools and Centers to create the Fires Center of Excellence is exactly what is needed to get the synergy from both communities. Soldiers, officers, NCOs, Department of the Army civilians and their families all have been shuffled around as organizations and units have been reorganized, renamed and reconstructed; but out of all this turmoil emerges opportunity not only for the organization but at the individual and personal levels too.

As the Army moves forward with its transformation, along the Chief of Staff of the Army's "Strength of the Nation" focus, we, here at the FCoE, are moving forward also. Intertwined with the Army's and Training and Doctrine Command's Campaign Plans, the Fires Strategy and the current draft of the Fires Campaign Plan are setting the course for the old Fort Sill to transform into the Fires Center of Excellence.

What does the FCoE do differently? Rest assured it's not change for change's sake, but is the proactive response from Army leaders worldwide to transform and evolve in an era of persistent conflict. One thing that eight years of combat have taught us is that change and our ability to adapt keeps us relevant. Not only is training changing, but job titles, and job descriptions. Most of all, our current way of thinking is changing.

The idea of a Joint Fires University — where it supports the pillars of a "university" as we define it, such as "education, research and development, currency and outreach" — reflects this new way of thinking. There is an increased emphasis on life-long learning and generating adaptive, versatile Soldiers and leaders. This overall concept and strategy is mirrored in both the Field Artillery and the Air Defense Artillery Strategies.

Strategies. With both branches on the ground and the Fires Center of Excellence at an initial operating capability, the Fires community is moving forward. Change isn't easy, but how the change process is communicated to people within the organization is a critical factor in determining their reactions. This is why the September-October edition of the *Fires* Bulletin is dedicated to the Fires Center of Excellence Strategy, the Air Defense Artillery Strategy and the Field Artillery Strategy. (Executive excerpts from each of the strategies are in this edition.)

To read the full strategies, log onto Army Knowledge Online and the Fires Knowledge Network homepage located at **https://www.us.army.mil/suite/page/130700**.

The FCoE Strategy is located on a drop-down menu when the cursor hovers over my photo. The FA and ADA Strategies are located on the left-hand menu, adjacent to the respective commandants' photos.

These combined strategies are the "seed corn" for the Fires Campaign Plan, that will outline our tactics to coordinate tasks, resources and timelines to keep us constantly moving forward to achieve full-spectrum dominance on the battlefield of the 21st century. Our ability to adapt and respond will determine whether we succeed or fail. So it's essential not to get mired down in the past, but take lessons learned forward with us and be ready to engage the future and all its changes fully.

Success. The success of the Fires vision rests solely in your hands — the Soldier, the Department of the Army civilian, the officer and each family member. Support the Fires Center of Excellence mission that partners with the Air Defense Artillery's and the Field Artillery's lines of effort to continue to grow adaptive leaders and Soldiers. This is not only an investment in our future, but in our lives.

Remember that the most important choice we have is whether, we develop a positive or negative attitude toward change and the realities that come with it. Each person in the Fires community has a role in our transformation, and it's only through your support we will become the world's most versatile Fires force with competent Soldiers and leaders, both military and civilian. Only you can make it happen. The Fires Center of Excellence is now.

Again, I thank each and every one of you for your duty, selfless service and sacrifice and am proud to be serving you in this capacity.

Agile — Decisive — Anywhere — Anytime! Fires Strong!

The Fires Center of Excellence Strategy

By MG David D. Halverson,
Commanding General of the
Fires Center of Excellence

This strategy marks a new beginning for the Fires force and its branches. An era of complex, protracted conflict has challenged our Army to understand the operating environment more thoroughly, frame the problems better, and develop innovative means to ensure our commanders have full-spectrum dominance on the battlefields of the 21st century. In response to a changing aim point and Base Closure and Realignment law, the Fires force is adapting itself with a focus on agility, mobility, precision and integration. This includes new beginnings for both the air defense artillery and field artillery branches that, together, will focus on effectiveness and efficiency as an integrated Fires force team — one that will be an integral part of others, including joint, coalition and interagency teams. With declining world resources and shrinking defense budgets, we can do no less.

This document outlines the way ahead for the Fires force, led by an agile, forward-thinking Fires Center of Excellence, integrating capabilities and training Soldiers and leaders in new ways to provide fires capabilities needed in the 21st century. It is a catalyst for change and provides the "seed corn" for the Fires Campaign Plan, which will operationalize our strategy by synchronizing tasks, resources and timelines to keep us constantly moving forward to achieve our vision. The Fires vision is to be the world's most versatile Fires force, with agile and adaptive Soldiers and leaders, fielded with integrated and interoperable systems, capable of delivering accurate and responsive fires in any environment from "mud to space" at any time.

The strategy is an investment in our future. We must change the way we train our people significantly, provide career-broadening opportunities, resource our research efforts and develop new systems. Communication, coordination, cooperation and collaboration will be keys in this endeavor, and we must ensure our success by providing the right resources in the right amount at the right time.

Our mission. Our mission is to be a decisive Fires force that provides dominant responsive, scalable, accurate lethal and nonlethal fires for the joint commander at the time and place of his choosing. We must have systems with integrated capabilities that leverage commonalities and provide unprecedented reach and mobility to ensure our strategy by synchronizing the full range of earth-to-space assets. We must create learning organizations that achieve decision superiority and responsiveness in the information environment through collaboration, outreach, coordination and communication.

We must develop the Fires Center of Excellence as a Joint Fires University that is a leader in innovation, providing world-class education and training to develop agile leaders who are experts in the art and science of the "Fires" and protect warfighting functions. We must develop confident, competent, disciplined warriors and leaders committed to the all-volunteer force and actively engaged in the Army's comprehensive fitness programs.

The endstate. The Fires Strategy will provide the means by which we will reach our objectives. We will become the world's most versatile Fires force with confident and competent Soldiers and leaders; world class integrated and interoperable field artillery and air defense artillery systems; and a Fires force capable of delivering responsive, scalable and accurate lethal and nonlethal fires in any environment at any time. We will become a Fires force with operational tempo balance that effortlessly meets Army Force Generation requirements; Soldiers, leaders and families who want to continue to serve our Army; and an agile institution that delivers the world's best Fires technical and leader development training — a Joint University. We will become a transformed Fires force that focuses on achieving effectiveness, efficiency and synergy; a community and culture of outreach, communication, collaboration, coordination and cooperation; and a community that provides integration experts for our Army from lethal and nonlethal fires to airspace.

The operating environment. The operational environment of the future will include unfamiliar cultures and intricate networks in heavily populated urban areas as well as ungoverned rural locales that may provide safe havens for extremists organizations. The conflict catalysts listed in the figure below will continue to have a significant impact on the operational environment during the next decade or longer.

The collective effect of these trends will be an operational environment characterized by complexity, uncertainty, rapid change and persistent conflict (protracted hostility among any combination of state, non-state and individual actors) for the next several decades. We expect these conflicts to occur in all domains — land, sea, air, space and cyberspace — and will present numerous, continual challenges for the Fires force as it supports joint and coalition force operations into the 21st century.

While the most dangerous threats to our interests are rogue states and non-state actors with weapons of mass destruction capability, future threats will be as complex as the operating environment. The most likely threats will be hybrid — those having dynamic combinations of conventional, irregular, terrorist and criminal capabilities.

We can expect them to use the full spectrum of options, including every political, economic, informational and military measure at their disposal. In short, they will employ any available means — high- and low-tech — to attack us where we are weakest. Hybrid threats necessitate creative solutions. These solutions require talented Soldiers who are versatile enough to function in complex environments for extended periods.

While our force provides the finest Fires support in the world with devastating accuracy, firepower and a wide range of effects, it has focused on a predominately conventional threat. This strategy shifts the aiming point to full-spectrum operations to hedge against unexpected contingencies.

2 1st century fires strategic imperatives. The strategic imperatives that have emerged from our analysis will not only serve as guideposts for the accomplishment of the Fires strategy, they also will provide the foundation for developing quantifiable metrics to assess our progress toward the Fires end state.

The Chief of Staff of the Army stated that, "an Army … must be capable enough to be versatile; mobile enough to be expeditionary; responsive enough to be agile; precise enough to be lethal; robust enough to be sustainable; and flexible enough to be interoperable with a wide range of partners. These qualities — versatile, expeditionary, agile, lethal, sustainable, and interoperable — will be the defining qualities of a balanced Army." The nine strategic imperatives embody all of the Chief of Staff of the Army's capabilities and will provide direction to the Fires Force as it moves forward.

Human capital sustainment. We must continue to preserve our nation's most precious asset — its active and Reserve Component Soldiers and Department of the Army civilians.

Integrated capabilities. An integrated air-ground picture will be required to solve 21st century targeting, airspace

Fires Strategy

Conflict catalysts	Resulting trends	Threats	Fires Center of Excellence		
			Strategic imperatives	**Campaign plan lines of effort**	**Endstates**
• Globalization • Proliferation of weapons of mass destruction • Failed and fragile states • Technology and information proliferation • Shifting sociological demographics • Climate change • Scarcity of natural resources • Domestic economic policy and budget constraints	• Increased gaps between "haves" and "have-nots" • Increased potential for nuclear, biological or chemical attacks • Increasing support for radical and religious extremist organizations • Complexity, uncertainty, rapid change and persistent conflict • Adversaries will be multi-dimensional, intelligent and adaptive, using a wide array of tactics • Ungoverned rural locales provide safe havens for extremist organizations • Unfamiliar culture and intricate networks in heavily populated urban areas • Increasing urbanization and ideology competing for sovereignty • Poor governance in many states	• Instability • Weapons of mass destruction attacks • Terror breeding grounds • Cyberspace • Humanitarian crisis • Failed states and city states • Insurgency	• Human capital • Integrated capabilities • Precision strike • Reach • Responsiveness • Agility and mobility • Scalable lethality • Innovation • Protection	• Grow leaders • Prepare Soldiers • Sustain • Engage • Transform	• The world's most versatile Fires Force with confident and competent Soldiers and leaders • World class integrated and interoperable field artillery and air defense artillery systems • A Fires Force capable of delivering responsive, scale and accurate lethal and nonlethal fires in any environment at any time • A Fires Force with operational tempo balance that effortlessly meets Army Force Generation requirements • Soldiers, leaders and families who want to continue to serve our Army • An agile institution that delivers the world's best Fires technical and leader development training, a joint university • A transformed Fires Force that focuses on achieving effectiveness, efficiency and synergy • A community and culture of outreach, communication, coordination and cooperation • A community that provides integrated experts for our Army from lethal and nonlethal fires to airspace

and fire control challenges.

Precision Strike. The Fires force will deliver air defense and field artillery munitions precisely where the maneuver or joint force commander wants them.

Reach. To both protect our forces from indirect attack and strike our adversaries' critical vulnerabilities, the Fires force must have tactical, operational and strategic reach from mud to space.

Responsiveness. Responsiveness encompasses the continued improvement of our technology, processes and tactics in response to threats from an increasingly capable array of rapidly delivered munitions.

Agility and Mobility. Both our leaders and our systems must be agile and mobile.

Scalable Lethality. The Fires force must offer and have access to a highly-integrated network of sensors, systems and munitions with scalable, destructive capability to minimize the residual effects and collateral damage.

Innovation. The Fires force continually must seek out concepts, technologies and procedures to promote effectiveness and efficiency.

Protection. The Fires force will protect Army forces and our joint, interagency, intergovernmental and multinational partners as well as U.S. citizens at home.

Priorities. Declining budgets and resources are a fact of the 21st century. While this strategy provides a comprehensive approach to achieve the Fires end state, the reality is that we will not receive all of the resources necessary to accomplish the required tasks. Therefore, it is prudent to establish priorities as we move forward to achieve our vision.

We must develop competent and confident Fires leaders for our Army and support the current fight by providing the Army with a campaign-quality, expeditionary Fires force that can operate effectively and efficiently with joint, interagency, intergovernmental and multinational partners across the full spectrum of conflict both abroad and at home. We must transform the force, anticipate joint, interagency, intergovernmental and multinational requirements, advocate for resources and integrate force application functions to deliver the optimal combination of lethal and nonlethal Fires capabilities for joint and maneuver commanders. We will develop a culture of outreach, communication,

collaboration and coordination through engagement; sustain the Fires force by managing resources to support the current fight — reset, retrain and revitalize the Fires force in support of Army Force Generation; and establish and sustain the Fires Center of Excellence as a world-class learning organization with the best Soldiers, leaders, civilians, facilities and equipment

The Fires Campaign Plan. The Fires Campaign Plan is designed to achieve the Fires strategy vision by using a holistic approach, phased over time that incorporates doctrine, organization, training, materiel, leader development, personnel, facilities, cost and risk as integrating tools. It is organized along five lines of effort that correspond to the priorities for the Fires force.

Grow leaders. We must create mentally and physically agile and adaptive leaders with an expeditionary mindset who possess the talent to lead and succeed in an era of persistent conflict.

Prepare Soldiers and leaders to succeed in current and future fights. Produce Soldiers and leaders who are both competent and confident to perform Fires core competencies with state-of-the-art systems that dominate adversaries and protect friendly forces.

Sustain. Strengthen the long-term health of the Fires force through actively promoting accessions and retention and minimizing attrition.

Engage. Create, sustain and enforce a culture of outreach, communication, collaboration and coordination to achieve the Fires end state.

Transform. Develop interoperable, networked and integrated systems capable of executing multiple missions and the education system to support leaders and operators for those systems in the future hybrid threat environment.

The Fires Center of Excellence. The most visible manifestation of transformation in the Fires arena is the creation of the Fires Center of Excellence. The Fires Center of Excellence will act as the headquarters with oversight of both the Field Artillery and Air Defense Artillery Schools. Its mission is to train, educate and develop capabilities; engage, collaborate and partner with stakeholders; sustain and provide a Fires force to support the joint warfighting commanders across the spectrum of operations in the

joint, interagency, intergovernmental and multinational environment. To accomplish its mission, the Fires Center of Excellence will perform the following.

Drive transformation and manage transitions. The Fires Center of Excellence will provide institutional agility, monitor ongoing operations, anticipate future requirements and test new concepts and solutions for current and future fights.

Act as the hub of an influence network. It will shape both its external environment and influence organizational culture by educating our Army and building internal and external consensus on our mission and purpose.

Provide governance and oversight. The Fires Center of Excellence will oversee the execution and progress of the Fires Campaign Plan; execute field artillery and air defense artillery force modernization functions; acquire, allocate and manage Fires force systems, resources and operational transitions; and provide the Army with the best trained and equipped Soldiers and leaders for the force.

Provide a world-class, joint educational and training facility. It will deliver the world's best Fires technical and leader development training, providing the appropriate mix of live, virtual and simulated training to officers, warrant officers, NCOs and Soldiers with the intent of becoming a Joint Fires University, similar to modern civilian universities with research and development, world-class instructors and an outreach capability to educate and acquire knowledge from experts world-wide.

The Fires Strategy provides a way ahead that centers on the versatile people and units comprising the Fires force, supported by a world-class Fires Center of Excellence. The Fires Center of Excellence will use the Fires Campaign Plan to drive the development and preparation of Soldiers, leaders and systems to achieve the desired end state — the world's most versatile Fires force with agile and adaptive Soldiers and leaders, fielded with integrated and interoperable systems and capable of delivering accurate and responsive Fires in any environment from "mud to space" at any time. ▪

BACKGROUND: The Fires Center of Excellence shoulder sleeve insignia. The arrowhead denotes the growth of the two branches in the western plains of the U.S., the first indirect fire at Agincourt and the symbol of the pointed tip for air defense artillery. The stars indicate excellence, the requirements in support of warfighting commanders. The cannon symbolizes the Fires Center of Excellence's mission to develop qualified Fires warriors and leaders. The crossed lightning bolts signify the future of electronic warfare and directed energy.

The Air Defense Artillery Strategy

By BG Roger F. Mathews,
Chief of the
Air Defense Artillery

The way ahead. The Air Defense Artillery Strategy is intended to carry the air and missile defense forces of the U.S. Army well into the 21st century. It reflects the change of focus and priorities of our National Defense Strategy and signals a similar transformation for the Army's air and missile defense forces.

This concept includes the vital role air and missile defense will fulfill in joint and Army Fires as the long-awaited Fires Center of Excellence assumes control of the Air Defense Artillery School. It includes the Army's move to field truly joint integrated air and missile defense systems that will enable tremendous new capabilities — to include common command and control and joint integrated fire control. Furthermore, it includes the transitioning and fielding of elements from the Missile Defense Agency to the Army, providing unprecedented protection for our homeland and allies.

The Army's air and missile defense forces must continue to adapt against an ever increasing variety of irregular and asymmetric threats, including ballistic missiles capable of early submunitions release and sophisticated end-game maneuvers, advanced cruise missiles that can jam, spoof or navigate around defenses, unmanned aerial systems that can coordinate enemy fire in mere seconds and rockets, artillery and mortars that threaten even the most secure bases.

This strategy charts a course through these challenges. It incorporates the air defense branch, the air and missile defense equities of the U.S. Army Space and Missile Defense Command, the proponency of the Fires Center of Excellence, and integrates the materiel developer's "system of systems" solutions.

The vision. Provide the Army and combatant commanders with a flexible, adaptive and tailorable air defense artillery force capable of defeating the full range of threats across the full range of operations.

This simple vision sums up the air defense artillery endeavor — to be the best at what we do. Civil War General Robert E. Lee once said, "Do your duty in all things. You cannot do more; you should never wish to do less." Our "duty" is to protect that which America cares about most — its people, forces, friends and allies. We can do no more — we must do no less.

Air defense artillery tenets. While working toward this vision, we must not get lost in the details and lose sight of who we are and what made us so successful in the past. The following tenets provide the foundation to help us stay focused as we move forward through complex and uncertain times.

We will care for our Soldiers and their families. Without them, nothing else matters. The best systems in the world will be effective in combat only if maintained and employed by professional warriors who believe in their training, their leaders and their Army.

We will continue to offer good careers, a high quality of life for Soldiers and their families and a professional development path that lets every Soldier succeed according to his merits and motivation.

We are essential to the joint force. Integrated air defense artillery has been an inherently joint mission area for decades. It encompasses intercepting intercontinental ballistic missiles attacking the homeland, to defending Marines ashore, to defeating rocket attacks against air bases, to providing joint situational awareness and understanding, to supporting airspace management and more. We have worked closely with the other services to achieve the best capabilities possible. Our future will require more cooperation and integration with our joint and coalition partners in order to achieve the "jointness" and interdependence among our systems.

We are essential to the Army. Army air defense artillery has supported the maneuver force since our inception as anti-aircraft artillery in World War I. We defended the Ludendorff Bridge at Remagen, as the Army advanced to end World War II. We employed Duster 40-mm guns in Korea and Vulcan alongside the infantry in Vietnam. We intercepted scuds in Operation Desert Storm, and we prevented the "decapitation strike" in Operation Iraqi Freedom by intercepting a ballistic missile just hundreds of feet above the land component commander's morning battle update brief. We serve today in brigade combat teams and protect forward operating bases in Iraq from rockets, artillery and mortar attacks. We provide freedom of action from the tactical to the strategic level. This will not change.

The strategic imperatives. Secretary of Defense Robert M. Gates recently noted the War on Terrorism is " … a prolonged, worldwide irregular campaign …" and one in which our adversaries " … are developing the disruptive means to blunt the impact of U.S. power, narrow the U.S.' military options, and deny the U.S. military freedom of movement and action."

What do these "disruptive means" indicate to us? It means the air defense artillery will face several imperatives in this new global environment, including the following.

Protracted "tension." The strategic environment of the future will require Army air defense artillery forces to continue to embrace the "911" culture. We will be required to respond with little or no notice to our nation's needs, often at a time and place not of our choosing. We will serve in numerous countries that require our strategic assurance as a *quid pro quo* for their partnership and support in protecting our mutual security interests. We will continue to defend our maneuver forces as we pursue victory. Air defense artillery will be "on mission" in peace and war.

Increased threats from traditional ballistic missile capabilities. Ballistic missiles have been around since World War II and within numerous nations, to include China and Iran. These countries have invested heavily in ballistic missile technology and continue to challenge the "proficiency" as well as "sufficiency" aspects of our defense with maneuvering warheads, decoys, and early-release submunitions. While fighting a large-scale ballistic missile fight as part of a conventional campaign likely is limited to a few large nation states, we still must prepare to defeat those threats or risk allowing an adversary to exploit a strategic vulnerability.

Alaska National Guard members of B Crew, 49th Missile Defense Battalion, operate the ground-based midcourse defense portion of the Ballistic Missile Defense System at Fort Greely, Alaska, May 5, 2007. (Photograph by SGT Jack W. Carlson, III, Alaska Army National Guard)

Ascendency of new asymmetric threats. Today's adversaries have access to a wider and increasingly sophisticated arsenal that includes not only ballistic missiles, but also a range of cruise missiles, unmanned aerial vehicles and easily attainable rockets, artillery and mortars. U.S. adversaries have access to an abundant supply and variety of these "new" asymmetric threats. Technology transfer can cut decades off development timelines; it is easier than ever for our enemies to buy "turnkey" aerial systems.

Increased demand for strategic assurance and deterrence. As multiple recent conflicts have demonstrated, our coalition partners will require a commitment of U.S. Army air and missile defense forces to provide deterrence and protection in return for allowing access to bases, ports and transit. Even today we maintain air and missile defense forces in nations across the world to address potential threats and foresee only increased demand for such strategic assurance and deterrence capabilities in the future.

Actions in response. Our required actions are clear and straightforward. We must enhance our current capabilities, develop new required competencies and always take care of our Soldiers and their families. The following guiding principles will keep us committed to a path. This is consistent with the guidance and directives of our nation's leadership and fulfills the requirement for joint integrated air and missile defense that were developed through years of study and analysis.

We will implement common command and control, the key to success in future air and missile defense fights. We will seek out "multi-mission" capabilities and look for opportunities in common platforms. We will design organizations to exploit our abilities and for enduring campaigns. We will find the balance between current and future capabilities, while balancing operational risk and preventing fratricide.

We will never shortchange training; new capabilities are meaningless if Soldiers can't effectively employ them. We will improve our linkage to other Fires forces and joint and coalition capabilities so we can attack our adversaries and defend our forces simultaneously.

How we will fight. Tomorrow's joint integrated air and missile defense force will be more technically complex, interconnected and interdependent than at any time in history. Army air and missile defense Soldiers and leaders could move from intercepting rockets, artillery and mortars in a Fires organization to working interagency actions as part of the Ballistic Missile Defense System, to providing joint integrated firing solutions with the Navy. It is critical that we execute these varied missions competently and to standard.

We will develop doctrinal updates that capture how we will fight the joint integrated air and missile defense. Our doctrine will capture and reflect our role in this joint world, to include joint integrated fire control. We will update our doctrine, organizations and training plans for air and missile defense's role in homeland defense

— our top priority.

We will work with other services to bridge the capability gap jointly for early entry operations, to include countering unmanned aerial vehicles, indirect fire and other anti-access aerial threats. We will achieve an integrated fire control capability with the Navy by fiscal year 2014 to prosecute engagements across additional hundreds of miles of engagement space. And we will achieve an integrated air picture jointly that will ensure we can accomplish our missions in complex and crowded airspace, while minimizing or eliminating the risks of fratricide.

How we will organize. As noted in the National Defense Strategy, the Department of Defense needs to posture itself to support low intensity, protracted and contingency operations. For air and missile defense forces, this means maintaining our core competencies of ballistic missile defense, cruise missile defense, situational awareness and understanding, and airspace management, while developing new competencies to defeat emerging threats such as unmanned aerial vehicles; rockets, artillery and mortars; and electronic attaches. Our future air and missile defense forces must provide robust, persistent defense in a variety of situations and with a variety of partners.

We will refine and realign our composite organizations that are the primary formation from which we will execute our air and missile defense missions. Sustaining capabilities will allow us to adapt as the threat improves, avoiding the creation of

new vulnerabilities. We will update our organizations to reflect the evolving roles of our Army air and missile defense commands and brigades clearly.

Army air and missile defense commands will focus on the strategic/joint theater fight and provide command and control, battle management and communications joint interface. Air and missile defense brigades will focus on operational/critical asset defense and plan, integrate and coordinate air and missile defense operations in support of the maneuver commander. We will transform select air and missile defense units to become rocket, artillery and mortar "intercept" organizations and assign them to fires brigades.

How we will equip. We will field a common Army integrated air and missile defense Command and Control capability by fiscal year 2014 — our number one priority.

We will provide the joint warfighter with unprecedented new Army air and missile defense capabilities, as we field elevated surveillance and fire control systems, new interceptors for Patriot, improved short-range radars and more to improve the level of protection we provide the nation.

We will transition rapidly and transfer sensor elements from the Missile Defense Agency to the Army and achieve formal agreement on its role in the Ballistic Missile Defense System vice contribution to the theater of operations. We must reconcile the requirements with the theater to ensure the homeland and all warfighters remain protected — even if the battle crosses multiple theaters

How we'll man. We will refocus leader development and training to include emerging threats. Future air defense artillery training must be joint, often combined, and remain in concert with the broader Army. We will evolve the Air Defense School into a world class "College of Knowledge" within the Joint Fires University.

We will develop state-of-the-art virtual and constructive training, education and leader development courses and material that will span individual and collective training, self-development, institutional and operational assignment training.

We will create versatile leaders who are proficient in our branch and the Fires environment. We will work with civilian institutions to ensure continued educational credit for our courses. We will provide incremental updates to our professional development career maps for both enlisted and officers.

We also will incorporate and accommodate new paths to a successful career, to include serving in Fires or homeland defense or space/cyber operations. We will create and support organizations and networks that focus on family needs to provide resources and reach-back to guarantee world class treatment of our families.

The air defense artillery campaign plan. The Air and Missile Defense Campaign Plan serves as the "intellectual bridge" between the branch's vision of the future, as set forth in the air and missile defense strategic concept, and the detailed planning, execution and synchronization that must occur between our various lines of effort to make that vision a reality. Essentially, the Air and Missile Defense Campaign Plan presents a detailed roadmap for achieving the air and missile defense vision.

It is a living document that provides a simplistic presentation of the key actions and activities of the air defense artillery branch in the near term and highlights potential general officer "required by" decision points. The campaign plan focuses on the next 24 months with a tail that accounts for the ensuing 36-month period. It is tied to the principles and "how we wills" discussed earlier.

The campaign plan is executed along four lines of effort — people, institution, futures and operational force. The people line of effort captures military occupational specialty considerations (e.g., accessions

and imbalances), care of families, and opportunities for Soldiers and the civilian force. The institution line of effort addresses the move of the Air Defense School from Fort Bliss, Texas, to Fort Sill, Okla.; doctrine, organization, training, leadership and education, facility actions and the integration of these actions into the Fires Center of Excellence construct. The futures line of effort is expressed in terms of capabilities, focusing on materiel and the acquisition process. The operational force line of effort considers the fielding of new systems and capabilities and the deployments of air and missile defense units.

There is a natural synergy and overlap between these lines of effort. Actions and activities in one will influence and possibly dictate actions or activities in others; actions or activities in one also could appear easily and correctly in another. And, people, though portrayed as a distinct line of effort, is the driving consideration in and is embedded throughout the other lines of effort (See the figure below).

Air and missile defense forces are entering exciting times — fielding new organizations and new weapons systems and establishing a new home here at Fort Sill. However, the enduring missions and demands on the branch will not change, and they will continue to grow more challenging and complex. We may serve proudly as Fires professionals, space soldiers or even cyber-warriors, but we still will be the air defenders who are called to defend the force, our allies and our homeland.

First to fire!

Air defense artillery strategic lines of effort

Air and Missile Defense lines of effort	Fires Center of Excellence lines of effort	Army lines of effort
People	Grow leaders/Sustain	Sustain
Institution	Prepare	Prepare
Futures/Institution	Transform	Transform
Operational force	Sustain/Engage	Reset

The Field Artillery Strategy

By BG Ross E. Ridge,
Chief of the Field Artillery

The field artillery's mission is to deliver and integrate lethal and nonlethal fires to enable joint and maneuver commanders to dominate their operational environments across the spectrum of conflict.

An army at war has one clear objective — to win the current fight. In doing so, we must preserve the all-volunteer force, grow and train leaders, support Army Force Generation and modernize to be prepared to deal with the threats that we may encounter in years to come. The field artillery must match these changes to be relevant and fully capable of supporting the joint maneuver commander with the most responsive, lethal and nonlethal, precision fires available no matter where we may operate on the spectrum of conflict.

Our goals. The following long-term goals will help us achieve our desired outcome. These goals give us a common direction, situational understanding and aim points to keep us on course as we strive to be experts in our craft and sustain the capabilities and contributions that our branch provides to the larger Army, our sister services and our nation.

Field artillery's manning and leader requirements fully support the immediate needs of the force, the long-term health of the branch and the all-volunteer Army. Field artillery must be the maneuver commander's principal integrator for lethal and nonlethal joint and combined fires — his trusted agent for all aspects regarding the fires warfighting function.

The field artillery is the dominant shaping force for the commander on the battlefield. Weapons system platforms and enablers must be designed, fielded and employed to support field artillery Soldiers as they fight to defeat all threats — current and future.

The U.S. Army Field Artillery School is the premier military institution in the world in the development of artillery leaders who are agile, adaptive and decisive. The desired outcome is an agile, adaptive and decisive field artillery force that provides the right fires and effects in the right amount at the right time in support of the maneuver, combined and/or joint force commanders.

Operational environment in an era of persistent conflict. To achieve the desired outcome, we must have a clear understanding of the future operational environment and how it affects our ability to accomplish the goals. Only then can we articulate the manning and equipment requirements, doctrinal focus and leader training necessary to be the agile, adaptive and decisive field artillery force necessary to support operations on the 21st century battlefield.

As the field artillery supports operations during the next decade, we anticipate that the operational environment will be marked by uncertainty and will present continued challenges for our forces and joint fires community. Challenges in how we conduct fire support operations will require agility and innovation by our Soldiers as new adaptive threats that employ a mix of new and old strategies and technologies emerge. These adaptive threats will necessitate changes in how we prosecute the fight and what systems we employ to accomplish the mission. U.S. forces can expect adversaries to rely more on asymmetric means, such as anti-access and area denial strategies, unrestricted warfare, cyber-attacks and terrorism, to mitigate their relative disadvantages. Therefore, the current and future security environments require that Army forces have capabilities to dominate the land dimension across the full spectrum of conflict.

Ideological competition for sovereignty and influence over populations also will characterize future conflict. Gaining the support of indigenous populations is now so important that conflict cannot be waged "around the people;" it unavoidably is waged "among the people." Adversaries will seek to mitigate conventional advantages, operating anonymously in civilian neighborhoods and among the people to avoid detection and counteraction. There will be a premium placed on forces that can anticipate and adjust the type, amount and rate of efforts required to achieve stability with the allotted resources provided.

Conflicts will continue to take place under the watchful scrutiny of the 24-hour news cycle. A global media presence and increasingly universal access to information will ensure that details of a conflict are available rapidly through social, communications and cyber networks. Adversaries now have many venues to disseminate their messages worldwide. The dramatic growth of the internet and cellular communications has created low-cost, effective means to move information rapidly, transmit instructions, shift resources and shape perceptions in unprecedented ways. Concerns about collateral damage and perceptions may shape engagement techniques and use of weapon systems by the commander on the ground.

The combined impact of these trends make it likely that the next several decades will be ones of persistent conflict — protracted confrontation among state, nonstate and individual actors that are increasingly willing to use violence to achieve their political and ideological ends. We are fighting smart, adaptive opponents who are leveraging the opportunities presented by globalization and low-cost technology to conduct attacks on our Soldiers and the indigenous civilian population. To prevail in this struggle, our artilleryman must anticipate requirements, expertly integrate joint lethal and nonlethal fires, and dominate the environment to provide the desired fires and effects that the maneuver commander needs to accomplish his mission.

21st century requirements for the field artillery force. In the years ahead, we can expect to encounter complex, dynamic and unanticipated challenges to our national security and the collective security of our friends and allies. These challenges will be waged across the spectrum of conflict — ranging from peacetime engagements to general war and at all points in between — and in all domains — land, sea, air, space and cyber. The lessons of Iraq and Afghanistan have taught us about the inextricable and simultaneous nature of full-spectrum operations and the importance of being able to transition rapidly from offensive to defensive and stability operations within the same environment.

21st century leaders must understand and appreciate the complexity of the dynamic and ambiguous environment in which they operate as well as the subsequent needs of joint force commanders. They must be able to access joint fires at all levels of command and in coalition forces (interoperability), to integrate lethal and nonlethal networked fires rapidly and to mass preci-

sion, scalable munitions in space and time across the spectrum of conflict. They have to retain proficiency in core artillery and fires competencies in spite of ongoing nonstandard missions that currently support the irregular warfare fight. And 21st century leaders must be able to transform as required to adapt quickly to changes on the hybrid threat battlefield.

These requirements lead us to being more adaptive, resilient and innovative in how we train, equip and man our units and force us to reassess how we grow our leaders to manage transitions as the threat and environment changes. It is impossible to predict fully where the next conflict will occur or what skill sets our Soldiers will require, but we, as leaders, can determine the amount of risk we are willing to accept by ensuring that we have the right training, equipment and organizational structure in place to support operations among multiple points along the spectrum of conflict.

According to the Chief of Staff of the Army's white paper Adapting Our Aim: A Balanced Army for a Balanced Strategy, a balanced Army that can do this must be "organized to be versatile, mobile enough to be expeditionary, responsive enough to be agile, precise enough to be lethal, robust enough to be sustainable and flexible enough to be interoperable with a wide range of partners." These qualities — versatile, expeditionary, agile, lethal, sustainable and interoperable — describe not only the operating force but also the institutional Army that prepares and sustains it.

Recruit and retain quality Soldiers, leaders and civilians. This is the field artillery branch's top priority. We are only as versatile, agile and capable as our most important asset — our people. Each artilleryman must strive to be a warrior first and live the ideals embodied in the Soldier's Creed. All of our Soldiers must be disciplined, physically and mentally tough, and proficient in their warrior tasks and drills. By doing so, they maintain a baseline of

> *"The field artillery is the dominant shaping force for the commander on the battlefield."*

skills that allows them to adapt rapidly to changing missions and conditions. During the next decade, we still may be called upon to perform missions that may be considered nonstandard or that prevent us from performing our jobs as artillerymen.

Our units offer the Army a very flexible and versatile set of capabilities when we view ourselves as warriors and are prepared to support the commander no matter where we are needed on the battlefield. At the same time, our Soldiers and leaders must remain agile and capable of transitioning to and providing artillery-specific support as required when the conditions change. The challenge will be in determining the level of balance and risk that commanders are willing to accept in maintaining baseline competency skills within their respective units. If we always view ourselves as warriors, we can adapt easily to whatever missions our Army asks us to execute.

Sustaining the field artillery force long-term is linked inextricably to how we manage and balance our force structure, maintain our level of manning readiness and ability to recruit quality Soldiers today to operate the increasingly complex and technologically advanced systems within our formations. As we look to the future and available pool of qualified recruits, we need to relook at our policies — specifically how we access women into the branch — and reassess the Army's current policy on women serving in specific field artillery military occupation specialties. The laudable actions by our women already in the field artillery, as well as those serving in other branches and specialties within our formations, clearly demonstrate their dedication and willingness to serve our Army.

Expanding the number of specialties and where they can serve could enhance the quality and capability of our force further.

Grow leaders. To be a master of our warfighting craft, our leaders must maintain multiple core competencies in targeting, delivery of fires and the integration of lethal and nonlethal fires and effects, and must be able to employ those critical skills fully in support of their joint and maneuver commanders. What makes us unique as military leaders and as a branch are the traits that these three core competencies give artillerymen — flexibility, adaptability, mental agility and joint interoperability.

When these critical thinking skills are combined with the experience gained as advisors to the commanders — who are normally one and two grade-levels higher — and reinforced by our professional military ethics, it is easy to understand why maneuver commanders want field artillerymen serving in critical positions on their staffs and in positions of trust. This trust can be fleeting, and our leaders must earn it daily through their demonstrated actions, ability to use critical decision-making skills and responsiveness to the mission needs of the commander and troops in contact.

As we continue to grow joint fires professionals, we must invest in creating officers and NCOs who can adapt quickly to transitions and function effectively in any physical or cultural joint, interagency, intergovernmental and multinational environment. We must instill in these leaders an ethos of individual and organizational lifelong-learning that spans the operational, institutional and self-development domains.

Our leaders must be culturally astute and able to use this awareness and understanding to assess and provide innovative solutions rapidly to developing situations whether at home or abroad. Developing these skills must begin by creating the conditions for critical and innovative thinking by our officers upon their arrival at Fort Sill, Okla. The same exists for our Soldiers when they report to Advanced Individual Training for their artillery technical training and reinforced once they attend the Advanced Leader Course at the NCO Academy.

This is where we sow the seeds of lifelong learning throughout their military careers and give them the tools to sustain this educational journey. When it comes online, we will leverage the Fires Center of Excellence Joint Fires University — resident instruction, mobile training teams, distance learning and academic partnerships — to ensure that we maintain an educated and mentally agile and adaptive officer and NCO Corps. This training and education coupled with the adaptation of professional experience will be the means in which the field artillery grows and develops its officers, NCOs and civilians for the future.

Support the current fight. The field artillery has been and always will be defined and judged by its ability to deliver the right munitions, on the right target and at the right time. Precision strike will continue to depend on the five requirements of accurate, predicted fire to ensure the precise target is engaged and desired effects achieved; this includes the need for a scalable lethal capability to minimize the residual effects of munitions.

To be responsive to the needs of the maneuver force, all field artillery battalions must be capable of delivering precision fires in support of operations from brigade combat teams to fires brigades. Current and future artillery units must have the ability to mass precision fires in both space and time — mass multiple firing units and systems on a single target (massing in space) and attack multiple targets simultaneously throughout a distributed battlespace at all

levels (massing in time). This change in how we mass fires will cause us to seek new and innovative ways to obtain precise target locations and mensurated data, and drive the field artillery community to develop even closer ties with the airspace command and control, space and intelligence communities.

The effects of lethal and nonlethal weapons used sequentially or in combination provide the maneuver commanders with an unparalleled graduated response option. Escalation-of-force options range from simple, commercially available nonlethal items to conventional lethal fires. Lethal fires include support to conventional and Special Operations Forces through the integration of joint precision-strike operations and embraces technologies, such as precision-guided munitions, that increase desired effects while mitigating unnecessary collateral damage.

Important for our near- and long-term viability, we must continue to resource and leverage the capabilities of the school to help units prepare for deployment and subsequent post-deployment reset requirements. The current limited dwell time between redeployment and re-designation as an available, ready force, along with manning constraints, skills atrophy and, in some cases, the lack of adequate senior field artillery experience in the brigade combat team formations will require the U.S. Army Field Artillery School to support the operating force — active and Army National Guard brigade combat teams, division and corps headquarters, and joint and other service headquarters — with mobile and collective training teams to allow them to reestablish proficiency in artillery competencies and to perform lethal and nonlethal fires collective tasks.

Campaign-quality, expeditionary field artillery force. America's recent combat employments in Afghanistan and Iraq demonstrate that neither the duration nor the character of military campaigns in the 21st century is readily predictable. This may require a variety of weapons systems and capabilities to support operations — lethal, nonlethal, precision strike, responsive and mobile — and options for the commander in regard to employing lethal munitions and determination of the level of collateral damage he is willing to accept.

The field artillery force must have a balanced mix of organizational mobility, reach and weapons system capabilities that can support the heavy, Stryker and infantry brigade combat team formations, as well as the respective division-, corps- and theater-level commands fires and effects requirements. Agility will come from our ability to transition seamlessly from peacetime engagement to major combat operations as the situation and conditions change.

Crucial to being able to provide responsive fires to troops in contact in the future is networked fires capabilities that can access joint fires platforms readily, rapidly deconflict and integrate airspace requirements by users, and engage targets with precision and scalable munitions to achieve the commander's desired effects. In the interim, the gap between design and reality can be closed by leveraging our Soldier's and leader's skills as field artillerymen and joint effects coordinators, tailoring our modular forces with the right capabilities to support the mission commander in theater, and adapting innovative materiel solutions that adequately address force application and command and control requirements.

Establishing joint fires observers within the active and Army National Guard maneuver formations has provided our brigade combat teams with unprecedented access to aerial fires platforms, capabilities to communicate with joint terminal attack controllers and "masters-level" fire supporters in their units. Commanders must understand the capabilities those officers and NCOs bring to the fight and ensure that they are managed as a weapons system, assigned appropriately within their units, qualifications maintained and properly equipped to conduct the mission.

Integration and use of joint fires with our coalition partners will continue to be the norm in future operations. This will require joint and coalition Soldiers to have access to and be capable of delivering timely and precision fires on the battlefield. In the near-term, interoperability challenges must be overcome in the way of training, doctrine and equipment to ensure full access to our networked fires capabilities.

Transform the force. The field artillery continually must seek new ways and technologies to promote both effectiveness and efficiency. This translates into anticipating warfighter requirements in survivability, precision, accuracy, and reliable systems and equipment that support force application and command and control functions. In the near-term, automation systems and software must be specifically designed to promote integration and information exchange. Streamlined, flattened communication architectures will enable the sharing of creative insights from the field, industry and academic think tanks and the civilian community.

Critical for the success of fires for the future is the integration of a system of multidimensional sensors, fused to form a real-time intelligence and target acquisition capability through integrated command and control systems that will drive a responsive, scalable, precision fires network for the supported commander. This will provide the capability to reach, shape and dominate a battlespace at depths and in timeframes far greater than possible today, an enhanced capability to meet requirements from the tactical to the strategic level, and a force that will project power rapidly anywhere, anytime.

We must continue developing future systems while sustaining and upgrading our current weapons and enabling systems that support the current fight. Our efforts should give us networked and integrated joint fires systems that meet the needs of the operational force — accurate, responsive, survivable, mobile and with scaled-lethality and range — to allow commanders to dominate any portion of the spectrum of conflict through the next several decades. Additionally, a smaller logistical "footprint" enabled by advances in energy and propellant efficiencies will make artilleryman more sustainable in austere environments and decrease the frequency of Soldiers driving on arduous and hazardous lines of communication. To compete for dollars now and in the out years, the field artillery community must seek multi-mission, common platform and command and control functions and capabilities in our systems while ensuring that our lethal core competencies are addressed properly.

In sync with bringing new systems online, we must have the capability to train more effectively and efficiently through the use of simulations at not only the institutional training base but at unit installations and at the combat training centers. A number of simulation capability gaps exist that must be addressed in the near-term, and if resolved will enhance our ability to support reset and retraining requirements at home-station and enable us to better develop critical and creative-thinking leaders through experiential learning.

Establish the U.S. Army Field Artillery School under the construct of the Fires Center of Excellence. The field artillery requires an institution that is current, adaptable, on the leading edge of educational technology and one that produces Soldiers and leaders in a matter that fully supports Army Force Generation and the needs of deploying units. We must continue to be innovative, collaborative and forward thinking in how we look at doctrine, training, manning and equipping our force.

To build and maintain our agility, we must be a learning organization that can absorb lessons from the field quickly, make

them readily available on a knowledge network and apply them in the classrooms and at the combat training centers. The U.S. Army Field Artillery School must be able to share those lessons, updated doctrine and "best practices" through the Fires Knowledge Network, "mil-wiki" doctrine sites, multiservice conferences, professional magazines like the *Fires* Bulletin, Warfighter Forums and through constant engagement with the field and with other countries' artillery forces.

We must demonstrate an aggressive, leader-development approach that culls insights and ideas from multiple sources to foster mental agility — this ultimately will breed confidence in our leaders. Incorporating innovative and collaborative education and outcome-based training techniques, diverse and realistic training databases, and current threat scenarios into the course curriculum is essential if we expect to replicate the complexity level our leaders will experience once they are assigned to their units.

The Field Artillery School must embrace simulations and gaming, maximize Training and Doctrine Command's Central Training Database, network with other schools and centers, and leverage other associated technologies to enhance experiential learning. We must be able to adapt quickly to changes that occur on the hybrid-threat battlefield and import those lessons into our institutional classrooms; this requires all of our cadre and Soldiers to be innovative in how we approach training.

Develop a culture of outreach, communications, collaboration and coordination. The Training and Doctrine Command's Knowledge Management Strategic Plan has as its vision statement the bumper sticker, "a knowledge-enabled force — one learns, everyone knows." To expect our units and headquarters to be flat organizations and our Soldiers to be capable and empowered to operate across the spectrum of conflict, we should find ways to disseminate information and employ innovative ways to distribute it so it can be absorbed readily by our leaders. Using various forums, professional discussions and visits to facilitate doctrine, lessons and observations to be disseminated to the field artillery force is critical to having a knowledge-enabled force.

For the Field Artillery School to be recognized as the premier military institution in the world in the development of agile, adaptive and decisive artillery professionals, we must reach out to the operating force, our sister services and multinational partners and allies. We are working closely with the Air Force in addressing air-ground support, airspace management concerns and solutions and the establishment of a Joint Close Air Support Center of Excellence.

We're working with the Navy to develop the electromagnetic gun program, and the Marine Corps to grow competent and competent artillery professionals and to partner in weapons programs. We are also working with the Special Operations community to develop joint fires officers and NCOs.

Participating in professional discussions; hosting subject-matter-expert exchanges, lectures and visits by senior foreign distinguished visitors; and reciprocating by providing training teams and exchanges that support combat command theater engagement plans are also critical to achieving this goal.

Lastly, we must improve our ability to communicate our story. Often, we hesitate to inform our nation, our Army and our artillery population about the successes and contributions our Soldiers and branch make every day. We must do a better job of shaping the strategic communications and messages to our force and the rest of the Army if we expect to retain quality people, compete for limited funding and resources, and articulate the vision of how the field artillery can support our defense forces through 2025.

As we look at the operating environment, we expect to encounter during the next decade — hybrid threats, budget limitations, continued deployment cycles, modular transformation and congressionally mandated base realignment and closures that continue to reshape the Army's footprint and Fort Sill — we expect to see some tough years ahead of us. These challenges cannot deter us, but must make us more determined to reestablish the primacy of the artillery force on today's and tomorrow's battlefields.

It is my vision that the field artillery is the commander's premier, world-wide deployable force, able to dominate any operating environment through the integration and employment of joint and coalition lethal and nonlethal fires. This vision can be achieved if we are willing to work together to address the challenges affecting our branch and focus on the priorities that will enable us to support the maneuver and joint commanders across the full spectrum of conflict and in any operating environment.

Anticipate — Integrate — Dominate. Artillery Strong!

*Editor's note: The complete Field Artillery Strategy can be found at **https://www.us.army.mil/suite/page/130700**.*

Field Artillery Basic Officer Leaders Course students train at Fort Sill, Okla., Nov. 17, 2008. (*Fires* Archives)

MG David D. Halverson assumes command, Fires Center of Excellence and Fort Sill, Okla.

By the *Fires* staff

On Aug. 26, 2009, MG Peter M. Vangjel passed the reigns of command to MG David D. Halverson, who is now the second commanding general of the Fires Center of Excellence and the 47th commanding general of Fort Sill, Okla.

During his tenure as the chief of field artillery, commandant of the field artillery school and commanding general of Fort Sill, Vangjel addressed many challenges facing the field artillery during an era of persistent conflict. Realizing the field artillery was degrading in its core competencies, he charged the school leadership with redesigning current courses and designing new courses to "re-Red" the artillery.

Vangjel also, along with MG Howard B. Bromberg, commanding general of Fort Bliss, Texas, accomplished the collocation of the Field Artillery and Air Defense Artillery Schools and Centers to create the Fires Center of Excellence.

With the standing up of the Fires Center of Excellence, Vangjel restructured the command to make the chiefs of air defense artillery and field artillery into brigadier general commands, passing command of the field artillery to BG Ross Ridge in June. "Our field artillerymen are the perfect prototypes for getting it done, despite risking skills atrophy," said Vangjel at the field artillery transfer of authority ceremony. "We are turning that around."

In his farewell speech, Vangjel mentioned the five priorities he outlined when he took command here two years ago — prepare Soldiers to succeed in the current fight, grow and develop leaders, rapidly reset and re-establish core competencies, transform Fort Sill into the Fires Center of Excellence and sustain not only the force, but also all equipment.

"Well, if this were a corporate board meeting, I'd be happy to report that the team at Fort Sill has delivered the goods," Vangjel said. "Significant progress has been made, on time and on target, in all areas, largely because of a quality workforce, military, civilian and volunteers."

General Martin E. Dempsey, commander, U.S. Army Training and Doctrine Command, Fort Monroe, Va., presided at the change of command ceremony.

"One of his final actions as commander was to leave his successor with a comprehensive Fires Strategy … to outline the way ahead for the Fires force and laying the seed-corn for a follow-on campaign plan," said Dempsey. Dempsey also hailed Fort Sill's Army Family Covenant Action Plan as one of the best among the 15 installations that make up Training and Doctrine Command.

Vangjel left Fort Still to take command of Third Army, U.S. Army Central at Camp Arifjan, Kuwait.

Of Halverson, Dempsey said, "The U.S. Army Fires Center of Excellence is privileged to follow one great command team with another in Dave and Karen Halverson. … He's an outstanding Soldier, field artilleryman and leader, and certainly no stranger to Fort Sill. Dave returns to Fort Sill after serving as the director of force development, Office of the Deputy Chief of Staff, G8, in Washington, D.C., and brings a wealth of experience and a diverse background of service to Training and Doctrine Command."

Halverson's other accomplishments include director of Operations, Readiness and Mobilization, Office of the Deputy Chief of Staff, G-3/5/7, Washington, DC; assistant division commander, 4th Infantry

MG David D. Halverson receives the Fires Center of Excellence colors from GEN Martin E. Dempsey, Training and Doctrine Command commanding general, replacing MG Peter Vangjel as the Fires Center of Excellence commanding general during a change of command ceremony on Fort Sill's Old Post Quadrangle, Aug. 26. (Photo by Monica Woods, *Fort Sill Cannoneer*)

Division, Fort Hood, Texas deploying in support of Operation Iraqi Freedom; commander, U.S. Army Operational Test Command, Fort Hood.

He served as deputy assistant commandant, U.S. Army Field Artillery Center and School, Fort Sill, Okla.; chief, Operations Plans Division, J-3 (Operations), U.S. Central Command, MacDill Air Force Base, Fla., deploying in support of Operations Iraqi Freedom and Enduring Freedom; and commander, Division Artillery, 2nd Infantry Division, Eighth U.S. Army, Korea. He also has served as chief, Program Analysis Team, Program Analysis and Evaluation Directorate, Office of the Chief of Staff, U.S. Army, Washington, DC; commander, 2nd Battalion, 82nd Field Artillery, 1st Cavalry Division, Fort Hood, Texas. He holds a Master's of Science in Operations Research and Systems Analysis from the Naval Postgraduate School in Monterey, Calif.

Halverson is married to the former Karen Malloy. They have three daughters, Lindsey and son-in-law Tyler, Anna and Ellen.

"Wow! This is a tremendous day for the Halversons," the new commanding general of Fort Sill and the Fires Center of Excellence said. "Over 30 years ago, I was just a young lieutenant here. I heard about these changes of command, but I never thought I'd be standing, actually assuming the command of this great post and its great responsibility."

Halverson recognized the Soldiers standing on the field for "representing the greatest our nation has to offer, volunteers to our Army. They're committed to a higher cause, willing to fight and preserve the freedom that we in America cherish so much. They also represent the Fires Soldiers who are in harm's way in foreign lands today." ▪

An Iraqi police officer oversees security of U.S. Soldiers on a joint patrol mission in Kirkuk, Iraq, Aug. 2. (Photo by SPC Canaan Radcliffe, U.S. Army)

Targeting Dynamics: post Iraq security agreement

By CW3 Thomas S. Green
and LTC Tommie L. Walker

We have seen an evolution of targeting within our operational environment in Iraq, changing the framework of full-spectrum operations. The new security agreement that took effect January 1 changed how we target insurgents and terrorists in Iraq. Several factors caused a shift in our targeting efforts, such as 100 percent Iraqi security forces led operations, joint security station closures and the withdrawal of Coalition Forces from Iraqi cities. Due to these circumstances, our targeting process no longer held the credence it once did. Managing information and expectations became increasingly complex due to the rapid progression of the Government of Iraq.

Paradigm shift. As a result of the security agreement, its requirements and the Government of Iraq's increased capability to provide security, our mission changed to "follow and support." We advise and enable, even to the point where we find ourselves asking the Iraqi security forces, "What do you think, and how can we help?" This is certainly a paradigm shift from how we did business for the last six years, but these changing conditions are absolutely essential to the conventional forces targeting process and overall campaign plan.

This article specifically discusses the significant modifications to our targeting methodology within a conventional, modular brigade combat team. It addresses the three distinct areas of our targeting evolution — targeting, prosecution-based targeting and information operations. Finally, it answers a fundamental question, "Can U.S. forces continue to target insurgents and terrorists in Iraq's new security environment?"

In-depth targeting. The 2nd Brigade Combat Team's, 1st Infantry Division, targeting process adapted to the changing environment to remain efficient and effective. Before the security agreement, the *Dagger Brigade* operated in a more traditional targeting framework. It based its targeting focus on identifying, mapping and, then, attacking the terrorists' or insurgents' networks. This works well when operating in a unilateral fashion, as we did before the security agreement's implementation. The only real shift for us after the agreement was moving from the "decide, detect, deliver and assess" model to the Special Operations Forces' model of "find, fix, finish, exploit, analyze and disseminate." This was not a drastic change, but it allowed us to focus more on nodal analysis to understand better what makes these networks operate. However, we still saw the problem from one point of view — our vantage point.

Threat lines. After Jan. 1, we had to adjust our aperture by viewing the problem from the Iraqi security forces' perspective and modify our priorities based on the new "combined" assessment of the enemy situation. Initially, in fall 2008, the targeting meetings with our Iraqi Army partners were somewhat challenging — we simply targeted differently. As we shared our targeting process with them, they began to apply some of our methods to their processes (predictive analysis, information exploitation, taking immediate advantage of actionable intelligence, etc.). As Iraqi Army partnerships matured, we noticed most of the individual targets were not associated with any single network. We realized we were not targeting in the most effective and efficient manner.

We discovered most of these targeted individuals were tied to threats that linked multiple networks. Although we categorized targets as part of a particular network for the purpose of tracking them (i.e. al Qaeda in Iraq, former special groups, rejectionists, etc.), in practice, we were shifting our targeting focus to threat-based methodology. We discovered threat lines, linked to multiple networks that created an enemy "collage" by way of associations we had not connected.

After identifying these connections within the threat lines, we refined our targeting methodology and realized these "threat line" targets were associated through direct or indirect ties. This discovery paid huge dividends in how we focused our targeting efforts at the brigade combat team level. We now could target threats, such as vehicle-borne improvised explosive devices and suicide-vest improvised explosive devices, more precisely and surgically — as opposed to more generic analysis on networks such as "al Qaeda in Iraq." This was the first and most important evolution of our targeting process (See Figure 1 on page 14).

Challenges. Before the security agreement, actioning targets was relatively simple. Regardless of the intelligence source used to trigger an operation, Coalition Forces conducted full-spectrum operations in accordance with the U.N. Security Council Resolutions. Obviously, that changed when the Iraq security agreement went into effect, and that change forced us to modify how we targeted.

The first "hill we had to climb" was implementing a 100 percent Iraqi security forces partnership. This meant no more unilateral offensive operations. Fortunately, we began combined operations in fall 2008, making the transition easier.

Figure 1: Evolution of the targeting process

FROM (Traditional networks)	TO (Threat networks)
Karkh al Qaeda in Iraq	Vehicle-borne improvised explosive devices
	Suicide-vest improvised explosive devices
Sunni rejectionists	RKG-3s antitank grenade networks
Shia extremist groups	Explosively formed projectile/ Improvised explosive device networks

The second hill was a bit more challenging. We had to shift to prosecution-based targeting that required presenting evidence and obtaining an Iraqi warrant before detaining a target. At this point, we transitioned elements of the targeting process to align with Iraqi law. Because there were no standing operating procedures or lessons learned, it was very challenging to operate under this concept. We learned and adapted as we went.

Critical enabler. One key to our success was developing rapport with and using the expertise and knowledge of local Iraqi investigative judges. Engaging them proved critical to our ability to obtain warrants against targets and allowed us to continue detaining insurgents and terrorists. There were many growing pains associated with trying to figure out how to approach this "warrant requirement" challenge. There were many questions we needed to answer. Which judges tend to work best with Coalition Forces? What is the Iraqi Army's involvement? Are there jurisdictional boundaries? What do we do with a target after detention? How involved are we in the prosecution process following detention? Fortunately, we had great, early success with our investigative judge. They laid out and continue to layout clearly what they expect in the process.

Judge run. To date, our most significant achievement is the "judge run." Our brigade prosecution task force (See Figure 2) brought witnesses and detainees before the investigative judge to obtain warrants, allowing Coalition Forces and our Iraqi partners to continue attacking the networks in accordance with Iraqi rule of law. The judge run initially was designed as a key leader engagement. It allowed us to establish a working relationship with the investigative judge in our operational environment and, thereby, gain a better understanding of Iraqi law.

As the relationships matured and the security agreement's requirements loomed, the brigade prosecution task force and our partnered investigative judges increased their commitments to our relationship. The judge run became a weekly event, and its context expanded to encompass prosecution-based targeting completely. Our engagements rapidly moved past theoretical rule-of-law discussion to prosecutable application. We engaged the enemy through the most basic form of analysis — selecting targets for which the Iraqi courts likely would issue warrants to preserve the Iraqi judicial system's due process. The Multi-National Division-Baghdad Prosecution Task Force began to embrace the effectiveness of the "judge run" strategy, and a new evolution in our targeting process occurred.

Through our partnership with the investigative judges, we could think "outside of the box" and develop other ways to obtain warrants because traditional reporting methods were not always releasable to Iraqi authorities. Our common methods to gain actionable intelligence were document and media exploitation, and network associations. Although very similar in nature, the collection methods varied and produced different results.

Unclassified data. An example of one of the new tactics, techniques and procedures that we established was the exploitation of unclassified/releasable-to-Iraq document and media exploitation data to obtain warrants by presenting targeting threat lines to the investigative judge and illustrating links between detainees, specific enemy activities and known/alleged terrorists. Showing these associations without violating operational security was challenging, but, when an S2 analyst presented it in the right way, it proved as effective as the standard line-and-block network diagrams.

Network association. Another tactic, technique and procedure was obtaining warrants through network association. Before a judge run, we analyzed our targeting lines to identify targets for warrants. Then, we matched the targets to already captured detainees who we believed were associated through reporting or who may provide information on the target. During a judge run, we gave investigative judges the releasable information, connecting the detainees to the target and used the detainees as witnesses against the targeted individual. The investigative judges interviewed the detainees/ witnesses based on the information we provided before the interview. This process led to numerous warrants and proved extremely successful.

In addition to obtaining warrants, this process deferred cases for prosecution and established procedures to obtain testimonies from Soldiers who were injured or who witnessed enemy events or illegal activities. It allowed the transfer of and collaboration on ongoing criminal investigations. It also identified commonalities between networks that resulted in more effective combined targeting and enhanced coordination between multiple Iraqi agencies, such as the Ministry of Justice, Ministry of Defense, Ministry of Health and Ministry of Intelligence.

Credible messages. To shape our lethal efforts, we incorporated information operations and took it further than just supporting lethal operations. We put the Iraqi Army in the lead, mentoring them about the types of messages to send to the public and advising them how the effects could shape their security operations. This was effective for two reasons. It used the Iraqi Army's understanding of their culture and put an Iraqi face on the information operations effort, adding credibility to the message. We stopped simply distributing wanted posters all over Baghdad and, instead, surgically placed target information posters in selected areas of interest. We also incorporated products that focused the population's attention on the threats — antitank grenades, improvised explosive devices and indirect fire — in known engagement areas, resulting in decreased attacks in those areas.

Successful strategy. Although we continued to develop the information operations concept as a complementary effort to lethal targeting, it paid dividends by keeping high-level insurgent/terrorist leaders out of Iraq. The information operations products informed the Iraqi population of the enemy's activities and made the situation untenable for them. The Government of Iraq's success with information operations is commendable. We exploited its success, along with our Iraqi Army partners, providing positive reinforcement though radio and television broadcasts and billboards that highlight the security increases within

their communities. We attributed the new found security to the Iraqi security forces and not Coalition Forces.

Targeting transformation. The second half of the brigade's deployment was filled with periods of intense transformation for combined targeting operations. We witnessed great success in our new targeting efforts. We continually applied lessons learned and refined them, making most operations within the targeting team proactive rather than reactive. This is not to say that we did not have our share of frustrations and anxieties as we approached the June 30 milestone for pulling out of the cities, but we effectively codified our tactics, techniques and procedures.

On June 30, the operations' change certainly left a mark on the Iraqi people, their government and the Coalition Forces' day-to-day routine that previously dominated our everyday lives. The amount of tactical patience required during this transition was enormous and caused serious headaches for many commanders. This transition was historic because it was a time of true measure for the Iraqi security forces as they assumed control of all security actions. If we were to apply a simple metric to the level of violence since the security transition, a notable decrease occurred within northern Baghdad and Abu Ghuraib. Although there were many theories, the one that could not be ignored was the Iraqi security forces' increased efforts to bolster its security posture and image among the populace, directly impacting its ability to attack and prevent violence.

Recent changes. Several dynamic changes in our targeting lines occurred during the past few months. We assumed the Abu Ghuraib Qada from 2nd Brigade, 25 Infantry Division, on Feb. 21. This expanded our operational environment beyond Fallujah for some targets. Typically, the size of this area requires a division to tackle the urban terrain. Meanwhile, expanding the area of operations was only part of the challenge. We also anticipated inheriting a problem set of complex insurgency safe havens in the area from Abu Ghuraib to Fallujah (east to west) and Zaidon to Ibrahim Bin Ali (south to north). We began to "shake the tree" of insurgent networks in this new area, and we assessed this area was the center of gravity for al Qaeda in Iraq's terrorism in Baghdad.

Adapting. As we moved toward June 30, the first major step in the Coalition Forces' eventual withdrawal from Iraq was the application of new articles as outlined by the security agreement. We were wrapped in a shroud of operational perplexities. However, we found new ways to operate without violating Iraqi law or the security agreement, maintained the trust established during years of team building with Iraqi security force commanders and with Government of Iraq officials, and decoded the true intent of the security agreement's articles.

Although there was constant change during the last few months, one thing remained the same — our aggressive targeting methodology and application. We continued to dismantle threat lines by meticulously analyzing the key centers of gravity within those lines. Our shift from sensitive- to human-intelligence-based targeting, although painful, opened different thought processes, added another effective weapon to the targeting arsenal and amplified our targeting ability. New dynamics emerged when conducting human-intelligence-driven operations.

Without abandoning the use of sensitive intelligence, we found carrying a target into prosecution in Iraq's judicial system required a strong human-intelligence base. This was a fusion of everything after point of capture—document and media exploitation, combined explosive exploitation cell, sworn statements, interrogations, witnesses and, most importantly, getting the detainee in front of an Iraqi judge quickly before he could fall into the abyss of Cropper or Bucca detainment facility. Once in one of these facilities, detainees instantly seemed to become institutionalized and somehow managed to be stricken with a "severe case of amnesia" that was complicated by a bold sense of intrepidness. They seemed to feel invincible and no longer intimidated by American interrogators.

Factors to consider. We continued to find creative ways to attack the threats, even when it seemed all of the resources dried up. We thought about what end state we wanted to achieve when targeting a particular threat line. What is the most active network within this threat? Who possesses the most relevant reporting on that network (sensitive or human-based intelligence)? Do we have sources willing to corroborate the intelligence? Do we have a valid warrant for these individuals? Will their capture have a significant impact on the network and the threat? All of these are factors for consideration to avoid the snares of catch and release. Each detention should be significant.

The Iraqi security forces are good at detaining many individuals, as it did during recent combined operations. However, sometimes the question had to be asked, "why?" "What impact will detaining a particular individual have on the overall enemy network or threat targeting line? Will this detainment lead up the enemy network chain, and what was the basis for the detention?" The answers to these questions determined if it was just a cheap detention

Figure 2: Brigade prosecution task force
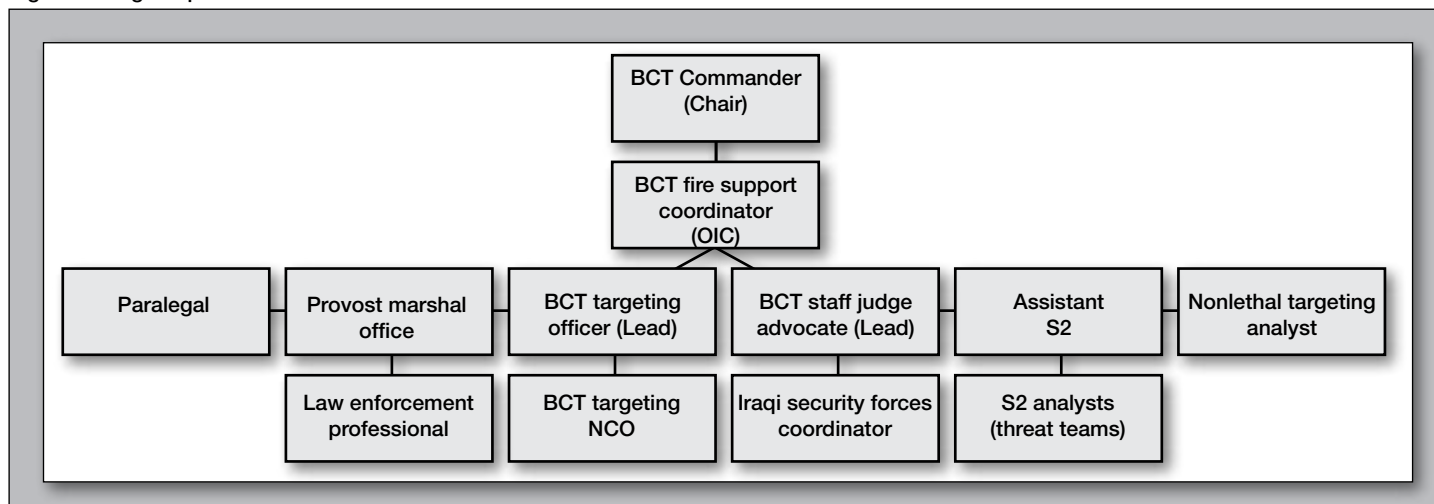
to satisfy the need to put as many "notches in the proverbial belt," or, if this insurgent would lead us to a greater understanding of the network.

The brigade prosecution task force, working in conjunction with the division prosecution task force and our sister brigades, paid great dividends. We shared lessons learned to incoming adjacent brigade combat teams in an effort to help them avoid the pitfalls we experienced when we stood up our brigade prosecution task force.

Our brigade prosecution task force includes the staff judge advocate, targeting officer, fire support coordinator, law enforcement professionals, military police and various other personnel. These personnel provided a myriad of specialized input that allows us to think through problems efficiently, ultimately ending with the successful prosecution of targets. No single member had the right or wrong answer; this process was completely foreign to our staff. However, when combined, the result lent itself to an organized war-fighting function.

Be prepared. Our relationships with the investigative judges were only part of the formula required to obtain a "good warrant" — the quality of the information put before the judges was just as important. Taking an investigative judge to lunch at a local dining facility only helps so much. Beyond that, preparation and homework must be done to present quality, relevant information to the judge.

Active cases. We noticed the number of witnesses in detention facilities who actually provided useful information was drying up quickly. To address this problem, we slightly shifted our focus to warrants on individuals with active combined explosive exploitation cell cases. This allowed us to introduce forensics into the courtroom — such as the target was involved with improvised explosive devices or explosively formed projectiles — and the testimony of subject matter experts. It also exposed the Iraqi judicial system to a new concept of forensics and how individuals are tied to catastrophic events.

There were only a couple of cases presented to the investigative judge that did not result in a warrant because we used our law enforcement professionals, who are very familiar with this process, to spearhead this task. They can present the evidence to the investigative judge in a much more professional manner than most Soldiers who are not trained in law or law enforcement procedures. The combination of law enforcement professionals and the live testimony of forensics experts opened a new avenue for us and provided true professional development for the Iraqi judicial system.

The information operations effort continues to be a mainstay, complementing lethal targeting. In some instances, information operations take the forefront when we are unable to target an individual kinetically. We receive reports of insurgents unwilling to re-enter our operational environment or even Iraq because of our nonlethal targeting team's efforts. This approach has a significant impact on the enemy's freedom of maneuver.

It helped to pull the Iraqi security forces into the fold as they detained "wanted" individuals crossing checkpoints. This was a huge win for the Iraqi security forces. Although we did the behind-the-scenes work to target these individuals, we allowed the Iraqi security forces to reap the benefits of the detention and exploitation. Although successful, fusing information operations with lethal targeting was not always the easiest of marriages.

Careful thought required. Lethal and nonlethal targeting have their own effects and can work against each other if not carefully planned and executed. If the intent was quick detention, depending on how the target is being tracked, information operations may not be the best choice as it may facilitate never seeing or hearing from the target again. On targets tagged as "must detain," information operations may not be the route because the short-term effect of the target's detention and exploitation outweighs the more enduring effects information operations can have. Options must be weighed carefully, and the effects analyzed to achieve the best possible outcome. We will never be able to exploit this means of targeting fully in our lifecycle, but we can mitigate many insurgents' attempts at attacking Coalition Forces and Iraqi security forces effectively, significantly disrupting the enemy's freedom of movement.

Full partnership. We continued to refine our targeting process, and the united effort of conventional forces, Iraqi security forces and Special Operations Forces has disrupted numerous insurgent/terrorist networks — most notably the antitank grenade threat in Ghazaliya. Our various approaches to obtain warrants, track targets and execute combat operations result in a concerted fusion of intelligence and operations that leads to the true defeat of a network. We now are in full partnership with our Iraqi security force counterparts and support them. Their success is our success. The Iraqi security forces have gained confidence with key detentions and the needed encouragement to take this mission and run with it.

They aggressively exploit the detentions of key individuals in the vehicle-borne improvised explosive devices, suicide-vest improvised explosive devices and antitank grenade networks, essentially emboldening them to become more aggressive. We help them obtain warrants, focusing on key aspects of targeting threat networks, and we conduct cross-boundary operations and combined operations with other security elements. The *Dagger Brigade* has left its mark on Baghdad and will take that focus and apply it as we dismantle the insurgency in the western areas. We have seen a major shift in our targeting, but the true measure of our success has been the Iraqi security forces' increased ability to conduct successful unilateral operations.

More work ahead. Twelve months is not enough time to exploit all of the capabilities that we can bring to bear. There are still many lessons to be learned, creative ideas to explore and techniques to refine. Our success is not a pat on the back of the *Dagger Brigade*, but, instead, is a tribute to the immense work of the Soldiers, NCOs and officers who live by the motto *No Mission too Difficult, No Sacrifice too Great, Duty First*. ▪

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Chief Warrant Officer 3 Thomas S. Green, field artillery, is the targeting officer for 2nd Brigade Combat Team, 1st Infantry Division, Fort Riley, Kan., deployed in support of Operation Iraqi Freedom. Previously, he served as battery executive officer and brigade targeting officer for 1st Brigade Combat Team, 1st Infantry Division, deployed in support of the military transition team training mission in Operation Iraqi Freedom. He also served as radar section leader for 1st Brigade Combat Team, Fort Riley, deployed in support of Operation Iraqi Freedom.

Lieutenant Colonel Tommie L. Walker, field artillery, is the fire support coordinator for 2nd Brigade Combat Team, 1st Infantry Division, Fort Riley, Kan., deployed in support of Operation Iraqi Freedom. Previously, he served as the chief of operations, for 1st Infantry Division; battalion executive officer and S3 for 1st Battalion, 5th Field Artillery; and brigade fire support officer for 1st Brigade, 1st Infantry Division, all at Fort Riley. He also has served as deputy chief of operations for 2nd Infantry Division, Korea; chief networks branch and automation officer for the Center for Army Lessons Learned, Fort Leavenworth, Kan.; and deputy inspector general for HHB, Personnel and Support Battalion, Fort Sill, Okla. He holds a master's degree in computer resources and information management from Webster University, Fort Leavenworth.

Accurate, Predicted Fire:
solving muzzle velocity data deficiencies

U.S. Marines of Howitzer Section 1, Battery S, 5th Battalion, 10th Marines, Regimental Combat Team 6, fire an M795 projectile from Camp Fallujah, Iraq, Nov. 2007. (Photo courtesy of Combat Camera)

By Capt. Timothy G. Heck

Upon assuming responsibilities as the fire direction officer for Battery S, Regimental Combat Team 6 at Camp Fallujah, Iraq, during Operation Iraqi Freedom, I noticed a problem in our ability to execute fire missions accurately when it came to muzzle velocity management. My core problem was an abundance of different propellant lots and models. At one time, I had almost 30 different powder lots of varying model and quantity — 11 lots of M119A2 powder alone. A call to B Battery, 1st Battalion, 41st Field Artillery, deployed nearby in Habbaniyah, revealed it faced the same issue.

While a large quantity of powder lots can be difficult to manage in a moving combat environment, we were conducting static firebase operations. The problem stemmed from the segregation of lots into different ammunition pits for different guns and the lack of a standardized method for dealing with these on-hand lots. I also lacked the historical data upon which to base either second-lot inferred calibration or predictive muzzle velocity data.

As a result, I could not produce accurate ammunition information to meet the requirements for accurate, predicted fire — mostly due to ammunition management issues and a lack of institutional memory across the artillery community. The solution, though not new, lies in readdressing how to implement recent technological advances. Then, we can provide accurate first-round effects on target with minimal expenditure of ammunition and reduced collateral damage risks.

Little progress. This problem was neither new nor unique. Several critiques emerged after Operations Desert Shield and Desert Storm. Capt. B.L. Peyton wrote that Marine batteries faced three muzzle velocity management problems in those operations (See his article "Muzzle Velocity Management During Operation Desert Storm" in the October 1991 edition of *Field Artillery.*) First, a large number of propellant lots were issued for each propellant model. Secondly, a database for the higher charges (M119A1 and M203 in Peyton's case) did not exist. The third problem was the nature of the M90 velocimeter, which I did not experience because it was replaced by the M93/M94 chronographs.

The commanders of the 18th Field Artillery Brigade, Fort Bragg, N.C., raised concerns about lot allocations and calibrations in their after-action report, (See "Operations Desert Shield and Storm — a Unique Challenge for the 18th FA Brigade [Airborne]" by Freddy E. McFarren *et al* in the October 1991 edition of *Field Artillery*).

The 12 years between Operations Desert Storm and Iraqi Freedom did little to rectify service-wide issues of calibration and muzzle velocity management. Two after-action reviews, which Army units submitted shortly after the beginning of Operation Iraqi Freedom, discussed the lack of muzzle velocity data for the ammunition drawn. These after-action reviews — submitted to the Center for Army Lessons Learned — came from both 105-mm and 155-mm battalions, revealing the problem across both calibers and services. The after-action reviews noted the inability to provide accurate fires. The lack of muzzle velocity data was noted especially for the higher charge (M229 for 105-mm and M119/M203 for 155-mm) missions that commonly were fired in combat. Years after initial operations in Operation Iraqi Freedom and almost 18 years after Operation Desert Storm, the lack of readily available muzzle

velocity data to improve firing accuracy continues to plague batteries.

The ammunition homogenization issue has been discussed in several articles. Majors Michael Forsyth and Troy Daugherty wrote an excellent piece on managing ammunition and lot distribution problems at the battery level (see "Ammunition Management in Battery Operations" in January-February 2001's *Field Artillery*). Major Brent Parker and Captain Michael Philbin also presented advice on how to manage the battalion's ammunition allotment issues in that edition ("Ammunition Management is Everybody's Business").

Several after-action reviews from Operation Iraqi Freedom dealt with ammunition distribution issues. These reports, submitted to the U.S. Marine Corps Center for Lessons Learned, echo a common requirement for more sensitivity to artillery ammunition requests in both projectile square weight and propellant lot issues from our logistical support units.

One of our solutions was firing illumination missions, using the limited-quantity lots to retain the larger lots of known efficiency for shooting high-explosive projectiles. While less than ideal, it was one of the solutions we adapted with the ammunition on hand to provide accurate fires.

When seeking accurate firing solutions,

the value of individual piece calibration data cannot be understated. As *Field Manual 6-40 Field Artillery Manual Cannon Gunnery* explains, individual baseline calibration is the preferred method of obtaining muzzle velocity data. However, calibrations ideally should be completed before deploying. It would be "far better to expend rounds calibrating during training at home station than expend rounds calibrating during combat operations in theater." (See "From SOSO to High-Intensity Conflict" by Mark L. Waters in the July 2004 edition of *Field Artillery*).

For Battery S, calibration shoots used a sizeable portion of its on-hand lots and required help from other units to provide observers, impact area security and increased coordination requirements with both air and maneuver forces. Obtaining calibration data before deploying for the ammunition we would receive in theater would have helped our accuracy.

While we conducted two calibration shoots using our new M777A2 howitzers, changing operational environments and restrictions limited our ability to calibrate new ammunition as the Modular Artillery Charge System became available. Furthermore, conducting consistent calibrations in theater remains a largely unrealistic goal, especially in Iraq as we transition into stability operations. Ten years ago, CPT Jonathan Howerton's M198 platoon faced similar problems while supporting operations in Bosnia-Herzegovina (See "M198 Platoon Autonomy in Multinational Operations" in the September 1998 edition of *Field Artillery*).

Without calibrated data for our howitzers, we had to rely upon the least-preferred course of action when accounting for muzzle velocity variations. The solution entailed engaging in predictive muzzle velocity techniques, specifically combining shooting strength with propellant efficiencies. Obtaining shooting strength was an easy in a battery gunnery sergeant-driven event because our artillery mechanics could take pullover gauge readings. That data then was compared to the equivalent full-charge data obtained from the Navy Marine Corps 10558 Weapon Record Books. However, propellant efficiency information was the most pressing problem I faced when creating solutions for accurate, predicted fire.

Improvising. To solve the problem, I started with the published propellant efficiencies I

received as an artillery student at Fort Sill, Okla. The list, approximately 14 pages long, contained information on a variety of lots across the caliber and model spectrum, but excluded the Modular Artillery Charge System charges that trickled into my position with the XM982 Excalibur projectiles.

But, this data presented another problem because the most recent information was obtained in 1997 with most of the data coming from the early 1990s. When compared with more recent calibrated data from other sources, the probable error varied as much as 7.7 meters per second on a lot of M119A2. This variation changed the predicted impact of the M795 projectile by almost 220 meters at maximum range. As a result, the potential for faulty or outdated data to hinder my ability to provide accurate predicted fire was too great to be overlooked. A wider breadth of records and information was needed to account for muzzle velocity variations. (A useful website for updates on the MACS system, as well as contact information to Picatinny Arsenal can be found at **https://picac2cs9.pica.army. mil/ConventionalAmmo/Home.aspx**. A link also can be found on that page for the Excalibur project manager.)

To fill the gaps in the historical record, I combed my own firing records to find calibrations fired in stateside training events. Then, I supplemented these with some Army-provided records, Canadian records and calibration data still on-hand from previous batteries in Fallujah. These various records helped build a larger historical database but, on a whole, failed to improve my firing data because the information did not include many of my acquired lots.

The muzzle velocity records from previous Fallujah batteries were more valuable, but only because I could conduct second-lot inference for my M198 howitzers. So, the wide variety of lots that rotated through my position made most of them useful for archival data, but added little value to my firing solutions.

My most useful source of data was an old muzzle velocity log from 5th Battalion, 10th Marines. The former battalion operations chief provided it before deployment. The log contained both the published probable error list and calibrated data obtained during various training events and combat operations before 2005. It was the largest record I obtained, and it significantly expanded my records. Nevertheless, this log was limited in both its scope and ability to help me manage muzzle velocities, especially when dealing with M119A2 and M203A1 charges for which muzzle velocity records are minimal. Attempts to obtain other battalion or

An Excalibur round is fired from an M777A2 lightweight howitzer at Camp Fallujah, Iraq, Nov. 4, 2007. (Photo courtesy of the Digital Video and Imagery Distribution System)

regimental logs were unsuccessful.

Lost in the shuffle. As the artillery community continues to function as the "jack-of-all-trades" in Iraq and Afghanistan, our basic proficiency as artillerymen degrades. Our institutional memory and other repositories of information obtained through years of training exercises and combat deployments also are being lost. As units stand-down or reconfigure, battery, battalion and regimental muzzle velocity logs either disappear or fade from memory. Often our units are reformed and redeployed as everything from civil affairs groups to military police to border control. The binder of M90 Velicometer work sheets (Department of the Army Form 4982-1-R) is lost in the shuffle as we retool for everything but cannon artillery. It's essential to rebuild our muzzle velocity logs to achieve accurate, predicted fires. However, I feel it's a problem that can be rectified.

Standards. First, batteries need to create and enforce standards for using the M93/94 chronographs in training and combat operations. A table of organization increase to provide one chronograph per howitzer would be a welcomed change. However, that seems unlikely in the near future. The muzzle velocity management chain needs to start on the gun line with howitzer section chiefs, who should obtain both familiarity and comfort with the M94/94 chronograph. From there, the fire direction officers and operations chiefs at the battery level should require the use of chronographs to record calibration data and prioritize calibration efforts.

While collecting this data at the battery-level fire direction centers is useful for a battery, it does little to improve the knowledge pool available to other units who also might draw the same lot. Battalions and regiments need to develop and enforce standards for collecting muzzle velocity data, converting it to usable probable error data and disseminating it to other units. As batteries return from the field, their new calibrations are turned over to battalion for review and publication. Battalions should push their acquisitions to regiment for further dissemination. Independent batteries, such as those attached to Marine expeditionary units or firing batteries in Iraq and Afghanistan, either return their data to their parent commands or publish it themselves.

Isolated information. Capt. Dean Robison, U.S. Marine Corps, wrote about a laptop-based muzzle velocity variants database management program in his article "The New M94 Muzzle Velocity System" in the March-April 1997 *Field Artillery* bulletin about the M94

chronograph. While the ability to download muzzle velocities directly from the M94 into my laptop would be an interesting feature, the true genius in his suggestion is the concept of a computerized database program for muzzle velocity variants.

The old battalion log I received was a Microsoft Access database that could be manipulated and modified. I added the Army, Canadian and Modular Artillery Charge System efficiencies — in addition to my own — to the database. From there, a click of the button displayed the efficiencies of all calibrations fired for my lots. The Microsoft Access database proved useful to me and anyone with access to my computer, but it did little for other units unless they asked for my data. A rather large database with no ability to disseminate it does most of the community no good; an online data base accessed through Army Knowledge Online is the optimal solution.

Combined information. Army Knowledge Online provides global access to a variety of knowledge databases and archives by enabling greater knowledge sharing among Army communities. By creating an online muzzle velocity database on the Fires Knowledge Network — with the cooperation of organizations, such as Firing Tables and Ballistics, Project Manager-Combat Ammunition Systems and Fort Sill's gunnery department — units can upload, access and archive the latest propellant efficiency data for a variety of models and charges, enabling more accurate fires. The Army Knowledge Online archive concept is no different than the services collecting and placing online lessons learned archives after operations or exercises. Using Army Knowledge Online's restricted access portal allows the information to be secured, ensuring quality control and operational security.

Furthermore, by adding the ability to place urgent requests — similar to the urgent needs statements from deployed units — batteries can harness the chronographs of other units to help them accurately compute firing solutions. These urgent requests are simply requests for artillery information and focus priorities at battalion and regimental levels to support the warfighter downrange better. The database becomes more than just an information repository; it responds to meet the units' needs in the fight.

Challenges. The online database is not a cure-all. First, Internet access is required. This may not always be

possible in combat operations, especially if the unit is constantly moving. This problem can be mitigated by working with logistical units before crossing the line of departure to determine what lots will be drawn and comparing those lots to the database. From there, fire direction officers can prioritize calibration efforts before commencing operations to fill the holes in their records and request reach-back

> *"As the artillery community continues to function as the 'jack-of-all-trades' in Iraq and Afghanistan, our basic proficiency as artillerymen degrades."*

support from parent commands.

The second drawback to placing the database on Army Knowledge Online is the potential to preclude some allies who use NATO ammunition from accessing the database. Liaison would need to be conducted with our partner nations to maximize the scope of the data and to ensure our partners can benefit. The Fort Sill gunnery department is the ideal coordinator with international artillery communities due to the global nature of its students and alumni.

An online muzzle velocity variation database would alleviate some of the problems batteries have faced since at least Operation Desert Storm. Through harnessing the technological leaps of the last 20 years, we can reduce the gaps in our muzzle velocity management problems and provide a shared and accessible database. Furthermore, as units transition from military police to firing batteries to civil affairs groups, an online database would help preserve the institutional memories better than traditional paper logs. Online archiving increases our ability to meet one of the five requirements of accurate predicted fire. ▪

Captain Timothy G. Heck, U.S. Marine Forces Reserve, is assigned to the 4th Air Naval Gunfire Liaison Company, Marine Forces Reserve, West Palm Beach, Fla. Previously, he was the field artillery training officer, Combined Joint Task Force Phoenix, deployed in support of Operation Enduring Freedom, where he trained the Afghan National Army on the D30 howitzer and former Warsaw Pact 82-mm mortars. He also served as the battalion fire direction officer for 5th Battalion, 10th Marines, 2nd Marine Division, Camp Lejeune, N.C; and the fire direction officer for Battery S, 5th Battalion, 10th Marines, deploying in support of Operation Iraqi Freedom with Regimental Combat Teams 6 and 1.

Targeting
or counterfire

By 1SG Stephen P. Myers

The Army's realignment to a modular force structure created many new and unique changes to tactical operations. The Field Artillery community is no exception, and the impact of these changes can be felt in target acquisition. Counterfire and targeting duties represent two different operational areas. However, doctrine does not separate these duties clearly in the new force structure.

Each fires battalion within the brigade combat team will have a counterfire operations cell. The fires brigade will include a target processing team. Without a clear definition of the two duties, it is hard for commanders to fill positions with qualified personnel. This article describes how the targeting and counterfire definitions and placement of targeting and counterfire personnel became blurred and offers suggestions to fix the inconsistencies.

History of transition. Changes to the Military Occupational Specialty 131A Field Artillery Targeting Technician Warrant Officer/Section Leader force structure began in 1994; the Army used the field artillery targeting technicians as targeting officers. During the conflicts in Bosnia and Kosovo, the traditional fire support element evolved into the fires cell. As part of today's new force structure, 131As are leaving the radar sections. Warrant offices' duties increased significantly as they filled their new positions as targeting officers, however, doctrine has been slow to capture all these duties.

The counterfire operations section in the fires battalion incorporates Military Occupational Speciality 13R FA Firefinder Radar Operators sergeants first class and staff sergeants as counterfire and assistant counterfire NCOs, positions that traditionally were filled by 13F Fire Support Specialists. 13F sergeants first class held these positions, although, they had little experience in counterfire operations.

Their targeting experience was in the fire support element, where they were well versed with tactical operations center daily operations. The military education for these senior NCOs falls short in the areas of

Figure 1: These field manuals discuss the different definitions, duties and responsibilities of the targeting officer and counterfire officer.

- *Field manual 3-09.12 Tactics, Techniques and Procedures for Field Artillery Target Acquisition*

- *Field manual 3-09.21 Tactics, Techniques and Procedures for the Field Artillery Battalion*

- *Field manual 3-09.23 Tactics, Techniques and Procedures for the Modular Fires Battalion*

- *Field manual 3-09.24 The Fires Brigade*

- *Field manual 3-09.42 Tactics, Techniques and Procedures for Fire Support for the Brigade Combat Team*

- *Field manual 3-13 Information Operations: Doctrine, Tactics, Techniques and Procedures*

counterfire and target sensor management to support the brigade.

Duty description inconsistencies. The field manuals in Figure 1 discuss the different definitions, duties and responsibilities of the targeting officer and counterfire officer. The duties listed in Figure 2 describe an NCO in a counterfire operations section. Comparing Figures 1 and 2 show some of the inconsistencies in the duty descriptions.

At the pace our Army is changing, we must define all military occupational speciality duty descriptions clearly to ensure Soldiers operate within their qualifications. A number of field manuals are outdated and inaccurately capture and describe the duty positions. Several of the older field manuals are scheduled for updates in the near future. However, in the interim, confusion still exists about the correct duties.

Counterfire and targeting are two separate areas; they require different skills and training. Many NCOs who work in a tactical operations center are labeled incorrectly as a targeting NCOs because they perform the duties and responsibilities of a targeting NCO. In fact, they are working

Figure 2: Duties of Military Occupational Specialty 13F4O Senior Field Artillery Targeting NCO, *FM 3-09.12 Tactics, Techniques and Procedures for Field Artillery Target Acquisition*

The 13F40 sergeant first class targeting NCO assigned to the corps target acquisition detachment is responsible for setup and operation of the target processing section. His duties follow:

- Leads, supervises and trains the targeting element.

- Sets up and maintains all targeting element maps, charts and records.

- Ensures Advanced Field Artillery Tactical Data System is initialized properly and used in conjunction with the targeting information from the target production map and other sources to produce targets.

- Helps recommend employment of fire support means to include naval gunfire and close air support.

- Ensures targets generated by the targeting element are passed to the fire control and operations elements for action.

- Ensures information from shelling reports and mortar bombing reports are integrated into the target development process.

- Helps maintain the artillery order-of-battle database and target files.

as counterfire NCOs.

One recently deployed unit demonstrated the consequences of inappropriately assigned personnel in Iraq. A MOS 13F40 FA fire support senior NCO worked as the targeting NCO in the fire support cell. The 13R40 FA Firefinder Radar Operator from the direct support FA battalion was attached to brigade as the battalion liaison officer. The counterfire officer became ill and left theater for treatment, leaving a void in the counterfire operations section.

The 13F40 working as the targeting NCO could not fill the position because he

Soldiers of 1st Battalion, 501st Infantry Regiment, observe artillery fire near Camp Clark in Afghanistan, April 7. (Photo by SGT Christopher T. Sneed, U.S. Army)

lacked target acquisition experience. The solution in this case was to pull the 13R40 from the battalion liaison officer position and fill the counterfire officer position. The 13R40's knowledge and experience allowed for a relatively seamless transition. The counterfire operations section continued focusing on the combined arms fight and synchronizing its assets.

The 13R40 was the better fit as a counterfire NCO, not a targeting NCO, because of his substantial experience in radar operations. He understood radar zone management, pattern analysis, counterfire battle drills, azimuth of search requirements and other target acquisition functions. His skills and knowledge made him the better choice for the counterfire NCO. Labeling a 13F NCO as a targeting NCO is wrong as this example demonstrated. This validates the need to identify the duty positions properly and place qualified NCOs into those positions.

The tables of organization and equipment for the infantry brigade combat team and heavy brigade combat team place the counterfire operations section in the fires battalion. These counterfire operations sections will be manned properly with appropriate levels of 13Rs conducting counterfire operations.

Current doctrine problems. There are several references in multiple field artillery field manuals that explain the duties of the targeting officer/NCO and the counterfire officer/NCO. However, these duty descriptions often blend with or overlap one another. The field manuals in Figure 1 discuss the different definitions, duties and responsibilities of the targeting officer and counterfire officer. While some of the duty descriptions are similar, discrepancies exist in the various field manuals.

While various echelons of commands describe these duty positions differently, the basic duties and responsibilities are fundamentally the same. The only exception stems from the assets they control or plan. For example, the targeting officer conducts targeting at the brigade level the same way he does at the division or corps levels. However, there is a caveat in the type of targeting assets used to collect the necessary data while developing the target folders at the brigade and corps levels. But the processes and methods of collecting the information used in developing the target folders, target selection standards, high-value targets, high-payoff targets and the high-payoff target list as well as applying

the targeting guidance from the maneuver commander remain the same.

Several references in field manuals describe the duties of a targeting officer as a counterfire officer's duties, creating further confusion. These are just two examples to illustrate the similarity of duty descriptions used to describe two different functional areas. For example, *Field Manual 3-09.12 Tactics, Techniques, and Procedures for Field Artillery Target Analysis* list some of the duties of the field artillery brigade targeting officer — develops radar deployment orders for any attached radars, recommends radar coverage and positions for attached radars and produces the target selection standards matrix for target acquisition assets working for the brigade combat team.

In the same manual, some of the duties listed for the infantry brigade combat team counterfire officer are the same as the targeting officer, such as recommending and updating position areas for target acquisition assets, target acquisition coverage and recommending target selection standards. Logically, the targeting officer's duties should reflect his responsibilities. So, which one is correct? Either the counterfire officer or the senior counterfire NCO develops the

radar development orders in the counterfire operations sections. The targeting officer does not do that. The counterfire operations section also recommends radar coverage and positions for the attached radars, a task that is listed as the targeting officer's responsibility.

Targeting process. *Joint Publication 1-02 Department of Defense Dictionary of Military and Associated Terms* defines a target as "an entity or object considered for possible engagement or other action, an area designated and numbered for future firing." Warrant officers learn this definition during "The Targeting Process" block of instruction at the Field Artillery Warrant Officer Basic Course.

The targeting process, as stated in *Field Manual 6-20-10 TTP for the Targeting Process*, is the "process of selecting targets and matching the appropriate responses to them on the basis of operational requirements, capabilities and limitations." It is a logical process that synchronizes lethal and nonlethal fires with the effects of other battlefield operating systems. It also considers information from other agencies to achieve the desired target effect.

Eliminate confusion. It is essential that we develop our force to meet the contingencies of full-spectrum operations. We must recognize common doctrinal definitions and develop a common understanding of that terminology. For example, the terms target and targeting create a unique challenge in the area of targeting and counterfire because they are used out of context often and inappropriately to define both targeting and counterfire. The proper function of these two terms must be correctly applied to the positions of counterfire and targeting personnel.

Joint Publication 1-02 defines a target as "An entity or object considered for possible engagement or other action ... an area designated and numbered for future firing." It is important to note here, that a radar acquisition is just an acquisition that meets specific logarithmic calculations the radar extrapolates from a projectiles flight characteristics that it uses to pinpoint enemy mortar and artillery fire. However, not every acquisition is assigned a target number and should not be referred to as a target in this early stage of the acquisition process.

Acquisitions received by the radar are listed as either wanted or unwanted based on various checks conducted by personnel in the counterfire operations section. It is not until the acquisition is validated by the counterfire operations section that it can be called a "target" and assigned a target number. Once this happens, the counterfire process begins, and the appropriate counterfire response takes place. Here the target data should be used in current operations for immediate response in the counterfire fight.

Counterfire is a reactive or proactive (although primarily reactive) process that employs fire support or other means to neutralize, destroy or suppress enemy indirect fire weapons that become "targets" as they are selected for attack by the commander. The counterfire officer and NCO manage target acquisition assets, recommend position areas for target acquisition assets, orient field artillery target acquisition assets and other counterfire related duties. The counterfire officer and NCO work together in the counterfire operations section or with the battalion S2, ensuring target acquisition assets are used properly.

Targeting is defined further in *JP 1-02* as "The process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities." This definition of targeting correlates directly to the warrant officer's role as a targeting officer as they develop target folders for future response.

The targeting officer focuses on selecting and prioritizing targets as he develops and refines target folders based on information he collects from various sources such as signal intelligence or human intelligence. Then an appropriate action will be approved based on the commander's guidance.

Based on the commander's intent and concept of operations, targeting establishes targeting priorities for each phase or critical event of an operation. The difference between target and targeting is often confused because the definitions are not understood clearly; targeting is confused with targets and vice-versa.

Targeting/counterfire differences. To appreciate the differences in this area, one must understand the difference between targeting and counterfire. Targeting is "the process of selecting targets and matching the appropriate response to them on the basis of operational requirements, capabilities and limitations." Based on the commander's intent and concept of operations, targeting establishes targeting priorities for each phase or critical event of an operation. One of the key differences between the two is that counterfire is primarily reactive, whereas targeting is primarily proactive.

Counterfire reacts to enemy artillery or weapons that have begun firing while targeting is "what I do to cause effects on the battlefield to further my objectives," including the high-payoff target list, intelligence collection plan, target selection standards, attack guidance matrix and target synchronization matrix. Targeting methodology is based on the Decide, Detect, Deliver and Assess functions performed by the commander and his staff in planning and executing targeting.

Originally, targeting objectives were expressed in terms of the fire support mission area analysis responses of limit, disrupt and delay. While this is still appropriate, targeting includes lethal and nonlethal effects to achieve the commander's objective.

Confusion often stems from old doctrinal terminology when targeting objectives were achieved mainly through fire support and fire support alone. The thought of a target only existing as an object lased for a fire mission by a well-hidden 13F on an observation post does not define a target in this complex counterinsurgency fight and must not always be thought of in this context.

Targeting's role change. The role of targeting and the targeting officer expands far beyond the fire support element.

SPC Patrick Martinez of A Battery, 1st Battalion, 319th Field Artillery Regiment, 3rd Brigade Combat Team, 82nd Airborne Division, Multi-National Division-Baghdad, measures the fire range during an artillery training exercise at Forward Operating Base Hammer, Iraq, Aug. 22. (Photo by PVT Jared N. Gehmann, U.S. Army)

Targeting is a dynamic process; it must keep up with the changing face of the battlefield. The targeting officer develops targeting folders based on the maneuver commander's guidance and the commander's desired targeting effect. From these target folders, they then determine the means to achieve the desired effect.

Is it an individual who is being targeted or a specific group the commander wishes to influence in some way? If it is an individual, is he to be killed, captured, detained or persuaded? If it is a group, what effect does the commander wish to gain, and what targeting method is he going to use? Targets are no longer solely enemy formations standing before U.S. in a linear formation. New enemy tactics and execution evolve, and so must the roles and duties of the targeting officer/NCO.

Counterfire's role. Counterfire primarily is a reactive countermeasure that "focuses on fires in response to enemy artillery or [electronic warfare] weapons that have begun firing, jamming or otherwise impacting the overall battle or the counterfire fight," *Field Manual 3-09.21 Tactics, Techniques and Procedures for the Field Artillery Battalion*. The key in this definition is "weapons that have begun firing."

Effective counterfire involves the rapid reallocation, movement and focus of counterfire assets to counter and eliminate a possible enemy indirect fire advantage quickly. As such, many duties and responsibilities of a counterfire officer and NCO relate to available target acquisition assets and focus on enemy indirect fire weapon systems. The counterfire officer and NCO also coordinate closely with the S2 to determine how significantly the enemy has weighted his indirect fire assets in that area.

Counterfire personnel help identify and implement zones—allowing counterfire assets to counter and eliminate a possible enemy indirect fire advantage quickly—and manage target acquisition assets. Counterfire personnel should be experienced and knowledgeable in all aspects of radar tactics, techniques and procedures. They understand radars' limits and capabilities as well as the tactical aspects necessary to employ them to the fullest capacity. Senior 13R and 131A warrant officers are suited for these positions because they have the required background and understand all aspects of target acquisition counterfire.

Targeting/counterfire NCOs. The separation of targeting and counterfire extends further into the enlisted ranks. Nowhere is this more evident than in the doctrinal duty descriptions of 13F4O targeting and 13R4O senior field artillery targeting NCOs as targeting and counterfire NCOs. The lack of distinction between these positions often creates confusion at many

levels; therefore, commanders are not using their 13F4O and 13R4O NCOs properly.

One doctrinal reference, *Field Manual 3-09.12 Tactics, Techniques, and Procedures for Field Artillery Target Acquisition*, classifies a 13F4O as a targeting NCO. However, the duty description and responsibilities listed for that position do not correlate with the targeting process. The duties listed in Figure 2 describe an NCO in a counterfire operations section. The use of the word "target" in this description refers to target acquisitions received by the radars, not targets or target packets developed by the targeting officer or NCO.

If the position is truly that of a targeting NCO, the duty description should identify those targeting duties the NCO would perform in that capacity. The duty description should also identify what section that individual would work, in this case, somewhere with the targeting officer, not in the counterfire cell.

Field Manual 3-09.12 also classifies a 13R4O as the senior FA targeting NCO, as shown in Figure 3. The description listed also describes the duties a counterfire NCO performs in a counterfire operations section. Therefore, it should be called the senior counterfire NCO, not a senior field artillery targeting NCO. This inappropriate use of duty titles creates confusion with regard to where these NCOs should be placed within the brigade combat teams.

The way forward. As new systems, such as the Lightweight Countermortar Radar, Unattended Transient Acoustic Measurement and Signature Intelligence System, Joint Land-Attack Cruise Missile Defense Elevated Netted Sensor System and other sensors, continue to populate the Army's inventory, counterfire will continue to play an integral role in future combat operations. 13Rs understand these sensors and their capabilities better than anyone on the battlefield, allowing the counterfire operations section at battalion to perform and conduct counterfire operations in a proficient, well-organized manner. There are no 13Fs at any level in the counterfire operations section in the new table of organization and equipment.

As our Army continues to move forward with the new modular force design, we must ensure we properly capture the targeting and counterfire duties and positions. We must incorporate all lessons learned from the combat training centers and, more importantly, from operations in Iraq and Afghanistan into institutional training, including position descriptions. These descriptions are being re-energized to identify and describe them correctly to ensure a clear understanding. Understanding the difference between counterfire and targeting will place the right personnel in the right duty position. ▪

Figure 3: Duties of MOS 13R40 Senior FA Targeting NCO, *FM 3-09.12 TTPs for FA TA*

The 13R40 sergeant first class targeting NCO assigned to the corps target acquisition detachment performs all duties normally performed by the target acquisition battery first sergeant. In addition, the senior field artillery targeting NCO performs the following duties:

- Conducts map reconnaissance of general position areas for location of weapon locating radars assigned to the corps target acquisition detachment.

- Collects and disseminates information provided by the intelligence section and applies their products to the tactical employment of target acquisition assets and counterfire operations.

- Monitors the operations, status and current and proposed locations of field artillery radars.

- Helps the counterfire officer develop target acquisition coverage to include command and control relationships of organic and attached target acquisition assets.

- Provides input to the S2 for consolidation into the target acquisition battery.

- Provides the counterfire officer with recommendations for positioning general support target acquisition assets and establishing sectors of search and radar zones.

- Helps maintain the artillery order-of-battle database and target files.

- Helps develop cueing guidance for all target acquisition assets.

First Sergeant Stephen P. Myers, field artillery is the first sergeant of 1st Battalion, 22nd FA, Basic Officers Leaders Course, Fort Sill, Okla. Previously he was the Soldier Program manager with the Directorate of Training and Doctrine, Fort Sill, for all Military Occupational Specialty 13R Firefinder Radar Operators. He was the target acquisition platoon sergeant for Headquarters and Headquarters Battery, 4-11 FA, 172nd Stryker Brigade Combat Team, in Fort Wainwright, Alaska deploying in support of Operation Iraqi Freedom 05-07. While deployed he also served as the target acquisition platoon sergeant, battalion liaison officer and counterfire NCO. He holds a Bachelors of Science degree in Public Administration from Upper Iowa University in Fayette.

Reset: reduce risk, improve readiness

By LTC Michael T. Morrissey

"We are faced with a long war against an enemy implacably dedicated to our destruction. We must sustain for an indefinite period superbly trained, technically superior, and fully equipped and supported armed forces, directed by political leaders who are committed to our ultimate success. The very survival of our nation is at stake, and the guarantee of liberty for our descendants is a legacy we cannot forsake."

GEN (Retired) Frederick J. Kroesen
"Evolving War Imperatives," *Army* Magazine (March 2009)

The U.S. is involved in a war lasting more than eight years. The Army is engaged in Iraq and Afghanistan and is also deployed to approximately 80 countries. Simultaneously, it is defending the homeland and is ready to support domestic crises. As outlined in *Field Manual 3-0 Operations*, persistent conflict and instability are the projected future; a future affected by trends, such as globalization, population growth, urbanization, demand for scarce resources, climate change, weapons of mass destruction, proliferation and failed states. In this environment, the Army continues to play an indispensable role, executing national security strategy.

The Secretary of the Army and Army Chief of Staff have assessed the Army as "out of balance." The effects of high operational tempo combined with insufficient recovery time for personnel, families and equipment resulted in readiness consumption at an unsustainable rate. To restore balance by 2011, leadership has given the Army four imperatives — sustain, prepare, reset and transform.

Army Force Generation. The Army purged the old system of tiered readiness and implemented the Army Force Generation model, known as ARFORGEN, to achieve its four imperatives. Simply, ARFORGEN is the development of increased unit readiness. Resources are allocated by deployment sequence; ensuring units are mission capable by deployment dates. Operational requirements drive ARFORGEN and include prioritization of resourcing, manning, equipping, sustaining and sourcing. (See the 2007 U.S. Army Posture Statement, Addendum H: Army Force Generation. Another informative article is "Reset after Multiple in-lieu-of-Missions" by LTC Geoffrey P. Buhlig in the July-September 2008 edition of *Fires*.) The ARFORGEN model consists of three phases — reset, train/ready and available.

Of the three phases, reset contains an inordinate level of organizational risk as new unit leadership faces a multitude of challenges, such as high personnel turnover, "at risk" Soldiers, family reintegration and absent unit organizational systems.

According to GEN George W. Casey, "The intent of reset is to recover personnel and equipment to a state of readiness at the end of six months so the unit can train up for the next mission." With the current strategic environment and a future of projected conflict, it is more important than ever to reset Soldiers, families and equipment properly.

We must identify and mitigate organizational risk inherent in reset to build readiness successfully. The U.S. does not have the luxury of a strategic pause in the foreseeable future. Ultimately, reset success contributes to strategic depth, enabling our nation to win the Long War, and flexibility for an uncertain future.

Unit environments differ by level, location and mission requirements. Some units have the added complexity of multiple subordinate units in different ARFORGEN phases. Regardless, the discussion in this article may prove useful in reducing organizational risk and improving readiness.

Organizational risk in reset. Although reset makes sense at the operational and strategic levels in generating forces to meet our nation's demands, the logic isn't always evident at the tactical level. Reset requires critical thinking from tactical-level leadership to identify challenges and implement solutions.

For example, reset generally includes turnover of a large portion of unit leadership during a finite window of time (battalion commander and command sergeant major through squad leaders). The reset period often has a high personnel turnover; a lack of functional fundamental administrative systems in critical areas, such as personnel, maintenance, supply and training; and a shortage of key personnel.

Other reset challenges include Soldiers and families who are "at risk" due to stress incurred from deployment and separation, domestic friction, post traumatic stress disorder, alcohol/drug abuse and traumatic brain injury. In addition, reset involves leaders who excelled in a combat environment, but have limited experience in garrison, such as knowing deliberate precombat inspections are just as necessary before a long weekend as they are for a combat mission.

As leaders, we fully appreciate the expeditionary nature of our Army and are eager to rebuild readiness rapidly. However, the old adage, "You've got to go slow before you can go fast" is appropriate. If not done right, your unit will come out of reset no better than it entered. Leaders must establish a balance between a sense of urgency to complete critical tasks and the need to reintegrate Soldiers and families. Reset must be planned and executed deliberately, beginning with an assessment of unit vulnerabilities and the implementation of appropriate control measures to reduce organizational risk.

Risk identification and assessment. As Yogi Berra aptly stated, "You've got to be very careful if you don't know where you are going because you might not get there." Like the first step of battle command, you must understand the problem — start by thoroughly assessing the unit. This assessment phase is critical to determining a command focus/vision.

Talk with key leaders before their permanent change of station/expiration term of service dates. Meet with subordinates to get a sense of the organization's strengths and weaknesses. Conduct sensing sessions with different levels in the unit, such as privates and specialists. This group consistently provides the best results, revealing candid feedback on areas that need improvement.

Determine the unit's climate. According to Army Regulation 600-20 Command Policy, command climate surveys are required within 90 days of assuming command at the company-level. These surveys provide a valuable venue for feedback. New commanders should complete the Army Readiness Assessment Program survey. The survey out brief, conducted by the U.S. Army Combat Readiness/Safety Center, gives leaders an understanding of their units' safety climate and knowledge of useful, available Army resources.

Given unit rotations into and out of theater, and transitions between core mission-essential task list and directed mission-essential task list, reviewing previous after-action reviews may not be useful, but still should be considered. At a minimum, ensure the unit conducted an after-action review on its recent operation. Those lessons will prove invaluable during the next deployment because the majority of your team will be new.

As part of your assessment, do not assume critical reintegration tasks such as post-deployment health screening or the Soldier Wellness Assessment Program were complete. Regardless of when you took command, you may be surprised at how poorly leaders follow through in these critical areas due to a litany of well-intentioned excuses. Failure at the Soldier Wellness Assessment Program incurs an unnecessary level of risk as unidentified physical or psychological stress may surface later.

Assess unit systems. You may identify a lack of basic Army systems such as personnel actions, barracks policies or even personnel accountability. Do not take anything for granted. Review and implement unit systems in personnel, logistics, maintenance, Soldier care and training. If you're fortunate enough to have policies and systems already in place, review them and check their status.

Soldiers of A Battery, 5th Battalion, 5th Air Defense Artillery, boresight their M3P 0.50 caliber machine gun as they prepare for Avenger Table VI gunnery at Fort Lewis, Wash., April 2009. (Photo by 2LT Katie Foremny, U.S. Army)

Finally, the assessment must include families. Do they support unit events? Are the family readiness groups supported and well-attended? Feedback from families offers a window into challenges you may not identify while talking with Soldiers.

Throughout the entire assessment process, be visible. Take every opportunity to see subordinates in both military and informal settings. Simply walk around the unit area often, both on and off duty. You'll be surprised what you'll observe, and your training and experience will give you "the ability to extract an enormous amount of meaningful information from the very thinnest slice of experience" (Malcolm Gladwell, *Blink*). These techniques allow you to have an accurate picture of your unit — organizational risks, strengths, weaknesses, cohesion, discipline and morale.

Organizational systems and required control measures. Now that you have a running estimate and identified organizational risks, describe and direct a detailed plan to put control measures in place. Do not do as Napoleon expressed during complex, evolving operations, "On s'engage et puis on viot!" (Translation: "One jumps into the fray, then figures out what to do next." See Dietrich Dorner's *The Logic of Failure*.) The process is not sequential. As with any operation, the leadership element of combat power determines success or failure. Below are common areas that require a leader's immediate attention and continued vigilance in the early stages of reset.

Chain of command. Although it may sound obvious, ensure a clear chain of command is in place with competent leaders. The turbulent period of transition between reintegration and reset, coupled with high personnel turnover, may create fissures new leadership must address swiftly. Align personnel in accordance with organizational structure and ability. Thoroughly reintegrate the unit, so you don't have an amalgamation of those who deployed, new Soldiers and rear detachment personnel.

Beyond leadership, resource key unit positions such as the career counselor, family resource staff assistant, equal opportunity leader and safety. Pay close attention to unit leaders. In many cases, junior personnel are filling key positions one to two levels above their ranks, especially as the permanent change of station surge hits a unit.

Abilities vary greatly. Some may have limited leadership experience due to filling nonstandard roles in support of a directed mission-essential task list. An example includes lieutenants who were slotted as

Organizational systems and required control measures

- Chain of command
- Discipline
- Unit paperwork
- Barracks
- Personnel systems
- Human dimension
- Safety/risk management
- Predictable battle rhythm and balance
- Battle drills
- Command supply discipline program

platoon leaders, but limited to shift-leader responsibilities in an engagement operations center. Although the billet may have provided great experience, these positions hardly equated to the roles and responsibilities of a platoon leader. Once promoted to captain or to a company/battery command, these leaders will need mentoring until they understand responsibilities and "what right looks like."

Discipline. After a lengthy deployment and with key leader turnover, there may be a sense that it's permissible to relax standards and discipline because "we accomplished our mission." Although not spoken, this lax attitude can permeate a unit. This is folly. With a clear chain of command in place, strictly enforce standards and discipline. Distinguish between honest mistakes and acts of indiscipline or behavior inconsistent with the Army Values. Develop a positive leadership climate and hold leaders accountable.

Unfortunately, there will be those few individuals who do not acclimate and, after efforts to rehabilitate, must be separated. As Jim Collins explains in *Good to Great*, letting the wrong people hang around is unfair to the right people and, ultimately, frustrates performance. Precious time and energy is diverted from developing and mentoring the right people.

Also, don't be fooled by statistics. Although the Army trend is a spike in incidents on or about redeployment plus sixty days, understand drug- and alcohol-related problems may not surface until later in reset. Do not assume drugs do not exist in your organization. Conduct aggressive, unpredictable urinalysis testing early and often. Ensure leaders are watching for nonstandard forms of abuse such as inhalants.

Unit paperwork. Personally review the standing serious incident report to

ensure it meets your intent and nests with higher headquarters' requirements. Keep it simple. Remember, a young staff sergeant or lieutenant on staff duty in the middle of the night will have to decipher it. Also it's a good idea to coach leaders on reporting procedures, accuracy and timeliness. Do not allow a serious incident report to leave your command without the executive officer or command sergeant major reviewing it.

Take personal interest in unit alert rosters and phone trees. With the high rate of personnel turnover in reset, alert rosters must be updated almost weekly to be effective. Otherwise, you'll identify the shortfall when you're unable to contact a leader during a unit crisis.

Barracks. Barracks may be the one area that keeps you awake at night in garrison. Go into your barracks during a duty day, weekends and holidays at various times. You will get a sense of your organization very quickly. A unit cannot tolerate an atmosphere of barracks indiscipline or poor physical security. Soldiers must reside in a safe, healthy living environment.

There must be a competent, trained NCO as charge of quarters who clearly understands his role. There must be a coherent policy that everyone understands. For example, are visitor sign-in procedures in place and observed? Unit leadership — first line supervisor through the battalion commander — needs to have a consistent presence in the barracks, especially during weekends and holidays. A simple tool such as a leader sign-in roster at the charge of quarters desk provides impetus for making young leaders visible.

Presence in the barracks does not equate to violating a Soldier's privacy or personal time. It means checking the charge of quarters, dayroom, common areas, hallways and, simply, being seen at various hours. Finally, unit staff duty Soldiers must know their duty and expectations, and take required checks and patrols seriously. Staff duty should not be an opportunity for them to catch up on movies.

Personnel systems. Reliable personnel systems must be in place at the beginning of reset or several aspects of Soldier and family care will be nonexistent. Otherwise, leaders will be overwhelmed in the react mode. Consider your S1 personnel action center as the keystone, if it is under strength, resource it with competent personnel. Tracking mechanisms must be present for

critical areas such as promotions, awards, evaluations and personnel accountability. It is a failure in leadership if a Soldier departs a unit without his award and evaluation report. Unfortunately, the default is to mail the award or email the evaluation after the Soldier departed.

Regardless of the tracking tool, make leaders proactive and accountable. Command and staff calls may be uncomfortable at times as leaders explain the status of each action, but Soldier care is too important to do otherwise. There also may be a plethora of pay problems that festered during deployment. A simple visit by a unit commander to the finance office can resolve them, but a unit system must be in place to process future actions.

Human dimension. Take time and assess the human dimension of your organization. This is more than simply a platitude of "Soldiers are our greatest resource" or "know your Soldiers." It requires leaders to understand a Soldier's fears, motivations, family background, domestic situation, goals, personality, previous combat experience and an appreciation of their stressors. Assessing the human dimension is more important now than any other time in our careers, whether it is a direct or indirect result of a long asymmetric war.

Work with key subordinates to identify those ("at risk") Soldiers who may need assistance and ensure plans are implemented to manage their stress effectively through counseling with a unit chaplain or family life counselors. Routinely assess progress through a system as simple as weekly updates by subordinate commanders. Make a deliberate plan to train and discuss stress management and suicide prevention during reset.

Soldiers and leaders must understand it is acceptable to seek help. We must get beyond the perceived stigma associated with talking to a counselor — especially for senior leaders. Leaders need to know resources are available to them and their Soldiers. During the recent suicide prevention stand down, the Army got it right by directing small group discussions and getting away from stale PowerPoint briefs. However, it shouldn't take an Army directed stand down for leaders to know their Soldiers and families.

Safety/risk management. Coach leaders to understand risk management is not a "check-the-block" activity, but must be considered throughout the planning process and continually updated as conditions change. Ensure leaders enforce privately owned vehicle inspections and use the Travel

Risk Planning System for long weekends and leave. Establish a motorcycle mentor program and put an aggressive leader in charge to ensure Soldiers meet regularly and comply with procedures. First-line supervisors must talk to Soldiers about the risks associated with drinking and driving and proper conduct of standards and discipline; this may prevent needless injury, loss of life or legal ramifications. A unit system as simple as a safe ride program where members carry unit cards with chain of command contact information and local taxi numbers reduces risk of driving-under-the-influence related incidents. Keep money with the staff duty to help Soldiers get a safe taxi ride back on post.

Develop an understanding among Soldiers that they serve something greater than themselves; they represent their unit and the Army by their actions. Reinforce the message at every opportunity as you conduct routine safety and discipline briefs. It is naive to believe a leader can prevent every incident, but controls must be in place to reduce them.

Predictable battle rhythm and balance. Soldiers and family members are sensitive to predictability, especially after a long deployment. Up front, publish a battle rhythm so Soldiers and families have it. To

do otherwise, directly impacts morale and erodes efforts to build cohesion. "Leaders' day" or "payday activities" scheduled the first Friday of each month, allow time for Soldiers and families to accomplish tasks delayed during deployment or reintegration.

Leaders must impress upon their subordinates that hours worked does not equate to efficiency and success. As Chief of Staff of the Army GEN George W. Casey explained in his remarks to the School for Command Preparation, "You're either deployed or preparing to deploy." Mentor leaders to balance their time for mission and family; this starts with the command sergeant major and commander. Enforcing balance early in reset pays dividends later in personnel readiness.

Battle drills. Despite leaders' efforts, a tragedy or serious incident may occur. Plan for it. A battle drill must be in place so leadership can handle tragic incidents such as suicide or sexual assault effectively. During the Brigade/Battalion Pre-Command Course at Fort Leavenworth, Kan., leaders hear horror stories from guest speakers about a death, suicide or sexual assault, occurring shortly after assumption of command. Naively, one assumes, "it won't happen in my unit." Unfortunately, it will. Prepare for it. Know what to do and who to call in the event of a sexual assault. Have the installation casualty assistance number available in the event of death and know the procedures for both formal and informal equal opportunity complaints.

Command supply discipline program. Supply discipline may seem like an unlikely area to address in your initial assessment of reset risk areas. However, bad lessons or no lessons at all while deployed may be a catalyst for poor accountability during reset. At a minimum, follow inventory procedures described in Army Regulation 710–2 Supply Policy Below the National Level; Army Regulation 735-5 Policies and Procedures for Property Accountability; Department of the Army Pamphlet 25-30 Consolidated Index of Army publications and Blank Forms; and Department of the Army Pamphlet 710-2 Using Unit Supply System.

Teach young leaders and Soldiers to care and account for equipment. Although a great program, do not presume your unit's equipment will come out of left-behind equipment with everything accounted for and fully mission capable. As equipment is being drawn from left-behind equipment and most, if not all, company-level changes of command are occurring, there is a potential for poor accountability.

Factors to consider when evaluating and increasing performance

- Counseling
- Unit programs
- Team building
- Sense of service
- Families
- Sponsorship and integration
- Training management
- Leader development

Get involved in change-of-command inventories. You may spend more time occupied in company-level change of command inventories than you remember from your days as a company commander. Ensure incoming and outgoing officers understand your intent and specific instructions for equipment layouts and paperwork. Randomly supervise layouts based on your own experience and direct your S4 to be incorporated to provide overwatch of young, inexperienced supply sergeants. Spot check platoon leaders' hand receipts. Ensure equipment is signed out to the user and new equipment purchased with the Government Purchase Card is properly recorded on hand receipts/property books. Poor accountability lessons may have been learned from multiple combat rotations. Address them early during reset.

Evaluate and increase performance. Basic unit systems and control measures are now in place, and your unit is gaining momentum through active leader involvement. Personnel turnover will continue to frustrate and challenge systems in place. Turnover varies by unit, but may be as high as eight to 12 percent. In the aggregate, that may seem minor; but when you factor in key losses, such as platoon sergeants and first sergeants, it can be painful. Leaders will spend a disproportionate amount of time ensuring departing personnel receive their awards, evaluations and other required paperwork.

Continuity is lost as leaders depart without a near-term replacement. During turnover, active supervision is critical to prevent atrophy. By this time, it may be appropriate to assess your command focus/vision based on lessons learned and unit capabilities. With personnel turnover, you will have to reissue it routinely to ensure a common understanding. Also, ensure your higher headquarters is aware of your personnel and equipment readiness beyond the monthly unit status report data. At the same time, remember the adage, "Don't

worry about what you don't have, and worry about what you have." Care for the Soldiers, families and equipment you have on hand and aggressively rebuild readiness. As personnel losses level out and gains increase, leaders can improve systems and unit programs, such as the following.

Counseling. Good units have a solid counseling program. Counseling is tied directly to the human dimension discussed earlier. Everyone within your organization requires counseling, both performance and event-oriented. *Field Manual 6-22 Leadership*, Appendix B, provides a good starting point. Anticipate a learning curve as you dispel bad habits such as "boiler plate" or generic prefilled counseling forms, or only counseling for negative events. Spot check counseling programs periodically to verify Soldiers receive quality, tailored counseling, for example, young Soldiers receiving financial counseling to avoid potential pitfalls. During reset, sit down and counsel all leaders you senior rate as well. This is time intensive, but is well worth the investment.

Unit programs. Now is the time to establish and resource programs such as Better Opportunities for Single Soldiers, re-enlistment/career counseling, family readiness group, equal opportunity, motorcycle mentor, single Soldier and Family Strong Bonds, guidon streamers for excellence and community volunteer outreach initiatives. Empower competent young leaders to develop these programs based on your intent. An active Better Opportunities for Single Soldiers program, for example, pays huge dividends as young leaders plan and conduct unit events.

Team building. Consistently, time is the most constrained resource. Team-building activities can accelerate bonding of new leadership teams, such as first sergeant and company/battery commander. A dynamic, mentally and physically demanding leader development program enables rapid integration and cohesion of new teams. An effective way of getting to know new teams compromised of your new officers, NCOs and Soldiers is to place them in a confidence course or problem-solving exercise where their success depends on communication. Strengths and weaknesses will immediately be apparent.

Informal social gatherings also offer an opportunity to develop relationships outside of the work environment. In addition to hails and farewells, invite commanders and first sergeants, along with spouses, to your home for simple events, such as a chili cook-off. This gives you and the command sergeant major an opportunity to build cohesion and

assess new leaders under different conditions. Team building is not limited simply to formal unit functions.

Family readiness groups and the Better Opportunities for Single Soldiers program also benefit from exercises that encourage cohesion earlier rather than later. *Field manual 6-22* provides basic ideas to develop teams, but do not limit your creativity. Google "team building" and you'll be rewarded with creative techniques outside of the military norm.

Also, reenergize old traditions like the "broken track" or "misfire" award that foster humor and camaraderie. Instill pride in your regiment by emphasizing its history at every unit gathering. Tie your young Soldiers to the past. Bring back retired veterans, such as the honorary commander or command sergeant major, to talk with your Soldiers and leaders. These are just a few ideas. Do not short-change team building.

Sense of service. As James Kouzes and Barry Posner explain in *Encouraging the Heart*, people are searching for deeper meaning in their lives; they want to make a commitment to common cause to accomplish extraordinary things. Ingrain a sense of standards and discipline; instill a sense that your Soldiers serve something greater than themselves — their unit, regimental lineage, our Army, our nation and each other. Reinforce this at every formation, gathering and ceremony. Motivate and empower them to contribute to a common cause. This can be done by planning and resourcing events like an NCO induction and change-of-position ceremonies to develop institutional pride. Make a big deal out of award and promotion ceremonies, ensuring family members are present.

Families. As you learn about your Soldiers, include their families. Deliberately plan unit events where families are welcome. Be creative and go beyond unit organizational days. You will find families need to be reset just as deliberately as your Soldiers and equipment. Give your family readiness group an active voice in unit planning and recognize their volunteer services often.

Align the unit calendar with the local school districts to make sure Soldiers attend parent-teacher conferences and block leave periods match school breaks. Make a big deal out of births, birthdays and anniversaries. If a Soldier or family member goes into the hospital, you want to know about it. When appropriate, visit the hospital. It may take time to gain family members' trust, but their involvement distinguishes a great unit and will help greatly during the unit's next deployment.

Sponsorship and integration. Take a look at how Soldiers are sponsored and received into your unit. A simple welcome letter or informative website can go a long way toward making a new member and family feel welcome. A caring sponsor can ease the stress associated with a move.

Ensure the command team greets new Soldiers upon arrival. Spot check new arrivals to see if your sponsorship program is working. Sponsorship does not end at unit reception. Sponsors and supervisors can help new personnel integrate easily and avoid potential pitfalls, such as landlord or lease issues or shady car dealerships with high interest rates.

A monthly unit newcomer's brief enables common understanding on expectations, command focus/vision, standards and discipline, and unit history.

MSG Timothy Shapiro embraces his daughter, Lia Dante, during his homecoming at Fort Hood, Texas, May 4. Soldiers' families require attention during the reset period. Consider their needs when planning the unit's calendar. (Photo by SFC Kap Kim, U.S. Army)

Training management. The model training strategy during reset is to focus on individual training, such as physical training, marksmanship, medical training (combat lifesaver), relearning military occupational specialty specific skills after a nonstandard mission and Warrior Tasks and Drills. In addition, conduct driver's training as new personnel are integrated into your unit.

As unit administrative systems become operational, Army Regulation 350-1 Training and Leader Development requirements will be identified. Avoid classroom settings as much as possible. Train in a field location.

Develop a strong physical training program that builds unit cohesion and individual strength and endurance. Keep command emphasis on the special population programs to ensure Soldiers pass the Army Physical Fitness Test or meet height/weight standards. A simple competition among Army Physical Fitness Test failures with the entire unit cheering them on will improve performance dramatically.

Also, leaders must conduct required new equipment training. Once your assessment is complete and you have a tentative plan, publish quarterly training guidance. Initially, training management is onerous due to other more pressing challenges in reset, but if you persevere, proficiency will develop. Visit company-level training meetings regularly. Do not expect them to adhere perfectly to Training Circular 25-30 A Leader's Guide to Company Training Meetings. At first, simply assess information flow and training plan development.

Also, external agencies will line up and explain your unit is not a priority for training resources, such as small arms ranges because of your ARFORGEN phase. Do not take no for an answer. Ranges routinely become available. Take advantage of them. Train young, inexperienced staff on problem-solving and the Military Decision-Making Process. Use simple unit events to educate them on the process and how they support battle command. Do not wait for a major operation to train the Military Decision-Making Process. By emphasizing these areas, your unit will emerge from reset at higher level of training readiness as it enters the train/ready phase. Because of personnel

turbulence, collective training is not recommended, but may vary by unit.

Leader development. There are three recommended components of leader development in reset — professional military education (such as the NCO Education System), self-improvement and unit professional training. During reset, aggressively prepare and enroll Soldiers in the NCO Education System. Have an order of merit list ready, and ensure school alternates are prepared for the Warrior Leader Course and other NCO Education System schools. Supporting professional military education further reduces your already thin ranks, but it's important to support Soldier development and build the Army's "bench."

Soldiers have ample time for self improvement through the Basic Skills Education Program and college courses. Provide motivation and information on resources available. Create an environment that encourages Soldiers to improve themselves. A simple technique, such as providing incentives for those who enroll in self-improvement classes, goes a long way.

The final component of leader development is unit leader professional development events. Officer and NCO professional development and combined events that focus on warfighting skills set favorable conditions as unit readiness improves. Also, classes tailored to areas that need improvement (such as preventive maintenance checks and services or effective NCO evaluation report writing) are beneficial.

Finally, require leaders to read. A reading list may go beyond military topics as long as it supports your training plan. There will be gnashing of teeth, but leader reading discussions offer another opportunity to build teamwork and understand subordinates' method of thinking. With measures in place to control organizational risk and unit programs established to enhance unit readiness, now is the time to take Vince Lombardi's advice and "run for daylight."

In *Hot, Flat, and Crowded*, Thomas Friedman provides yet another perspective on a future of instability and persistent conflict. Friedman states, "The world has a problem: It is getting hot, flat and crowded. That is, global warming, the stunning rise of middle classes all over the world and rapid population growth have converged in a way that could make our planet dangerously unstable." As scholars and pundits debate the duration of this war and the spectrum of conflict that will follow, one thing is clear — the enduring need for combat-ready units.

Successfully navigating ARFORGEN reset and rebuilding readiness to provide combat ready forces is paramount. To do it right, you must go beyond a simple reset checklist. To avoid failure, organizational risk must be identified and mitigated, and Soldiers and families must be reset just as deliberately as our equipment. As leaders, we are responsible for ensuring our unit is trained and ready. Go into ARFORGEN reset with eyes wide open, assess organizational risk and implement a plan tailored to your unit.

All will agree that ARFORGEN is more effective than the old system of tiered readiness as our Army astonishingly resources two combat theaters, supports homeland security, implements Base Closure and Realignment Commission decisions, continues modularity and grows force structure. Of course, that provides little comfort when you lose half a dozen trained squad leaders to Army Recruiting Command or a talented first sergeant to be deputy commandant at an Army Training and Doctrine Command school.

By 2011, ARFORGEN will be based on a six-year cycle to build readiness and meet operational requirements. Even as our Army becomes more proficient with ARFORGEN, leaders must continue to identify and mitigate organizational risk inherent in reset. ARFORGEN will work only through aggressive, caring leaders actively rebuilding their units. ▪

Lieutenant Colonel Michael T. Morrissey, air defense artillery is the commander of 5th Battalion, 5th Air Defense Artillery, 31st Air Defense Artillery Brigade, Fort Lewis, Wash. He served as a congressional appropriations liaison, Washington D.C.; a congressional fellow on the staff of a U.S. Senator, Washington D.C; executive officer for Task Force 1-18 Infantry, 1st Infantry Division in Tikrit, Iraq; and deputy G3, 1st Infantry Division, in support of Operation Iraqi Freedom II. He also served as chief of plans, 1st Infantry Division, initially for Operation Joint Guardian, Kosovo Force then Army Force-Turkey as part of Operation Iraqi Freedom I; and Battery Commander of A Battery, 4th Battalion, 3rd Air Defense Artillery, 1st Infantry Division, Kitzingen, Germany, in support of Operation Joint Endeavor/Joint Guard, Stabilization Force.

Photo contest deadline extended

The deadline for the 2009 *Fires* photo contest has been extended from Aug. 1 to Dec. 1.

The purpose of this annual contest is to obtain high-quality photos capturing field and air defense artillery units and personnel conducting training or engaged in full-spectrum operations.

Photos should capture images that tell the story of today's Army/Marine field artilleryman or air defenders in the War on Terrorism or in training between June 2008 and June 2009. The competition is open to any military or civilian, amateur or professional photographer. Although entrants may submit horizontal or vertical photographs, vertical shots tend to work best for magazine covers and posters.

A first place prize of $500, second place prize of $200 and third place prize of $75 will be awarded in each of two categories: (1) Training for combat/stability operations and (2) actual combat/stability operations.

Each entrant can submit up to three photographs. Each photo must be a color jpg or tif image with a minimum of four mega pixels in its original file size. Any image with its resolution enhanced to meet contest requirements will be disqualified. Images cannot be manipulated other than the industry standard for darkroom processing, such as dodge, burn, crop, etc.

Images must have identifying and caption information, including the photographer's name, unit/affiliation, email address, mailing address and phone number. Caption information must include who is doing what, where and when (date) in the photograph. Be sure to identify the personnel/unit being photographed — for example, SGT Joe B. Smith, C/2-20 Fires, 4th Fires Brigade, Fort Hood, Texas. Photos cannot be copyrighted or owned by an agency/publication; the image must be cleared for release and publishable in the magazine.

Email images to *Fires* at firesbulletin@conus.army.mil. Submit only one image per email. Mark the subject line as "2009 Photo Contest/Photo #1 [2 or 3], Entry Category – Your Last Name." Complete contest rules and additional submission methods are available online at **sill-www.army.mil/firesbulletin/contest.asp**. If you have questions, please call the *Fires* staff at DSN 639-5121/6806 or commercial at (580) 442-5121/6806. ▪

Objective Reality:
the Fires Center of Excellence is now

By 1SG Gary A. Lievense and
CPT Daniel G. Campbell Sr.

"A few years ago, I was in a doctor's office dealing with a foot problem, probably aggravated by my constant desire to run. After running a few tests, the doctor sat me down, rattled off ten or so different exercises and handed me a profile. He spoke very quickly. Knowing what I know about communication, I realized there was no way I was going to remember what he said, much less understand it or do it. He assumed once he had made the correct diagnosis and told me what to do, his job was done. He had checked the box on his to-do list, so it was time for the next patient."

1SG Gary Lievense.

Being able to just "check the box" on our to-do list has not been a luxury for our unit, B Battery, 2nd Battalion, 5th Field Artillery (Paladin), Fort Sill, Okla. For the past year-and-a half, we have been involved in a myriad of training endeavors and operational requirements. For example, we had four radar sections consisting of 33 Soldiers, NCOs and officers deployed throughout Iraq in support of Operation Iraqi Freedom VII-VIII. All 33 Soldiers safely redeployed this year.

The battery also fired on a weekly, rotational basis throughout summer 2008 for our two sister batteries that simultaneously trained as target acquisition batteries before deploying. We provided a Paladin platoon in June 2008, to travel to Fort Polk, La., to fire in support of the 509th Infantry Battalion. The battery deployed to Fort Knox, Ky., in July 2008, to support the mounted maneuver training for more than 1,400 U.S. Military Academy West Point and Reserve Officer Training Corps Cadets.

We conducted a 30-day rotation in March, in support of Operation Foal Eagle in the Republic of Korea, where we deployed as an integral part of Task Force Hawkins II, serving alongside the 1st Battalion, 64th Armor Regiment, from Fort Stewart, Ga. Currently, the battery is engaged in a field artillery support mission role with the 428th Field Artillery Brigade, providing fires with one platoon, while simultaneously preparing 130 Soldiers to deploy to Iraq as part of a target acquisition battery with

A three-step plan allowed B Battery, 2nd Battalion, 5th Field Artillery (Paladin), Fort Sill, Okla., to reestablish their core competencies and ability to support maneuver units. Pictured is an M109A6 Paladin howitzer from B Battery, 1st Battalion, 82nd Field Artillery Regiment, at Camp Taji, Iraq, Sept. 2, 2007. (Photo by SSG Jon Cupp, U.S. Army)

15 radar sections. All in all, the battery has fired more than 7,000 rounds safely in the past 15 months.

But, this past 15 months has not been without its challenges or setbacks. In this era of nonstandard and in-lieu-of missions, there is great emphasis placed on core competencies — especially in a Paladin unit where, in the course of three years, Soldiers trained for everything from serving as palletized-load system drivers to being radar operators.

"Getting back to our roots" as field artillerymen and reacquainting ourselves with core competencies required the engagement of our leaders at all levels. We devised a systematic plan to retrain and recertify, and our approach included three well thought out phases. First, we trained our leaders, including all officers and NCOs; then we trained our Soldiers; and lastly we trained, certified and qualified the entire unit to standard on Paladin Tables I-VIII.

The plan. The plan's first phase required the selecting key leaders for training, who, in turn, would enhance and improve training down to the section and individual level. In our Paladin platoon, this initial train-up incorporated the platoon leader, the fire direction officer, the fire direction NCO, the platoon sergeant, gunnery sergeant and the rest of the remaining NCOs.

To accomplish this, the platoon leader, the fire direction officer and the fire direction NCO were scheduled to attend the battalion's "Fire Direction Academy" mentored by the battalion fire direction officer and NCO. This training focused on operation of the Advanced Field Artillery Tactical Data System, manual gunnery, fire direction safety, establishing communications (voice and digital), dry-fire verification and developing movement orders. The platoon sergeants and gunnery sergeants were scheduled to attend the Field Artillery Master Gunner Course. The remaining NCOs were slotted for the Warrior Leader Course, Advanced Leadership Course and the Senior Leadership Course, as appropriate.

The plan's second phase was conducted after key officers and NCOs were trained. Using the training they received, along with a battalion certification program drafted by the battalion master gunner, and with oversight and guidance from the battalion

command sergeant major, these leaders began to train each Soldier on necessary skills.

For example, the battery devoted numerous hours for the section chief to work with his Soldiers on artillery proficiency training. The section chief, gunner and ammunition team chief had to meet the standards of a written certification test and to pass a hands-on gunner's test that included 16 individual tasks. The written certification test was proctored by the battalion master gunner. Individuals who did not pass the test were retrained by the section chief with guidance from the platoon sergeant and gunnery sergeant. The same was true for any Soldier who did not pass the gunner's test.

The plan's last phase required the section to train, to certify and, ultimately, to qualify on Paladin Tables I-VIII. Validation of the battalion's certification program also was required. The battalion master gunner certified each platoon sergeant, who then helped certify the sections from opposite platoons. The sections tested on each of the required tasks and retrained as needed. The entire process allowed the individual, section and leader to build confidence in their abilities and core competencies as field artillerymen. Individual and section confidence also increased with their ability to complete Paladin Table VIII successfully and safely.

Outside influences. During the initial planning period, there were numerous outside influences that could have derailed our plan of attack. The most dynamic event that affected the battery was the personnel changeover of every section chief and platoon sergeant and a new first sergeant — all within a two-month period. So, clear guidance and a focus on training for the battery was critical to accomplish all of the missions. Time is a fleeting resource and it's one you can never get back. That makes vision and leadership extremely important to a battery with multiple missions.

Great leadership at the section and platoon levels enabled B Battery to certify and qualify six gun sections within 36 hours, due to the support from the battalion master gunner and the S3. This happened after numerous weeks of training in the field. The battery subsequently retrained, certified and qualified a four-gun platoon in a five-week period, after the Soldiers, NCOs and officers returned from Iraq, using lessons learned from the previous certification process.

Completing this multitude of operational requirements would have failed without core-competency-based training for our leaders and Soldiers. This, along with the precision planning that was refined at every level, made it easier to make slight modifications without sacrificing standards. Using after-action reviews for every training event, even at the lowest level, helped ensure the next phase of training could be completed in the required time frame.

The result was the battery certifying a total of 10 gun sections, four fire direction centers and eight palletized-load system crews to support its field artillery missions. In addition, the battery's focused training, certifying and qualifying officers, NCOs and Soldiers, enables us to stand-up a target acquisition battery headquarters, three target production cell sections and 15 radar sections.

The battery's success in accomplishing all of its missions is well worth the pain, frustrations and minor set-backs we experienced and is a direct reflection of the outstanding Soldiers, NCOs and officers assigned to it. In a time when a lot of people are questioning the core competencies of our artillerymen, this battery is living proof that, after a short train up, we can support our maneuver brothers accurately and effectively. The core competencies that are instilled during institutional training do not go away while deployed; they just need the "cobwebs dusted off." In most Army careers, it's not often you get to see the results of well-made plans or training, and for artillerymen we seldom see the results of our profession, but knowing that this Battery can support any mission it receives, whether we see the results or not, justifies why we choose to serve in the field artillery, *The King of Battle*. ▪

The reset plan's last phase required the section to train, to certify and, ultimately, to qualify on Paladin Tables I-VIII, which built confidence in their abilities and core competencies as field artillerymen. Pictured is a M109A6 Paladin howitzer from B Battery, 3rd Battalion, 82nd Field Artillery Regiment, 2nd Brigade Combat Team, 1st Cavalry Division, at Forward Operating Base, Kirkuk, Iraq, Feb. 13. (Photo by PVT Justin Naylor, U.S. Army)

First Sergeant Gary A. Lievense, field artillery, the first sergeant for B Battery, 2nd Battalion, 5th Field Artillery (Paladin), Fort Sill, Okla. Previously, he served as the first sergeant for Headquarters and Headquarters Battery, the battalion S2 NCO, and as battalion master gunner, all at 1st Battalion, 14th Field Artillery, Fort Sill.

Captain Daniel G. Campbell Sr., field artillery, is the commander for B Battery, 2nd Battalion, 5th Field Artillery (Paladin), Fort Sill, Okla. Previously, he served as fires and effects advisor for Military Transition Team 0800 in Forward Operating Base E, ad Diwaniyah, Iraq, as the detachment executive officer for U.S. Army Field Artillery Training Center, Fort Sill. He also served as the battalion S3 and S1 for 1st Battalion, 78th Field Artillery, Fort Sill.

Little Room for Mistakes: developing junior NCOs

By 1SG Robert L. Kincheloe, II

There are as many recipes for success as there are successful people. However, can success be defined by the mere absence of failure? This might be the case for some people, but not for a senior NCO. To prepare junior NCOs to take the mantel of senior NCO, they must be prepared professionally and mentally.

Some might say adequate professional training is sufficient. However, superior professional training is necessary, because there is little room for mistakes when Soldiers rise into the senior ranks. Mentally preparing them is more difficult and time consuming. Without the professional guidance of a well-rounded senior NCO, their military careers could come to an end.

Empowering NCOs. Preparing a junior NCO professionally is not as hard as one would think. Most junior NCOs already have the basic foundation to prepare themselves for advancement into senior ranks. As benefactors, it now becomes the duty of the sergeant first class or first sergeant to further the development by fostering growth and refining the junior NCOs' knowledge. When a Soldier becomes a senior NCO, the answer "I didn't know" is no longer acceptable; this is where the preparations begin. The junior NCO must learn how to use and gather information before he makes any decision that could affect his career or his Soldiers' lives.

Part of the process. Junior NCOs must learn the processes as they advance through the ranks — not have to learn it after they become a senior NCO. Using the weight-control program as an example, I have noticed throughout my career most staff sergeants do not know how to place a Soldier into the program properly. The task is fairly simple, but it takes time. Because this program falls on the first sergeant's shoulders, he usually handles most of the paperwork himself or allows one of his trusted senior NCOs to help.

Although this ensures the paperwork is correct, it fails our juniors NCOs by not making them a part of this process. For example, junior NCOs need to know that the program disallows a medical condition as the cause of a Soldier's problematic weight gain. Mentoring and teaching the junior NCO about the program and how to fill out the paperwork properly ensure he can function in this capacity when it becomes his responsibility.

Greater responsibility. Teaching administrative procedures is another aspect of preparing a junior NCO for the responsibilities of senior ranks. We know the paperwork portion of our jobs has increased greatly. We attend more meetings, plan training on a larger scale and track monthly performance and promotion counseling at a level four times greater than we did as junior NCOs. The senior NCO must ensure his junior NCO is competent and capable to handle this less-appealing aspect of the senior NCO's duties. One way to learn if the NCO can handle this level of leadership is simply by putting him into the situations and seeing how he retains, filters and passes on the pertinent information.

Mentally preparing NCOs. Mentally preparing a junior NCO to become a senior NCO is often much more difficult. There is a role shift to which he must acclimate. As a squad leader, the junior NCO maintains a level of close contact with his Soldiers that makes them, essentially, brothers. As junior NCOs, they exercise more direct control over their squads, allowing them to succeed. As they become senior NCOs, they lose that bond and direct control because they must worry about more than just one small section.

As they become senior NCOs, they have to learn how to pass the torch and mentor the new generation of junior NCOs as they once were mentored and taught. They must hold their squad leaders accountable for their squads' training and actions, instead of the squad members. Remember a senior NCO's job is to guide the junior NCOs down the correct paths. Senior NCOs must prepare junior NCOs for the difficulties of relinquishing these responsibilities.

Another part of mental preparation is failure. Junior NCOs must know that, no matter how hard they train, some squads eventually will fail. This may be something new to NCOs who have experienced only success. Their actions to correct these failures will define them for the remainder of their time in their platoons and, quite possibly, the rest of their military careers. Junior NCOs also don't have the luxury of making hasty decisions to fix problems. Instead, they must spend more time identifying what caused the failure and then deciding how to avoid repeating it.

Preparing our junior NCOs to make the tough, unpopular decisions now will save them a lot of heartache and subsequent problems when they become senior NCOs. Making the tough decisions or "being the bad guy" is something every senior NCO does at least once in his career. This ranges from recommending denial for leave to working late on a Friday to ensure the mission is completed. Once the junior NCO accepts this as a fact, he is much closer to being prepared mentally for the ranks of the senior NCO.

The formula for preparing a junior NCO to become a senior NCO is nothing that can be written in a book or an article because every NCO is different. What works for one NCO may not work for another. It's important to experiment and remember to take lessons learned (both the good and the bad) from NCOs at every level, incorporating them into a leadership style that is uniquely your own.

When I was asked to write this article, my intent was not to produce a recipe, but to add my small part to this "stone soup" that hopefully will produce a ripple of dialogue that ensures every new senior NCO has a chance to add his own ingredient to his success.▪

First Sergeant Robert L. Kincheloe, II, air defense artillery, is the first sergeant of D Battery, 3rd Battalion, 2nd Air Defense Artillery, 31st ADA Brigade, Fort Sill, Okla. He served as the S3 NCO-in-charge for 6th Air Defense Artillery Brigade, Fort Bliss, Texas; first sergeant for C Battery, 3rd Battalion, 6th Air Defense Artillery, Fort Bliss, Texas; battery academics chief for B Battery, 3rd Battalion, 6th Air Defense Artillery, Fort Bliss. He also served as field training exercise NCO-in-charge for 6th Brigade, Fort Bliss, Texas; Army recruiter for the Cleveland Battalion, Ohio; and platoon sergeant for 1st Battalion, 44th Air Defense Artillery, Fort Hood, Texas.

Soldiers of 1st Battalion, 82nd Field Artillery Regiment, 3rd Brigade Combat Team, 82nd Airborne Division, provide security during a joint patrol with Iraqi police near Coalition Outpost Cashe South in Baghdad, Iraq, June 13. (Photo by SSG James Selesnick, U.S. Army)

Developing artillerymen in Operation Iraqi Freedom

By Captains David E. FitzPatrick and Kevin E. Morgan

The field artillery has a unique challenge in the War on Terrorism; it must maintain core competencies and perform missions outside of its traditional role. Artillerymen integrate and deliver cannon, rocket and missile fires, and manage fire support, information operations and numerous other nonlethal functions to enable joint and maneuver commanders to dominate their areas of operations.

Unique advantages. Field artillery officers have unique advantages over other branches. All artillery officers are trained during their basic course to be fire support officers, fire direction officers, platoon leaders and executive officers. The field artillery basic course traditionally is known as one of the most challenging courses within the combat community. This level of difficulty ensures the artillery branch continuously has high-quality officers.

Additionally, the Field Artillery Captain's Career Course prepares captains to assume positions as battalion fire support officers, battery commanders and leaders who can perform in full-spectrum operations successfully. Traditionally, these officers are very adaptive and agile, and able to perform a variety of different missions in Operations Enduring Freedom and Iraqi Freedom.

Training benefits. The key benefit of artillery training for officers is their understanding of maneuver elements. This knowledge is essential when these officers move from supporting maneuver forces to becoming a maneuver force. Artillery units conduct full-spectrum operations in two theaters of war, fighting a counterinsurgency with lethal and nonlethal effects.

Some of the pressing challenges include executing offensive and defensive operations and conducting stability operations with combat multipliers, such as psychological operations, electronic warfare, civil military operations and leader engagements. Fire supporters perform these tasks effectively and efficiently because they are predisposed to integrating all available assets to accomplish the mission due to their artillery training to integrate effects.

Adaptability. When field artillery units receive several changes to their primary mission from delivering fires to completing in-lieu-of missions, leaders have to adapt quickly to a variety of new, yet familiar operations. In addition to counterinsurgency operations, artillery units act as a security forces to aid Iraqi security forces and protect critical sites, convoys and designated personnel. Military police units, that traditionally conduct security force missions, continue to be stretched thin by Operations Enduring Freedom and Iraqi Freedom, and many artillery units are tasked to fill the missions the MPs cannot.

Fire supporters' experience with integrating effects has eased the transition to security force missions. These Soldiers integrate all fires to support a commander's scheme of maneuver. This knowledge gives artillerymen a distinct advantage because they train and fight with other combat arms branches, learning their tactics, techniques and procedures.

Understanding maneuver. When artillerymen with maneuver mission experience progress in the Army and find themselves in more traditional fire support roles, they can rely on their own experiences to support maneuver commanders better.

For example, precision-guided munitions like the Excalibur and the Guided Multiple-Launch Rocket System give maneuver commanders greater flexibility to engage the enemy and mitigate collateral damage. While these munitions offer a tremendous capability, integrating them into operations can be difficult. This is not because they are hard to use, but because many do not understand how to use them. Fire supporters with actual maneuver experience can integrate and train their units on these munitions accurately from a new, critical point of view — that of a maneuver commander.

Flexibility. Artillerymen train to operate at the company level and echelons above corps and bring their expertise to bear at any level. The independent nature of current artillery missions requires agile and adaptable commanders and leaders. They must operate with little guidance on a day-to-day basis. This skill, coupled with the ability to work with limited resources, gives artillery units greater flexibility when manned nontraditionally and assigned traditional artillery missions.

Traditional radar personnel — Military Occupational Specialties 131A Field Artillery Targeting Technician, 13R Field Artillery Firefinder Radar Operators and 94M Radar Repairers — are not manning the vast majority of radar missions. These are now being

manned by 13A Field Artillery Officers, Military Occupational Specialties 13B Cannon Crew Members, 13M Multiple Launch Rocket System Crewmembers, 13D Field Artillery Tactical Data Systems (FATDS) Specialists and 13P Multiple-Launch Rocket System Automated Data Systems Specialists. These Soldiers quickly and efficiently acquire the necessary training to be expert operators and leaders, and they bring new perspectives from their previous experiences solutions to the day-to-day issues associated with continuously operating radars in austere environments. Their technical savvy allows them to dominate new digital challenges and to provide critical tactical information for the maneuver commander and his staff.

Even roles that are filled by traditional personnel require artillerymen to operate at levels well above their peers. Like radar teams deployed in theater, cannon batteries are detached down to the section level to provide counterfire and fire support for various forward operating bases. The platoon leaders of these units must operate with little or no supervision and integrate themselves directly into a battalion or brigade staff, providing critical planning and execution information that normally would be developed within a fires battalion staff.

Independent expertise. Rocket batteries that provide Guided Multiple-Launch Rocket System support in theater face similar challenges. In Iraq, all Guided Multiple-Launch Rocket Systems are assigned to Multi-National Corps-Iraq, but attached with operation control to various multinational divisions. Then they are split to operate independently as platoons.

The leaders of these units are experts in all aspects of Multiple-Launch Rocket System precision-guided munitions and can advise commanders on employment and air-space clearance from the battalion level to echelons above corps. The technical and tactical experience and knowledge needed to advise these leaders come from a background in ballistic theory expertise and the terminal effects of varied munitions. The artilleryman is well-suited to provide this guidance better than any other type of Soldier.

Military transition team experience — CPT FitzPatrick. My recent deployment with a military transition team forced me to adapt to a team-building environment focused on training and advising the Iraqi Army for fires and effects. The deployment taught several important lessons. Team-building is essential for success on a military transition team and

should be fostered after mission successes as well as mistakes.

Differences. Cultural understanding is a unitary aspect of training that enables U.S. forces to recognize differences, address issues and develop solutions for the Iraqi Army forces that are receptive to U.S. Army advice. The Iraqis consider family values extremely important in their day-to-day lives. Every soldier in our Iraqi battalion voluntarily enlisted to secure his country, tribe and extended family. Our Iraqi Army soldiers lived locally, regardless of their Army's needs because that is where their families lived.

Generational divide. We realized there is somewhat of a cultural divide between the seasoned veterans and the newer Iraqi Army officers. The experienced officers listened to our team, but did not embrace much of our advice. Conversely, the younger leaders were very willing to learn about U.S. Army training and tactics. Their eagerness illustrated stereotypes of a regime unwilling to adapt to modern times are not necessarily true. The younger Iraqi Army soldiers are enthusiastic to adapt to modern warfare and diplomacy — something we might not have seen if not for cultural understanding.

These younger soldiers, one day in the foreseeable future, will be assigned to staff positions with enormous responsibility. These future Iraqi Army leaders strongly agree with American principles and leadership styles — an openness likely influenced by our awareness of their culture.

Advising. My deployment also highlighted the difficulties and challenges of an advisor — a role that has not had much emphasis in training until the military transitions team's creation and development. In retrospect, my deployment as an advisor in a military transition team was invaluable. The job's unconventional nature gave me a unique skill set that can be implemented in any unit and directly relates to my daily interaction in my battalion.

Military transition teams are unique because of their emphasis on teaching and their ability to evaluate the needs of the growing Iraqi Army. I had to hone my artillery skills because I could be called upon at any time to request fire support. My team's primary task, though, was to instruct, advise and act as a liaison between Iraqi and coalition forces. Teaching required strong communication skills and an open mind because some ideas were more difficult to relay and less accepted in a Middle Eastern culture.

Logistics. The Iraqi Army's needs were noted. We were in constant contact with

both sides as we implemented standard U.S. Army training and addressed the Iraqi Army's immediate logistical and communications problems. Logistically, the Iraqi Army battalion had difficulty transporting soldiers to the battlefield because they regularly lacked the necessary parts to repair their vehicles for months at a time.

Our team had to encourage them to circumvent the ineffective acquisitions system by escorting them to the Iraqi maintenance facility that was several hours away. On the battlefield, it was apparent the Iraqis often needed essential uniforms and ammunition. Our military transition team actively addressed these issues by seeking out units in our area of operations that were willing to help. While scavenging for equipment, we found an Air Force unit that

An Iraqi soldier provides security while his fellow soldiers prepare to conduct a cordon and search of houses in their operational environment in areas of Baghdad, Iraq, June 15. (Photograph by SPC Joshua E. Powell, U.S. Army)

recently received new combat uniforms. This unit was preparing to destroy all of their old desert camouflage uniforms at a burn pit. Fortunately, we obtained these uniforms for our Iraqi battalion. This Air Force unit contacted us on a monthly basis before they destroyed any equipment and proved to be our most valuable resource during our deployment.

Multiple-Launch Rocket System battery experience — CPT Morgan. In June 2008, I deployed to Iraq as the battery commander for Detachment 2, 2nd Battalion, 4th Field Artillery (Multiple-Launch Rocket System), to join Task Force Terminator. This task force, which was recently renamed Task Force Leader, maintained the Guided Multiple-

Launch Rocket System and Army Tactical Missile System capabilities for Iraq. It included two batteries of two platoons with three M270A1 launchers each. These four platoons operated separately to maximize the range of the M31 Guided Multiple-Launch Rocket System. Up to that point, my professional experience had been cannon and maneuver based.

Unique perspective. In September 2003, I deployed as a platoon leader in 1st Battalion, 5th Field Artillery (Self-propelled M109A6), 1st Brigade Combat Team, 1st Infantry Division. During that year-long deployment, I gained experience as a Paladin platoon leader and fire direction officer. I conducted mounted infantry platoon operations, base-defense operations and the delivery of fires.

After redeployment, I assumed duties as a task force fire support officer for 1st Battalion, 34th Armor, and deployed to the Joint Readiness Training Center, Fort Polk, La., in September 2005. Before I took command of a Multiple-Rocket Launch System battery, I was a gunnery instructor for the Field Artillery Basic Officer Leaders Course.

My exposure to the Multiple-Rocket Launch System was gained through the schoolhouse. While I lacked certain knowledge regarding rocket battery operations, my experience with direct-support cannon systems and as a maneuver platoon leader gave me a unique perspective on Multiple-Rocket Launch System operations as our batteries and platoons became more maneuver centric.

A Guided Multiple-Launch Rocket System (Photo by SPC Rick Rzepka, U.S. Army)

Changes. Through the introduction of the Guided Multiple-Rocket Launch System into theater, Multiple-Rocket Launch System platoon operations centers transitioned from generally supporting corps missions to directly supporting every maneuver platoon and company operating within its range ring. Shot and splash reports suddenly were in the platoon operations center's Multiple-Launch Rocket System Automated Data Systems Specialists' vernacular.

Our platoons were concerned about the infantrymen in contact on the ground and collateral damage but not necessarily concerned with deep targets. The change in the end user of our munitions definitely altered our procedures within the platoon operations center. We focused on supporting maneuver units in the close fight.

Spreading the word. Maneuver education was a critical portion of our mission. Since the Guided Multiple-Launch Rocket System was relatively new to commanders, I spent a significant amount of time visiting units within my supported area, educating them about the capabilities of this new munitions and, more importantly, about the theater requirements for using it.

Pre-deployment training. For some units, the groundwork already had been laid before they arrived in theater. Specifically, 1st Stryker Brigade Combat Team, 25th Infantry Division, arrived with a great understanding of the capabilities and limitations of Guided Multiple-Launch Rocket Systems. 1st Stryker Brigade Combat Team came to theater without all of the preconceived notions about the Multiple-Launch Rocket System.

This was due, in large part, to CPT Joshua Aranda's work with this brigade during its pre-deployment training. Aranda, commander of C Battery, 2nd Battalion, 4th Field Artillery, is deployed with Task Force Leader. His ability to inform the maneuver commander and his staff on rocket-delivered precision-guided munitions reflected the training he received as an artillery officer.

Artillerymen no longer take out entire grid squares, because in the past accuracy did not matter. Now, a Redleg's accuracy allows him to destroy targets with surgical precision.

A solid understanding. Airspace clearance became a considerable factor in the use of the Guided Multiple-Launch Rocket System. Our rockets affected all civilian and military airspace from the launch point to the target. Having a solid understanding of ballistics, missile flight paths and airspace control measures allowed officers in Task Force Terminator to advise the control and reporting center (basically, the country-wide air-traffic controller) on the best methods for airspace deconfliction. Our work created less restrictive means to control aircraft along the gun-target line and maintained the highest levels of safety for aircraft and pilots.

Dual roles. These artillerymen filled the roles of both commander and fire supporter. Their expertise in C operations gave them the technical insight to integrate precision-guided munitions in a multifaceted and joint environment at every level. Moreover, their background and training in maneuver operations allowed them to understand the ground commander's point of view and facilitate the fast and efficient delivery of precision-guided munitions.

A critical element. While some may say artillery has lost its place on the battle field, the officers and events written about in this article prove that our munitions and skills are still relevant. The skills we learn as both fire supporters and maneuver leaders make artillerymen a critical element for mission success. The field artillery's ability to perform such a myriad of missions successfully is a true testament of the leaders, NCOs and Soldiers who are fighting today's wars. ▪

Captain David E. FitzPatrick is the commander of A Battery, 2nd Battalion, 4th Field Artillery Regiment. He served as the battalion intelligence officer with 2nd Battalion, 4th Field Artillery Regiment; a fires/effects advisor for a military transition team, deployed to Operation Iraqi Freedom. He served as an observer controller/trainer with the 2nd Simulation Exercise Group, 75th Brigade, also at Fort Sill, Okla.; and as a fire support officer, support platoon leader, and battery executive officer in the 4th Battalion, 11th Field Artillery Regiment, Fort Wainwright, Alaska.

Captain Kevin E. Morgan, field artillery, is the commander of B Battery, 2nd Battalion, 4th Field Artillery Regiment. He has also served as the commander of A Battery and Detachment 2, 2nd Battalion, 4th Field Artillery Regiment, and has deployed in support of Operation Iraqi Freedom. He also has served as a gunnery instructor for Field Artillery Basic Officer's Leadership Course III at Fort Sill; as the task force fires support officer; and as a platoon leader for 2nd Platoon, B Battery, 1st Battalion, 5th Field Artillery, both at Fort Riley, Kansas.

Stepping Stones:
building a strong command team

By CPT Liane J. Pedroso

As a second lieutenant and a graduate of the Air Defense Artillery Officer Basic Course in 2004, my first assignment was as a maintenance platoon leader. My first platoon sergeant was, in fact, an acting platoon sergeant. I was told I would get a permanent one later, but I didn't have time to worry about my temporary. I had two missions — run my platoon and prepare to certify on Table IV — the first step to becoming a successful tactical control officer.

I soon learned my success as a platoon leader and tactical control officer depended on my platoon sergeant's performance and leadership. I began to build the foundation that would form the leadership stepping stones to my current position. Slowly, I learned to balance my platoon business with my crew training and certification.

Command team. In March 2005, my unit conducted a battery change-of-command ceremony. Little did we know, our incoming commander was about to change our lives forever. His name was CPT Angel S. Candelario; he was prior service and proved to be no angel at all. He was very competitive and had high expectations for our battery. His first sergeant was 1SG Heather J. Smith, a fellow air defender (Patriot Enhanced Operator/Maintainer).

Together, they were an incredible team with the most intense desire to excel. We trained very hard and never slowed down. Through it all, our command team was there every minute, sweating in the El Paso, Texas, summer sun in "full battle rattle" with the rest of us. Everything they did was a joint effort in support of our overall combat readiness as a battery.

One team. During a battalion best crew competition and Table VIII Gunnery, we were undermanned so severely, our commander had to be on the electronic power plant crew, I was on the radar crew and a fellow lieutenant was on the antenna mast group crew. We dominated the competition and won Best Reconnaissance, Survey, Occupation and Preparation Team; Best Radar Crew; Best Antenna Mast Group Crew; Best Engagement Control Station Crew; and the Best Launcher Crew. During this exercise, I finally understood what made a battery so successful — the leaders' abilities to teach and motivate their Soldiers.

Relationships. I have seen various officer and NCO relationships during my five years of service. Some relationships were not the best; others were influenced greatly by the success of an outstanding leader. What most don't realize is, although the commander and first sergeant relationship has its limitations, the motivation and dedication to your Soldiers and the mission is limitless. This is not a relationship solely based on one principle; it is the culmination of respect, experience, training and — as I learned — people skills.

Learning process. In the few months I have been in command, those four principles seem to form the foundation that works best for me. But everyday, my unit, peers and higher chain of command continue to teach me something useful, bettering the unit and myself. I always have been told, "To get respect, you have to give respect," because there is commonly a large gap in years and experience between the two ranks that form a command team. And this is certainly a true statement between a first sergeant and a battery commander.

Basics. Respect is essential when combining years and experience to provide Soldier care, accomplish goals, meet and exceed standards and, most of all, ensure combat readiness. In the air defense artillery community, the commander could have a Patriot background and the first sergeant may be a Stinger/Avenger air defense background. But it is important to note, no matter what different backgrounds the command team has, at the end of the day, they are both air defenders who are brought together to form a combat-ready battery of mission-focused, competent, trained Soldiers.

Coming into my command. I was, and I still am, very nervous about the position. Luckily, a very intelligent, influential figure during my short time in 6th Battalion, 52nd Air Defense Artillery, LTC Robert L. Kelley, told me "no matter what you do, just be yourself." These powerful words have been more than useful during the short time I have been a battery commander.

I am younger than nearly half of my battery — officers, NCOs and enlisted Soldiers combined. I believe my people skills have allowed me to earn respect, communicate, listen and interact with my Soldiers and my first sergeant. And fortunately, mission focus and combat readiness do not have to rule out having fun. It never hurts to incorporate fun into the daily work routine. Soldiers stay motivated and realize that "my commander and first sergeant really are human."

As a commander, just being myself, I have learned how to use my experience as a platoon leader and battery executive officer to contribute to my command experience, forming a unique bond with my first sergeant and Soldiers. At times, it can be very hard to describe the relationship between a commander and first sergeant. But, once you are placed in the position, what you thought and imagined become a reality. Everything you were taught, all the lessons learned and the experiences you have lived become the foundation that forms a strong and competent command team. ▪

Captain Liane J. Pedroso, air defense artillery, is the commander of Headquarters and Headquarters Battery, 31st Air Defense Artillery. Previously, she served as a battle captain and assistant S3 for 6th Battalion, 52nd Air Defense Artillery, Fort Sill, Okla.; battle captain and assistant S3 for 2nd Battalion, 1st Air Defense Artillery, and an executive officer of B Battery, 2nd Battalion, 1st Air Defense Artillery, all at Camp Carroll, South Korea.

Fires AUTHOR'S GUIDE

Article subjects. *Fires* strives to be "forward-looking." We're at the dawn of a new Army transformation. Many exciting things are taking place in the field and air defense artillery fields of expertise. Article subjects should therefore be current and relevant. Writers may share "good ideas" and "lessons learned" with their fellow Soldiers, as exploring better ways of doing things remains a high emphasis with *Fires*.

If an article subject is significant and pertains to FA or ADA and its diverse activities, as a rule of thumb we'll consider it appropriate for publication. Article subjects include (but aren't limited to) technical developments, tactics, techniques and procedures; how-to pieces, practical exercises, training methods and historical perspectives (AR 25-30, Paragraph 2-3, b).

We are actively seeking lessons-learned articles which will enhance understanding of current field and air defense artillery operations. The magazine's heart is material dealing with doctrinal, technical or operational concepts. We especially solicit progressive, forward-thinking and challenging subject matter for publication. In addition to conceptual and doctrinal materials, we encourage manuscripts dealing with maintenance, training or operational techniques.

"Good ideas" or "lessons-learned" articles should have two closely related themes: one, what did you learn from what you did? The second theme is: what is most important for others to know, or what will you do differently in the future? Include only the pertinent information on how you did it so someone else can repeat what you did. Don't include a "blow-by-blow" of your whole deployment. The article's emphasis should be that your unit has a good idea or some lessons-learned to share.

Steps involved in submitting an article to *Fires* are outlined following.

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Getting started. Select a relevant topic of interest to the U.S. Army Field and Air Defense Artillery community. The topic must professionally develop members of these fields. Write an outline to organize your work. Put the bottom line up front and write clear, concise introduction and conclusion paragraphs. Follow the writing standard established in AR 25-50, Preparing and Managing Correspondence, Section IV (the Army writing style), and DA Pamphlet 600-67, Effective Writing for Army Leaders, especially Paragraphs 3-1 and 3-2.

The Army standard is writing you can understand in a single rapid reading and is generally free of errors in grammar, mechanics and usage. Also see *Fires'* style manual. Maintain the active voice as much as possible. Write "Congress cut the budget" rather than "the budget was cut by Congress." (DA PAM 600-67, Paragraph 3-2, b[1]). Write as if you were telling someone face-to-face about your subject: use conversational tone; "I," "you" and "we" personal pronouns; short sentences and short paragraphs. Articles should be double-spaced, typed, unpublished manuscript, between 3,000 and 3,500 (or less) but no more than 5,000 words, including endnotes as appropriate.

Authors should check their articles' contents with unit commanders or organization directors or S2s/G2s to ensure the articles have no classified or operations security information in them. Clearance requirements are outlined in Army Regulation 360-1, Chapter 5, Paragraph 5-3. Headquarters Department of the Army/Office of the Secretary of Defense clearance is required if your article meets any of the criteria listed there. Article clearance is further covered in Paragraph 6-6, with procedures on how to do so outlined in Paragraph 6-9. The bottom line on most article clearance is discussed in Paragraph 6-6. While you certainly may ask your local Public Affairs Office's advice, it is the "author's responsibility to ensure security is not compromised. Information

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Changing the culture of small unit organizations

By CPT Seth G. Hall and
1LT Sean D. Bilichka

Success can be defined in many different ways. In some cases, success is transitioning a "bad" unit to a "good" unit. In other cases, it can be defined as helping a "good" unit become a "great" unit. All commanders and first sergeants inherit unique circumstances and challenges that must be addressed as they assume leadership of their units. This article discusses the Army transformation experience, specifically, changing two batteries in a field artillery brigade at Fort Sill, Okla., into two batteries in a fires brigade at Fort Lewis, Wash.

The description of these two units is not an indictment of the Soldiers or their previous command teams. Instead, the following ideas have broader applications. A potential unintended consequence of lifecycle units is the loss of institutional knowledge of the day-to-day operating systems and collective attitude of a unit. These changes can be overcome by the unit's leaders, but it is easier on the unit if the changes are massaged gently, instead of being broken completely and rebuilt forcibly.

Our command team, the first sergeant, battery executive officer and commanding officer, believed that the battery's environment resulted from Soldiers' attitudes and actions. Therefore, to affect lasting change in our unit, we had to change the unit's environment, the attitude and expectations. We reasoned that once the proper environment was established, it naturally would follow that new Soldiers could be incorporated to the "way we do things here." Through policies, attitudes and actions, we carefully cultivated the environment we desired, believing that Soldiers' behaviors would follow.

Without formal knowledge of the theoretical background, we had implemented our plans for change using Schneider's Model (1987), which claims that the environment is a product of people and their behaviors. Therefore, by focusing on developing a healthy environment we could receive new Soldiers and socialize them to the environment that we were creating. Our goal was to foster an environment where leaders could come and go, but the organization would maintain its standard of excellence.

First impression. During my in-brief with my first battalion commander as a new lieutenant, he told me, "You're lucky. You're going to A battery, and their commander is the best in the battalion — one of the best in the brigade." His decision to rate his battery commanders to a brand new lieutenant was his prerogative, but in my mind, he was absolutely right. For my first four months in the battery, we were the best by every

SGT Samuel Ward of Headquarters and Headquarters Battery, 17th Fires Brigade, teaches a class on high crawling while SPC Korey Siltman demonstrates it at Fort Lewis, Wash.,Oct. 23, 2008. (Photo by SPC Lucas Swihart, U.S. Army)

tangible measure. Morale was high. Inspections went well. Gun sections always were competing among themselves for best firing times in the battalion. The maintenance crews kept our operational readiness rating several points above the battalion average and well above the Army standard.

Drastic demise. Then, the battery changed command. Three months after that, we changed first sergeants. In a period of six months, the battery went from the best in the battalion to the worst. Morale was terrible. The battery scraped by on inspections; guns crews and maintenance performance dropped off considerably. Despite the change of the commander, first sergeant and a few other Soldiers, the battery remained 95 percent the same. How could such a dramatic turn for the worse occur so quickly? The Soldiers hadn't physically changed, but their collective performances had changed.

Multiple factors contributed to this battery's drastic demise, including the natural adjustment phase that inevitably occurs when key leaders change, but this article focuses on previous commander's inability to build an organization that could survive his departure. He was such a dynamic leader that his personality and charisma overcame many of the battery's shortcomings. He was extremely successful while in command, but ultimately the battery suffered when he left.

Leadership void. Instead of trained subordinate leaders who shared the load during the new battery commander's adjustment, the platoon leaders and platoon sergeants did not understand deeply enough how to continue the tradition of excellence. A good commander's unit excels while he is in command. A great commander's unit continues to excel during that vulnerable period when a key dynamic key leader leaves and a new leader emerges.

Establishing a baseline. In addition to complying with Army Regulation 600-20 Army Command Policy, a command climate survey allows an incoming commander to dig deeply and search for any underlying issues in the battery that, if not addressed, could prevent progress. For example, during my change of command inventories, I did my best to get to know the Soldiers and the prevailing issues the battery faced. This battery deployed twice in three years and, though battle hardened, was tired. Initially, no major issues came to the surface, but there was an underlying tension the command team could not pinpoint.

New course. Approximately three weeks into command, we conducted a command climate survey, and a racial divide was evident. We immediately conducted an equal opportunity sensing session and learned there were unit members who were engaging in racist speech and actions. The perception was the chain of command knew about the behavior and chose not to act. It was no wonder the culture of the organization needed changing. If Soldiers do not know their leaders will take care of them in all situations, they cannot be expected to have positive attitudes and good work ethics.

We removed cancerous actions and speech from the unit through the equal opportunity process. But beyond simply righting a wrong, these actions galvanized the remaining Soldiers, who were the broad majority of the battery. These actions also signaled the command team had begun a new course and communicated to the Soldiers no one was above the standard — even hard working, popular NCOs. The Soldiers needed to know without a doubt all equal opportunity measures would be enforced. Knowing the unit's direction allowed the leadership to move forward purposefully and begin to make appropriate changes.

Inspections. The command maintenance evaluation team is a Fort Lewis specific inspection team that provides commanders an independent evaluation of important unit functions. Every post has

or should have a similar organization. From day one, we worked with the evaluation team to ensure we not only met Fort Lewis' standards, but we eventually would exceed them. Some commanders may shy away from inspections, but it is important to know these organizations exist to make your unit functional. It is up to you to use them to the best of your ability and for the unit's benefit.

When the unit arrived at Fort Lewis, our facilities didn't have a pre-existing arms' room. To get us to the point where our arms were stored properly and within Army regulations, we had at least three courtesy visits from the team. A fault-by-fault, detailed listing of what needed to be fixed was given to the unit level commander.

From this point, we worked point-by-point through the list with the armorer. We had a weekly brief on where we stood with the inspections. Some problems simply required a memo to fix. Other problems were more complex and required us to order parts or tools. By prioritizing this list, we gave ourselves plenty of time to prepare for a real inspection.

Commanders shouldn't be afraid of staff-assisted visits and other inspections. It is an independent evaluation of your unit's readiness in a particular area. While it may cause you some heartburn with your boss in the short term, you can measure progress in the long term and be confident your equipment is being maintained, inventoried and stored properly.

Realistic progress. Every leader has heard the old cliché, "Soldiers don't care how much you know until they know how much you care." This statement is especially true when a leader is attempting to rebuild his unit. If NCOs and Soldiers perceive a "there's a new sheriff in town" attitude they may be resistant to change — even if they acknowledge the unit needs a major overhaul.

To guard against this, leaders must develop a genuine rapport with their Soldiers. In this book *Undaunted Courage,* Steven Ambrose wrote that CPT Meriwether Lewis "… knew his family. He was the head of his family." An important part of being the head of a military unit is knowing how to motivate Soldiers on an individual level.

This is especially true in a headquarters element where military occupational specialties vary from 13F Fire Supporters to 71L Administrative Specialists and everything in between. Commanders have the power to punish and reward. The science of command lies in knowing how to do each correctly. The art of command — really knowing your "family" — includes knowing when to use the proverbial carrot or stick.

For example, if "Soldier A" and "Soldier B" committed the same serious infraction, a commander may be tempted to give the same high-volume explanation of why the behavior will not be tolerated to each Soldier. A commander who knows his or her "family" understands "Soldier A" will respond to that high-volume explanation and correct his or her actions. On the other hand, "Soldier B" needs only a quiet correction to change the behavior.

Expectation management. When changing a unit's organizational culture, leaders must attack expectations from two fronts. The first front directly relates to you and the way you are perceived by your superiors. Nothing is more discouraging to a unit than watching Soldiers pour their blood, sweat and tears into a project only to have a battalion or brigade commander or command sergeant major tell them they've fallen short when they perceived they had succeeded.

This lesson was evident after moving posts, fielding a new weapon system and live-firing all in less than three months. We watched a battalion's collective ego deflate after the brigade commander told all of the chiefs the live-fire shoot was done using fake or "canned" data. Although he was probably technically correct, it angered the unit, launcher chiefs and, especially, the fire direction control NCOs.

All of Soldiers' pride and good feelings that developed during the shoot were erased in two words — canned shoot.

The unit leaders potentially could have avoided this disappointing comment by simply "prepping the objective" with the commander. If the subordinate unit leaders set the stage of the shoot as a unit that deployed twice to Iraq in three years, moved posts, fielded a new weapon system and live-fired three months later, the shoot may have been considered a homerun. Since expectations were not managed properly, an event that should have been celebrated as an important step in an ongoing process, instead, was perceived as a negative.

For example, your boss thinks you are operating at 60 percent efficiency after six months in command. Then, two months later, he sees you actually operating at a 70 percent efficiency rating; he won't be too impressed. It is your duty as a leader to articulate accurately where you are, for example, 45 percent versus 60 percent, to celebrate your progress — instead of being lamented. Be honest with your superiors.

SGT Christopher Trimmer, 2LT Theodore Dilla and SGT Steven Bragg, all of the 17th Fires Brigade, road march to a training area at Fort Lewis, Wash.,Oct. 23, 2008. (Photo by SPC Lucas Swihart, U.S. Army)

Things will surface eventually as to the true status of your unit. Openness about your strengths and weaknesses only works in your favor.

The second front where expectation management must be addressed is at the operator-level. During the early rebuilding phases of the two batteries, the phrase "It's not your fault right now, but in six months it will be," must have been said 100 times. Soldiers who are asked to solve systemic problems in their sections need several things to be successful. First, they need to know their leader understands the extent of the problem, and usually, it is not the Soldier's fault. By simply acknowledging there were major issues within a section and asking a Soldier be the primary catalyst for the solution, a leader empowers his Soldiers and unleashes a power that's existed since the Army of the Potomac — the Soldier's ability to improvise, problem solve and adapt.

"Genius knows no rank," was a phrase my brigade commander often used. While changing the units' organizational cultures, we followed the brigade commander's quote, "We placed the right people in the right spots, resourced them and let them solve problems." It worked far better than if the commander, first sergeant and executive officer developed all of the plans and forced Soldiers to execute them.

Making performers. As GEN (Retired) Colin Powell said, "Perpetual optimism is a force multiplier." Early during the rebuilding phase of my second battery command, I was speaking to a friend of mine who had just been assigned to the 1st Special Forces Group at Fort Lewis. We were talking about our units and Soldiers. I made a comment to him that it must be easier working with Soldiers who had volunteered for Special Forces duty and had been mentally and physically strong enough to be selected for that prestigious assignment.

He praised his Soldiers and their extremely demanding accomplishments, but then said something I found compelling, "It's just like a conventional Army unit; I have studs, middle of the road guys and substandard performers. Our charge as leaders is to make performers out of who you're given." Ordinary leaders can lead great men extraordinarily, but it takes a great leader to lead ordinary men extraordinarily. The mark of true leaders is taking center-of-mass-Soldiers — incidentally these are the Soldiers who make up the majority of the ranks — and getting them to perform at higher levels.

As a unit that was generating, we were receiving personnel from the Army at large. Most of them were straight out of Advanced Individual Training. Some Soldiers were discipline problems that other units didn't want. A few others were just Soldiers who never had enough attention from their leadership to develop them.

We tried to evaluate the Soldiers quickly and deal with each of them individually. Some were chaptered out of the Army. Most of the underperforming Soldiers were placed under the supervision of one of our several stellar NCOs and mentored to become better Soldiers. This all occurred with an end state in mind. We avoided creating "stud" platoons and "dud" platoons. Soldiers were assigned where we thought they would receive the best level of mentorship in accordance with their needs.

Celebrate the baby steps. There is no "one size fits all" timeline for changing the organizational culture of a unit. Some units that just need small changes may begin to show progress in a matter of months. Other units, where a complete paradigm shift is required, may take a year or more for true change to take hold. Either timeline is tolerable. As long as the unit is making progress, you are on the right path.

Remember, progress seldom comes in quantum leaps; typically, it comes in the form of "baby steps." That is why it is so important to establish a true baseline of the unit's systems. It will be easier to measure even the smallest amount of progress if you are accurate with your assessment.

In addition to painting an accurate picture of your unit's readiness to your boss, it also allows you to celebrate the baby steps. For example, my battery restarted completely when we moved from Fort Sill to Fort Lewis. Not only were we stationed at a new post, but we went from 126 Soldiers to 27.

For a more specific example, refer to the previously mentioned arms' room problems. We left an arms' room at Fort Sill that passed all inspections with flying colors. Now, we had no school-trained

armorer or certified storage room. At first, it was a tough process to get everything on track, but my first sergeant, executive officer and I began with the end state in mind. The end state was a fully functioning arms' room that met all security requirements, performed all maintenance and passed all inspections with a 100 percent success rate.

It was no small task. Two weeks after our arms' room was certified to store weapons, we established a baseline. The command maintenance evaluation team failed us with a 72 percent on our first courtesy inspection. We weren't surprised, upset or discouraged. With regard to unit transformation, failure is never desired but if you begin with the end state in mind and approach each event as a process to reach the end goal — it allows you to celebrate the small successes. In this case, that was the highest score for an arms' room in our battalion to date and the highest score any section had received from the courtesy inspection team.

We publicly celebrated the baby step by praising the armorer in formation and issuing a challenge to the other sections to beat that score. But we did not rest on that score. Two months later, the courtesy inspection team came again. This time, the armorer scored an 88 percent. A month later, the score was 100 percent. The nuclear, biologic, and chemical room rose to the challenge and scored a 99 percent on its inspection. The supply room did not want to be the weak link in the chain and followed through with a 98 percent.

On the right track. Very intentionally in the beginning of my command, the first sergeant and I used specific phrases when addressing our Soldiers. This was done to gauge when our messages were starting to sink into our Soldiers and when they were adopting our vision for the battery as their own. We knew adopting our language was a sign that the Soldiers were listening to our messages. My first sergeant returned every salute and every greeting of the day with "hooah, kill, death from above!" Soldiers ate it up. Medics, fuelers, clerks and guys who would never dream of Air Assault School were using Top's phrase to each other. They were listening.

Eternal optimism. This technique was effective only because we had applied the following principles. We knew our Soldiers. No one was above the "threat." We practiced eternal optimism, and we constantly were building them up. Without those foundations, the Soldiers would not have been receptive to our messages, especially mine. But because they knew us and knew we cared for each of them, their families and careers, they received the harsh language. They were listening.

Striving to be the best. Back to the example of the competition to be the best among our arms' room; nuclear, biological and chemical room; and supply room, it was only a matter of time before every section in the battery strived to be the best in all areas. The Army Physical Fitness Test, weapons qualification, internal and external inspections — anything to which an objective could be applied — soon became an opportunity to display a section's skill and proficiency.

The motivation no longer came from the first sergeant and commander; it came from every Soldier, striving to be the best and refusing to be the worst. It wasn't because he had been sat down and formally told to excel, but because the unit's organizational culture encouraged healthy competition, rewarded winning and did not tolerate losing. Mary Parker Follet, a leading 20th century writer on leadership, espouses the idea that rather than an individual leading an organization, the, "invisible leader" is the task or mission that organization is charged to accomplish. She believes that if everyone in the organization works for the "invisible leader" [read unit standard], then the importance of individual leaders is minimized and unit success more readily can continue during leadership change. Like a perpetual motion machine, once the standards and conditions were established, the Soldiers were resourced. The commander and first sergeant got out of the way; the Soldiers excelled, and success came naturally.

Command, at any level, is a blend of science and art. The commander must blend tactical and technical knowledge of Army doctrine with the ability to push, comfort, inspire, sometimes anger, but always lead his Soldiers. More powerful or effective than the Uniform Code of Military Justice, commanders set their units' organizational cultures — the driving force in a unit's success. ▪

SGT Steven Bragg of Headquarters and Headquarters Battery, 17th Fires Brigade, pulls security while his fellow Soldiers enter a training area at Fort Lewis, Wash., Oct. 23, 2008. (Photo by SPC Lucas Swihart, U.S. Army)

Captain Seth G. Hall, field artillery, is a graduate student at Columbia University with a follow on assignment to the U.S. Military Academy as a company tactical officer. Previously, he commanded Headquarters and Headquarters Battery, 17th Fires Brigade at Fort Lewis, Wash., and Headquarters and Headquarters Battery, 5th Battalion, 3rd Field Artillery, at Fort Sill, Okla., later moving to Fort Lewis, Wash. He served as the Squadron Fire Support Officer for the First Squadron, 11th Armored Cavalry Regiment, deployed in support of Operation Iraqi Freedom; a battalion ammunitions officer, battery executive officer and platoon leader in the 6th Battalion, 32nd Field Artillery, Fort Sill; and an executive officer in D Battery, 1st Battalion, 79th Field Artillery, Fort Sill.

First Lieutenant Sean D. Bilichka, field artillery, is the administrative officer for the Multi-National Corps–Iraq Joint Fires and Effects Cell, stationed at Fort Lewis, Wash., deployed in support of Operation Iraqi Freedom. Previously, he was the executive officer for Headquarters and Headquarters Battery, 5th Battalion, 3rd Field Artillery, and a platoon leader for C Battery, 5-3 FA (HIMARS), Fort Lewis, Wash.

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An Iraqi soldier photographs Iraqi police on the firing range during his Combat Camera training at the 24th Battalion, 6th Iraqi Army Training Academy in Baghdad, Iraq, Aug, 19. (Photograph by SPC Jennifer Reed, U.S. Army)

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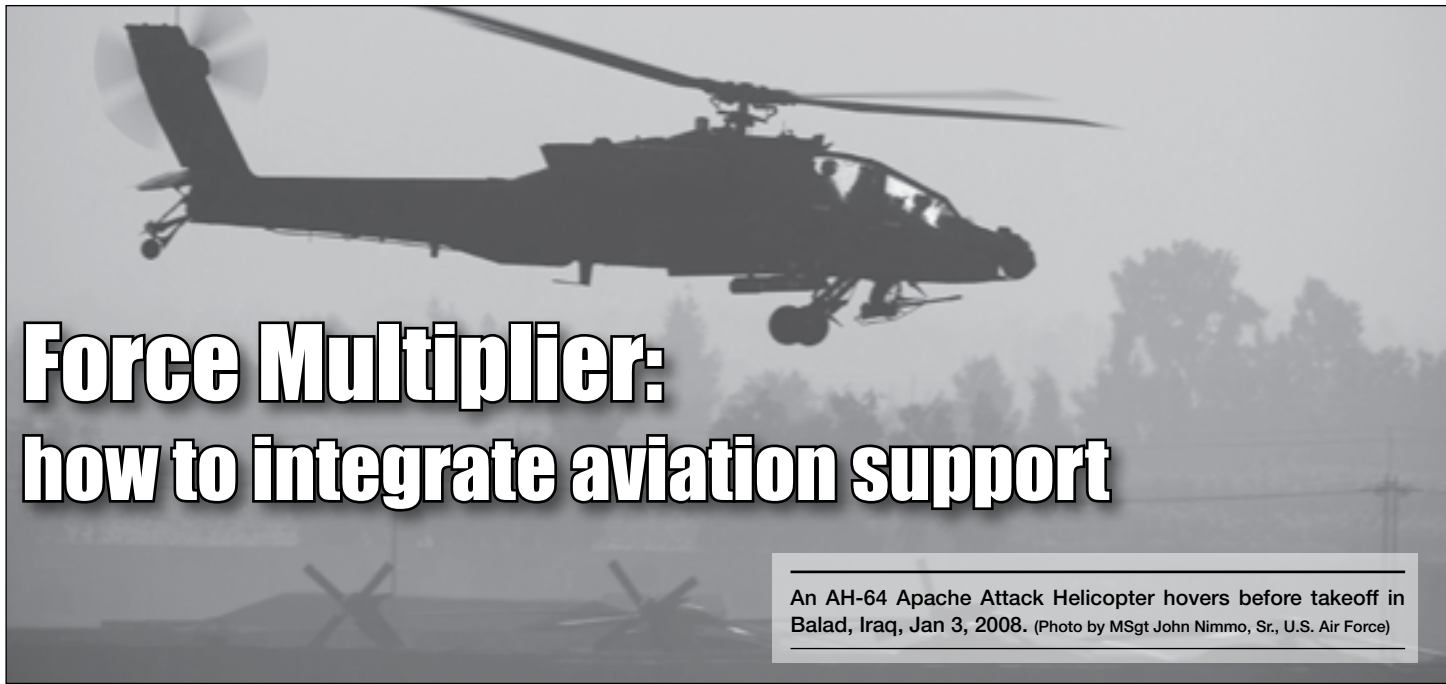
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An AH-64 Apache Attack Helicopter hovers before takeoff in Balad, Iraq, Jan 3, 2008. (Photo by MSgt John Nimmo, Sr., U.S. Air Force)

Force Multiplier:
how to integrate aviation support

By MAJ Rob Taylor

Many units arrive at the National Training Center, Fort Irwin, Calif., unprepared to integrate aviation support into their operations. Army leaders understand the five paragraph operations order and mission brief, but ground leaders frequently neglect to use this format when briefing aviators for mission support. As a result, their briefings to supporting aviation units lack proper format and content, leaving the aviators without a common operational picture of the mission and its impact in the brigade combat team's area of operations.

Ground commanders know and expect the benefits of aviation support in the close fight, but often do not train their units on the fundamentals of coordinating with aviation units. Frequently, this lack of familiarization leaves ground elements and aircrews fighting the same fight, but poorly integrated, resulting in poor mission coordination and less than ideal execution.

As a force multiplier, aviation can provide significant combat power for ground commanders when used properly. Ground maneuver commanders use air ground integration to synchronize aviation support into their concept of maneuver and communicate mission information to supporting aviation elements. Like any supporting effort, aircrews need specific mission details to execute the ground commander's intent. This article emphasizes the necessity and simplicity of air ground integration readiness.

Observations. Failure to integrate aviation assets starts with mission planning and extends through execution. Ground leaders routinely overlook the fact that aviators need mission details just the same as their own organic elements. Supporting aircrews need a mission statement, concept, intent, graphics, control measures, and a task and purpose. Ground leaders tend to provide an informal overview of the mission — rather than crucial information — when briefing aviators.

Due to this lack of integration, aviators often execute missions without details, such as a specific reconnaissance objective, a universal urban area numbering system, a list of locations, limits of named areas of interest and a timeline for mission execution. This greatly reduces aviation's influence on the ground scheme of maneuver, causes confusion on the objective and could lead to fratricide in the case of conflicting building numbering systems. Ground leaders can maximize the effect of aviation support by conducting proper air ground integration planning before and during mission execution.

Unacceptable. During a period of several training rotations, National Training Center observer/controllers witnessed examples of poor air ground integration briefing techniques. In one incident, after conducting a pre-mission brief with his company, a ground commander stood in the middle of his carefully prepared terrain model and gave the supporting pilots an abbreviated concept statement that did not include his intent or scheme of maneuver for the attack aviation team. He proceeded to ask questions about the aircrew's capabilities during the mission without giving them a mission statement, intent, task or purpose. Unfortunately, this style of air ground integration brief is closer to the norm, rather than the exception.

On another mission, the ground commander gave an abbreviated brief to the crew chief, instead of the pilots. He only told the crew chief that he wanted route reconnaissance for his movement to the objective and then aerial security for the duration of the mission. He failed to give the aircrew his maneuver plan, reconnaissance objectives, a timeline, a task and purpose for the aircrews, the location of the objective and a mission statement. This left the aircrew without situational awareness about these critical mission details. In this instance, the air mission commander advised the ground commander that she needed additional mission details to provide specific aviation support. The ground commander then returned to provide a more thorough brief.

Acceptable. Even though many ground commanders have trouble integrating aviation, many do not. During these same rotations,

> *"As a force multiplier, aviation can provide significant combat power for ground commanders when used properly."*

observer/controllers saw a limited number of well-planned air ground integrations. In one case, the ground commander provided an outstanding air ground integration package to his supporting aircrew. He gave them a copy of his mission graphics and briefed them on his plan of execution. He clarified his concept of maneuver and aviation support, the aviation task and purpose, and his personnel recovery plan. He concluded with a back brief rehearsal to confirm the aircrew understood his intent.

In general, the lack of coordination with supporting aviation teams illustrates the fact that most ground leaders are unfamiliar with air ground integration and do not train their units in these techniques. These leaders can greatly improve their combat readiness by becoming familiar with the essentials of air ground integration.

Essentials. *Field manual 5-20 Army Planning and Orders Production* states, "Planning is the means by which the commander envisions a desired outcome, lays out effective ways of achieving it, and communicates to his subordinates his vision, intent, and decisions, focusing on the results he expects to achieve." The ground commander uses air ground integration procedures to communicate his intent to the aviation supporting effort. Air ground integration starts with the ground commander's concept of execution and must integrate aviation throughout the planning process for proper synchronization. For aviation to augment the commander's combat power, supporting aviators must understand the ground maneuver plan and the commander's concept for aviation support completely.

Planning. The best method of communicating an air ground integration plan to aviators is to conduct a standard five-paragraph operations order brief — given to aircrews as the air mission brief. The ground commander should include the supporting aviation team as a maneuver element. Observer/controllers at the Joint Readiness Training Center, Fort Polk, La., routinely note that, when ground units coordinate with supporting aviation elements like one of their own maneuver supporting elements, they succeed in air ground integration. This requires ground leaders to include aviators in the planning and briefing process and to give them all

pertinent mission details. This should include the intent, concept of operation for ground and aviation elements, task and purpose, graphics and control measures, communications plan, and the desired end state.

Before executing operations, the aviation task force, in conjunction with the brigade combat team brigade aviation element and the ground task force, should establish the minimal essential planning information required to dedicate aviation assets to specific missions. Suggested planning requirements include timelines, graphics, concept and objective sketches, imagery, landing zone/pickup zone locations, target list worksheet, no fire/restricted fire areas, and the command and control plan. Aviators also need to know the marking techniques for friendly, enemy and target positions; who has authority for clearance of fires; applicable aviation rules of engagement; the ground commander's personnel recovery plan; and if there are any restricted operating zones in effect (See the Center for Army Lessons Learned Handbook 04-16, Cordon and search, July 2004).

The more information aviators have regarding the mission, the better support they can provide. Ground leaders also can keep radio traffic to a minimum by ensuring aviators have all necessary mission information before mission execution. The air mission request or pre-mission brief techniques best serve this purpose. The minimum essential information will vary with the type of mission. For example, attack teams who conduct hasty support of troops in contact will have much less time and therefore can operate on less information than assault aircrews who plan a deliberate limited-objective air assault.

Preparing a five-paragraph operations order, including the supporting aviators in the process, is the best approach for coordinating aviation supported missions. When time does not allow for deliberate preparation, the hasty mission brief, such as a close combat attack request over the radio, must provide as much information as possible for supporting aviators to maximize the effects of their support. The acronym MTGCRD "meeting card" serves as a mental checklist that simplifies the minimum essential details required for aviators to execute support for ground missions (See Figure 1). The meeting card should include the mission, task/

Figure 1: Minimum essential details to execute support for ground missions

> **The benefit of the meeting card elements of air ground integration is ground leaders can pass this information over the radio:**
>
> - Mission: Provide aviation support team with the mission statement.
> - Task/purpose: The deliberate task and purpose for aviation support.
> - Graphics and control measures: All graphics and control measures pertinent to missions. If necessary, refer to ground reference points, buildings, trees, etc. to provide a common operational picture to the supporting aircrew.
> - Communication plan: All possible elements of communication, including frequencies for the ground commander and all necessary supporting elements.
> - Rehearsal: When possible, pilots read back instructions for hasty air ground integration. If more time is available, leaders can use a more developed rehearsal.
> - Downed aircraft recovery team and personnel recovery plan: Plan for recovering aircraft and isolated personnel.

Figure 2: Essentials of deliberate and hasty coordination

Deliberate	Hasty
Ground to air: • Five paragraph operations order • Brief all mission details, products and rehearsal *Pre-mission planning and coordination* **Air crew to ground:** • Number of aircraft • Time on station • Munitions number and type • Number of casualties the aircraft can carry • Aircraft marking *Pilots participate in pre-mission planning when possible*	**Ground to air:** • Situation update • MTGCRD elements • Friendly, enemy and target locations; description and marking technique • Location of landing zones/pick up zones in case of contingencies **Air to ground:** • Number and type of aircraft • Time on station • Munitions number and type • Number of casualties the aircraft can carry • Aircraft marking

Figure 3: Air ground integration smart card

General comments	Aviation mission
• Aviation assets have limited station time; use your aviation efficiently. • Task organize aviation assets as a maneuver element. • Maintain communication with aviation units as other maneuver elements. • Give specific task and purpose. • Weapons systems can cause collateral damage. • Weapon systems can not differentiate between friendly and hostile personnel. • Plan should not be dependent upon aviation. • Plan for aviation on all missions.	• Security (area, screen and air assault) • Attack (hasty, deliberate, shaping, decisive and close combat attack • Reconnaissance (zone, area and route) • Defend Aviation tasks: • Destroy • Neutralize • Delay • Block • Defeat

Employment	Check in brief	Clearance of fires
• Direct fire • Observation • Reconnaissance (zone, area and route) • Security	Aircraft Check In: • Call sign • Number and type aircraft • Ordnance on board and laser code • Current location and estimated time of arrival • Time on station • Task and purpose • Attack by fire/battle position Supported unit attack brief: • Unit identification and call sign • Target description • Target location • Type of mark/laser code • Location of friendly forces and unit markings • Proposed attack by fire/battle position (include direction of fire) • Fire support (Include control of fires and clearance of fires) • Threat situational report (SITREP) (not limited to ADA systems) • Support unit attack helicopter control measures and anti-fratricide measures	• Establish communications with aircraft • Ensure air crew knows task and purpose • Know subordinate unit locations • Pass information per check in brief • Ensure rules of engagement criteria are met
Operational graphics		**Marking techniques**
• Attack by fire • Support by fire • Battle position • Observation post		Day: • VS-17 panel • Smoke • Star cluster • Signal mirror • Reverse polarity paper/panel • Laser designator • Combat identification panel • Tracer fire Night: • Infrared strobe • Spotlight • Chemical light on a string (buzzsaw) • Infrared spotlight • Infrared laser pointer • Laser designator • Combat identification panel • Tracer fire
Communications		
• Use command net and maintain communication with air mission commander. • Ensure you have primary, alternate, contingency and emergency communications. • Other aircraft may monitor alternate frequencies (fires, platoons, operations and intelligence. • Use plain and simple language. • Rehearse with air crews if possible.		

Aircraft capabilities
AH-64 A/D:
• Optics: target acquisition system and designation sight (forward-looking infrared)
• Video recorder
• Weapons: 30-mm cannon (300-600 rounds), 2.75-inch rockets (20-38), Hellfire missiles (4-8)
• On station time: 2.5 to 3.5 hours

OH-58D
• Optics: Day TV, video recorder
• Weapons: .50-cal machine gun (300 rounds), 2.75-inch rockets (7), Hellfire missile (2)
• On station time: 2 hours

purpose, graphics and control measures, communications plan, rehearsal and downed aircraft recovery team plan. Figure 2 (on Page 45) outlines ground and air briefing requirements for deliberate and hasty mission coordination.

While many ground commanders do not understand the technical details of specific aviation missions, they can provide an adequate mission statement by establishing the desired outcome of the aviation support. They can accomplish this by using the simplest terms possible, such as "Destroy the [target] at [location]." Once the supporting pilots understand the intent, they can execute the task appropriately to accomplish the mission.

Practice and rehearse. The rehearsal is essential to ensure understanding between the ground commander and the supporting aviation unit. Air mission and ground commanders can use a variety of rehearsals, ranging from a verbal back brief over the radio to a "full dress" walk through with a terrain model to ensure everyone understands the mission and their subsequent roles. A rehearsal is critical to air ground integration because it serves to identify possible points of uncertainty in the ground and aviation units' understanding of the operation as the walk through its execution.

> *"The rehearsal is essential to ensure understanding between the ground commander and the supporting aviation unit."*

Techniques. Army units have produced significant amounts of documentation highlighting air ground integration techniques and lessons learned, including several Center for Army Lessons Learned publications and unit air ground integration material such as the 3rd Infantry Division Warfighter Handbook. These resources present valuable techniques and are available for units to implement in their training. One example is the air ground integration smart card (See Figure 3) and the target handover event matrix found in the Center for Army Lessons Learned (CALL) Handbook 04-16, Cordon and Search. This smart card serves as a checklist for coordinating with aviation elements, providing an effective baseline of air ground integration procedures.

The air ground integration smart card includes minimal essential items based on their importance. For example, the initial check-in

sets the conditions for success by alerting the ground commander to the supporting aviation team's call sign, total number of aircraft, available ordnance and time on station. The ground leader then updates the aircrew on applicable items as shown on the smart card. Ground leaders can use the air ground integration card as a planning checklist as well as a quick reference for aviation employment, clearance of fires, marking techniques and communications.

Both aviation and ground leaders should use the "push/pull" method of exchanging mission information. If either the ground or the aviation element has information the other needs, each leader needs to "push" it to the appropriate unit. For example, aircrews notify convoy commanders about enemy activity or obstacles along their routes, and convoy commanders push enemy surface-to-air weapons reports to the aircrew as soon as they detect a threat. On the same note, if either element needs specific information, each leader should "pull" it, meaning he should request it from the appropriate source until he gets it. In this manner, leaders can construct a continuous situation update by requesting information as needed from other units.

Coordination. Once deployed to a combat theater, ground mission commanders rarely conduct face-to-face coordination with supporting aircrews before missions. At best, ground units see a liaison officer from the supporting aviation unit during mission planning. Rather, ground units use air mission requests to request aviation support and inform aviation units about mission details through their brigade combat team. Units send air mission requests from the battalion S3 to brigade staff for approval and tasking. The brigade aviation element, the division and the combat aviation brigade provide further coordination. Following approval, the respective units coordinate as necessary through various means to ensure mission success. The Army Command Post of the Future collaborative planning system best facilitates this process. Another way to refine the plan is for units to exchange liaison officers to coordinate in person.

When using the air mission request process, ground units

An Army Apache helicopter provides air support for 3rd Squadron, 7th Cavalry, 3rd Infantry Division, during a squadron cordon and search mission in the Adhamiya District of Baghdad, Iraq, Nov. 17, 2007. (Photo by SPC Jeffery Sandstrum, U.S. Army)

Figure 4: Home station air ground integration (AGI) training

Lines of operation	Objectives	End state

Reference material →
- Aviation manuals
- CALL publications
- Unit TACSOP
- AGI smart card

Academic forums →
- Aviation tactics brief
- Ground tactics brief

Situational training exercises →
- AGI live fire
- Cordon and search
- Mounted patrol
- Recon missions

Objectives:

Leaders use existing resources to familiarize themselves with air ground integration doctrine and tactics, techniques, and procedures

Leaders trained in the latest doctrine; tactics, techniques, and procedures; and best practices for air ground integration

Individuals at the company level and below receive hands on training in the fundamentals of air ground integration

End state:

Competent, confident small unit ground leaders trained and prepared to execute effective air ground integration

Legend:
AGI = Air ground integration
CALL = Center for Army Lessons Learned
TACSOP = Tactical standing operating procedure

should include as much detailed mission information as possible, such as the mission statement, task and purpose, graphics and control measures, communications plan, time for rehearsal, the downed aircraft recovery team and personnel recovery plans, the commander's intent and concept of maneuver, and a copy of the operations order. This conserves valuable mission by clarifying details prior to execution rather than over the radio in the middle of a firefight. Ground and air elements can then conduct further mission refinement via radio on site during mission execution.

Both ground and air teams often experience communication problems during mission execution. Ground leaders find that they can communicate with aircrews better if they fully integrate them into the maneuver ground scheme and both ground and air elements have a common terminology. Leaders can ensure communications success by developing a primary, alternate, contingency and emergency plan for radios and frequencies, ensuring they have alternate methods of communication should any one method fail.

Home station training. To prepare for close combat, basic tasks must be completed during home station training (*Field Manual 3-04.126 Attack Reconnaissance Helicopter Operations)*. The time to train air ground integration is not the day of the fight. Rather, units must prepare as part of normal unit training during the months before deployment. This training produces high payoffs, training unit leaders to integrate and work with aviation teams during combat missions. Figure 4 depicts the development and resources that support home station training.

Training methods. Units can train leaders on the full sequence of mission operations from pre-mission planning through execution and debriefing. Ground leaders can improve their comprehension of aviation capabilities by becoming acquainted with aviation manuals and Center for Army Lessons Learned publications that refer to air ground integration, as well as their supporting aviation unit's standing operating procedures and air ground integration smart card.

Unit leaders can use academic classes to familiarize both ground and aviation personnel on integration procedures, highlighting essential information to the successful coordination of aviation supported missions. Important topics should include the mission brief format and content, and the capabilities of Army tactical aircraft. As a baseline of familiarization, unit leaders should use their unit's

tactical standing operating procedure and an air ground integration smart card — similar to Figure 3 — to ensure they include essential information during air ground integration training.

Integration. Once they have a good understanding of the air ground integration process, key leaders can integrate air-ground support into their normal home station training. For example, units can coordinate aviation support for all training, such as situational training exercises for cordon and search missions, reconnaissance, combat mounted patrol missions and convoy operations, with the intent of training air ground integration skills. Lanes can focus on hasty operations, for example, requiring ground leaders to use the essentials of hasty air ground integration. Ground leaders can maximize the benefits from aviation support if their air ground integration battle drill competence reaches down to the lowest level and is as common as the call for indirect fire battle drill. Sergeant's time is a prime example of a training opportunity.

The payoff. The results of this competence already have paid off in the combat theater. For example, aviators who return from Afghanistan relate stories of junior enlisted Soldiers who use air ground integration to direct aircraft during close combat attacks, air assaults and air strikes from U.S. Air Force close air support. Units can improve their air ground integration skills by including them in their tactical standing operating procedure.

Units may not have the luxury of face-to-face coordination in the combat zone. Ground commanders will use air mission requests for aviation support and will find themselves conducting air ground integration over the radio once the aircraft arrives on station. Training on essential coordination tasks and familiarization with aviation units long before deployment will prepare ground leaders to add the combat power of aviation teams to their capabilities in the close fight. ▪

Major Rob Taylor, aviation, is conducting in-country training in Maputo, Mozambique, for the FAO Proponent. Prior to serving as an observer/controller, he served as company commander of A company, 1st Battalion, 58th Air Traffic Services Battalion and also as the brigade assistant S4 of 18th Aviation Brigade, both at Fort Bragg, N.C. He also served as platoon leader with A Company, 2nd Battalion, 2nd Aviation at Camp Stanley, South Korea.

Apache Crews promote air-ground integration

A well-rounded knowledge of how assets work for a unit can become a force multiplier. Soldiers working on the ground can be limited, so adding aviation support to their mission increases the distance they can see and the fire power available. But knowing the in-depth details on how to use these air assets is not common knowledge – that is when the 1st Air Cavalry Brigade steps in.

Working to help build air-ground integration, the aviators of 1st Air Cavalry Brigade, 1st Cavalry Division, Multi-National Division – Baghdad, sat down and discussed the abilities of the AH-64D Apache attack helicopter with Soldiers of 2nd Squadron, 107th Cavalry Regiment of the Ohio National Guard, during an air-ground integration workshop, Aug. 10.

"We are building trust [and] relationships – trying to let the ground brigade combat teams know the 1st Air Cavalry is here to support them," said CPT Charles Disston, commander of Company C, 1st Battalion, 227th Aviation Regiment, 1st Air Cavalry Brigade.

Educating the ground commander on what the aircraft is capable of doing is important. That way the ground Soldiers can use the Apaches' capabilities effectively to their utmost ability, said Disston. The workshop started off with some classroom instruction

CW2 Brent Gruber (left), an AH-64D Apache attack helicopter maintenance test pilot in C Company, 1st Battalion, 227th Aviation Regiment, 1st Air Cavalry Brigade, 1st Cavalry Division, Multi-National Division-Baghdad, explains how the weapons systems of the Apache work to 2LT Martin Crowe, a convoy commander in 2nd Squadron, 107th Cavalry Regiment, Ohio National Guard, during an air ground integration workshop at Camp Taji, Iraq, Aug. 10. (Photo by SGT Travis Zielinski, U.S. Army)

where the 2-107th Cavalry Soldiers learned the in and out of the Apache – focusing on capabilities that can benefit their missions. Next, they headed out to the flight line to sit in the aircraft to get a feel for what the pilots see and deal with when they are called to support their brethren on the ground. For a unit just coming into Iraq, the Soldiers in 2-107th Cavalry appreciated the willingness of the aviators to teach them how to call on the Apaches and bring them to the battle.

"This meeting showed us that the Apaches are available, the crews are willing to do their jobs and how we can utilize the aircraft during convoy operations," said 2LT Martin Crowe, a convoy commander in 2-107th Cavalry.

One of the biggest things learned was how close the weapon systems of the Apache can shoot near friendly forces without causing damage to them, Crowe said.

"They are going to get in there and do their job, it is a sense of security," said Crowe. Once the 2-107th Cavalry troopers were pulled away from the Apache and the workshop, they had a better understanding of what battlefield capabilities they now harness from the ground. "If I was going to attack an American convoy and saw Apaches coming, I would probably think twice before I did anything," said Crowe.

By SGT Travis Zielinski
1st Air Cavalry Brigade, 1st Cavalry
Division Public Affairs

1LT Carolyn Wagnild (left), an Apache pilot in C Company, 1st Battalion, 227th Aviation Regiment, 1st Air Cavalry Brigade, 1st Cavalry Division, Multi-National Division-Baghdad, explains how the sighting system of the Apache works to SFC Jonathan Duffey, the tactical operations center NCO-in-charge for 2nd Squadron, 107th Cavalry Regiment of the Ohio National Guard, Camp Taji, Iraq, Aug. 10. (Photo by SGT Travis Zielinski, U.S. Army)

A U.S. Soldier calls for an airstrike on the hills surrounding Barge Matal, during Operation Mountain Fire in Afghanistan's eastern Nuristan province, July 12. Afghan national security forces and International Security Assistance Forces battled with insurgent forces in the late afternoon, after quickly securing the village's key areas early in the morning. (Photo by SGT Matthew Moeller, U.S. Army)

PIN 085726-000