FIRES

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The Fires Professional

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FIRES

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PURPOSE: Founded in 2007, *Fires* serves as a forum for the professional discussions of all Fires professionals, both active and Reserve Component (RC); disseminates professional knowledge about progress, developments and best use in campaigns; cultivates a common understanding of the power, limitations and application of joint Fires, both lethal and nonlethal; fosters joint Fires interdependency among the armed services; and promotes the understanding of and interoperability between the branches, both active and RC, all of which contribute to the good of Army, joint and combined forces, and our nation.

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On the cover: U.S. Soldiers with A Battery, 3rd Battalion, 6th Field Artillery Regiment, conduct live-fire exercises with the M777 towed 155 mm howitzer at Forward Operating Base Arian in Ghazni province, Afghanistan, March 7, 2013. (Photo by SFC Kenneth Foss, U.S. Army)

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Professionalism...More Than Being a Professional

By MG Mark McDonald
Commanding General of the Fires Center of Excellence and Fort Sill, Okla.

Last month, the chief of staff of the Army held a senior leader conference at West Point. One of the many things we discussed was the profession of arms and being a true professional, deserving of being called a Soldier. The theme for this edition of *Fires* is "The Fires Professional," which ties directly to the publication of Army Doctrine Reference Publication (ADPR) Number 1 (draft), *The Army Profession*, dated September 25, 2012. The most senior Army leaders have officially validated what Soldiers have always known. We are professionals. We are "a unique vocation of experts, certified in the design, generation, support, and ethical application of land combat power, serving under civilian authority and entrusted to defend the Constitution and the rights and interests of the American people."

Defining the word 'professional' is not a simple task. Webster has several definitions; however, there are two which best suit our profession as Fires Soldiers. "A professional is one who engages in one of the learned professions characterized by or conforming to the technical skill or ethical standards of a profession. A professional exhibits good judgment, a courteous, conscientious, and generally businesslike manner and professional behavior in the workplace." As professional Soldiers, society grants us an enormous amount of responsibility. We are the one percent of the population who chooses to swear an oath to protect the Constitution of the United States and obey the orders of the president. Our service is vital to a healthy, free society, yet the same services society requires of us, most are incapable or unwilling to perform themselves.

Laws and regulations govern our profession; however, each individual retains an inherent responsibility to keep the profession strong,

viable, respected, and above all, technically proficient, for without proficiency we cannot complete our primary task of protecting the Constitution. While military expertise is important, without the other four essential characteristics of the Army profession, the foundation is flawed and will surely crack or deteriorate. The five essentials for a strong Army profession are listed in the figure on the opposite page: military expertise, honorable service, trust, esprit de corps, and stewardship of the profession. The most critical of these is the bridge of trust within the Amy and among the American people.

Trust starts at the lowest level: trust between Soldiers is absolutely the cement that binds our Fires force. When Soldiers know their peers are accomplishing all of the required tasks at or above standards, and 'have their backs' in times of conflict, other levels of trust within our units more easily evolve and mature. Ensuring your Soldiers know the history and heritage of the unit's lineage, promotes a desire to 'live up to the standards of those who fought and died' before them. A sense of belonging, history, and commitment to the unit and the Soldiers of the unit is paramount, as is weeding out those Soldiers who are untrustworthy and detrimental to the morale and very foundation of trust within the unit.

On a popular website, askmen.com, the Army profession was voted as number seven in the top 10 most respected professions in the world. "Every country respects its military, and there's always a degree of prestige that comes with the

Five essential characteristics of the Army profession. (Illustration courtesy of the U.S. Army)

knowledge that a person willingly puts himself in danger for the sake of everyone else. All those who serve in the military, in all its branches and ranks, are respected for their service; however, officers in particular are afforded a special level of respect, because they are the ones responsible for everyone else - they're educated and experienced, and these [Soldiers] who risk life and limb are in their hands."

At ehow.com, the military profession was rated fifth, behind firefighters, doctors, scientists, and teachers. Society places a huge level of confidence in our uniform and the mere fact that we wear the uniform implies we uphold a higher standard of conduct than the civilians we defend. When trust between a Soldier and the country is broken or damaged, the level of respect for our profession suffers. Trust is truly the bedrock of our profession and all other essential characteristics are infinitely bound to keeping that trust. Nothing replaces trust between Soldiers, their leaders, their Families and the Army. When all levels of trust are intact, trust between the Army and the American people will remain strong and deserving.

Another characteristic of the Army profession I'd like to touch on is the stewardship of the profession. ADRP 1 states, "Stewardship is about our special responsibilities to the Army profession and to the American people. We are responsible and duty-bound to not only complete today's missions with the resources available, but also those of the future, to ensure our profession is always capable of fulfilling whatever missions our nation gives us. Our professional responsibility is to ensure, through our stewardship, the present and future effectiveness of the profession." Good stewardship comes with ownership of one's profession. In order for ownership to occur, each individual must possess the '3Ps:' passion, persistence, and professionalism.

Dr. Martin Luther King, Jr. once said, "If a man is called to be a street sweeper, he should sweep streets even as Michelangelo painted, or Beethoven composed music, or Shakespeare wrote poetry. He should sweep streets so well that all the hosts of heaven and earth will pause to say, here lived a great street sweeper who did his job well."

It is this level of passion for the Fires profession that will see us through whatever lies ahead. As Fires professionals, we must take responsibility for ourselves and take back some of the unique responsibilities of our work as Fires Soldiers. Over the past decade, our attention has been focused on fighting battles and winning wars. The force was spread very thin, and we relied heavily on contractors and the experience and technical abilities they brought to our team. With tighter budgets, many of the tasks they now complete will revert back to Soldiers, specifically those tasks relating to training and programmed instruction. Who better to train Soldiers than Soldiers? Professionalism will play a critical role in this transition as we move seasoned 'warriors' into roles they might perceive as being non-military.

In a paper entitled, "A Personal View of Professionalism," Ashwin Kini implies that a true professional sets himself on a path toward perfection within a chosen profession. "The path involves holding high personal standards, competing with oneself, constant learning, dedication, and commitment to excellence." A professional accepts the task they are given, whether sweeping streets or patrolling them, dedicates themselves to the task and performs the task to the very best of their ability. In other words, earning a badge of professionalism is hard work, not a title bestowed upon you because of a chosen career field. We have about 65,000 professional Fires Soldiers. Do all of them wear their professionalism with honor and pride? We have the ability, and the duty, to shape the path of professionalism within our force.

One distinguishing mark of a true professional is an innate ability to see

beyond self and always 'do what needs to be done.' Professionalism forms the foundation for mission command, applying the commander's intent in the absence of detailed orders. In their article, "Setting the Conditions for Mission Command through the 3-Ts: Time, Trust and Transparency," COL Lou Latrigue and Professor Gene Kamena underscore the importance of people, personalities and professional judgment in the success of mission command. While we can't do much to change personalities, we can influence the people we choose to keep on our team and the development of their professional judgment. When leaders share technical knowledge and tactical experience, it can provide a baseline on which subordinates will judge themselves. Raising the bar on individual professional judgment and the ability to implement mission command at unit level will improve the very foundation of the Fires force.

We are passionate about what we, as a Fires force, bring to the fight. The Fires Center of Excellence will prevail in our battle to ensure the Fires force has what we need to stay ahead of the enemy for the foreseeable future. We are also committed to your professional development and will do everything we can to maintain the quality and availability of the training you need for technical proficiency.

In order to ensure our future success, we must instill a culture of the highest level of professionalism. Demand it from yourself…demand it from your Soldiers.

Fires Strong!★★

PFC Justin Koehn helps members of the fire direction center convert target data into firing commands for the gun line during a live-fire exercise at Fort Bragg, N.C., April 9, 2013. The exercise was part of an airborne operation to test the readiness of Soldiers with the 319th Field Artillery Regiment to deploy anywhere in the world on short notice. Koehn is a Field Artillery automated tactical data systems specialist, assigned to B Battery, 2nd Battalion, 319th Field Artillery Regiment, 2nd Brigade Combat Team, 82nd Airborne Division. (Photo by SGT Joseph Guenther, U.S. Army)

Fires Changes of Command

May 1, 2013

2nd BN, 5th FA, Fort Sill, Okla.
Outgoing: LTC Seth Pilgrim
Incoming: LTC Travis Gray

May 2, 2013

3rd BN, 4th ADA, Fort Bragg, N.C.
Outgoing: LTC Richard Harrison
Incoming: LTC Patrick Costello

May 7, 2013

1st BN, 10th FA, Fort Stewart, Ga.
Outgoing: LTC Ed Willard
Incoming: LTC Kevin Capra

May 16, 2013

5th BN, 3rd FA, Joint Base Lewis-McChord, Wash.
Outgoing: LTC Joe Hilbert
Incoming: LTC Ian Bennett

May 17, 2013

1st BN, 377th FA, Joint Base Lewis-McChord, Wash.
Outgoing: LTC Chuck Roede
Incoming: LTC Alan Wagner

June 5, 2013

2nd BN, 4th FA, Fort Sill, Okla.
Outgoing: LTC Mark Schmitt
Incoming: LTC William Burnett

June 6, 2013

1st BN, 40th FA, Fort Sill, Okla.
Outgoing: LTC Willaim Davenport
Incoming: LTC Fidel Ruiz

June 6, 2013

5th BN, 5th ADA, Joint Base Lewis McChord, Wash.
Outgoing: LTC Michael Melito
Incoming: LTC Bradley J. (BJ) Herman, Jr.

June 7, 2013

1st BN, 78th FA, Fort Sill, Okla.
Outgoing: LTC David Lewis
Incoming: LTC Michael Mullins

June 19, 2013

210th Fires BDE, Camp Casey, Republic of Korea
Outgoing: COL Tracy Banister
Incoming: COL Mike Lawson

June 20, 2013

4th BN, 319th FA, Fort Sill, Okla.
Outgoing: LTC Kelly Webster
Incoming: LTC William Kirby

June 24, 2013

1st BCD, Davis-Monthan Air Force Base, Ariz.
Outgoing: COL David Ell
Incoming: COL Shaun Tooke

June 26, 2013

5th BN, 7th ADA, Rhine Ordnance Barracks, Germany
Outgoing: LTC Philip, Labasi
Incoming: LTC Lisa Bartel

June 26, 2013

Fires SQDN, 3rd CAV REG, Fort Hood, Texas
Outgoing: LTC Lynn Downie
Incoming: LTC Alric Francis

June 28, 2013

214th Fires BDE, Fort Sill, Okla.
Outgoing: COL Tim Daugherty
Incoming: COL Andy Preston

July 1, 2013

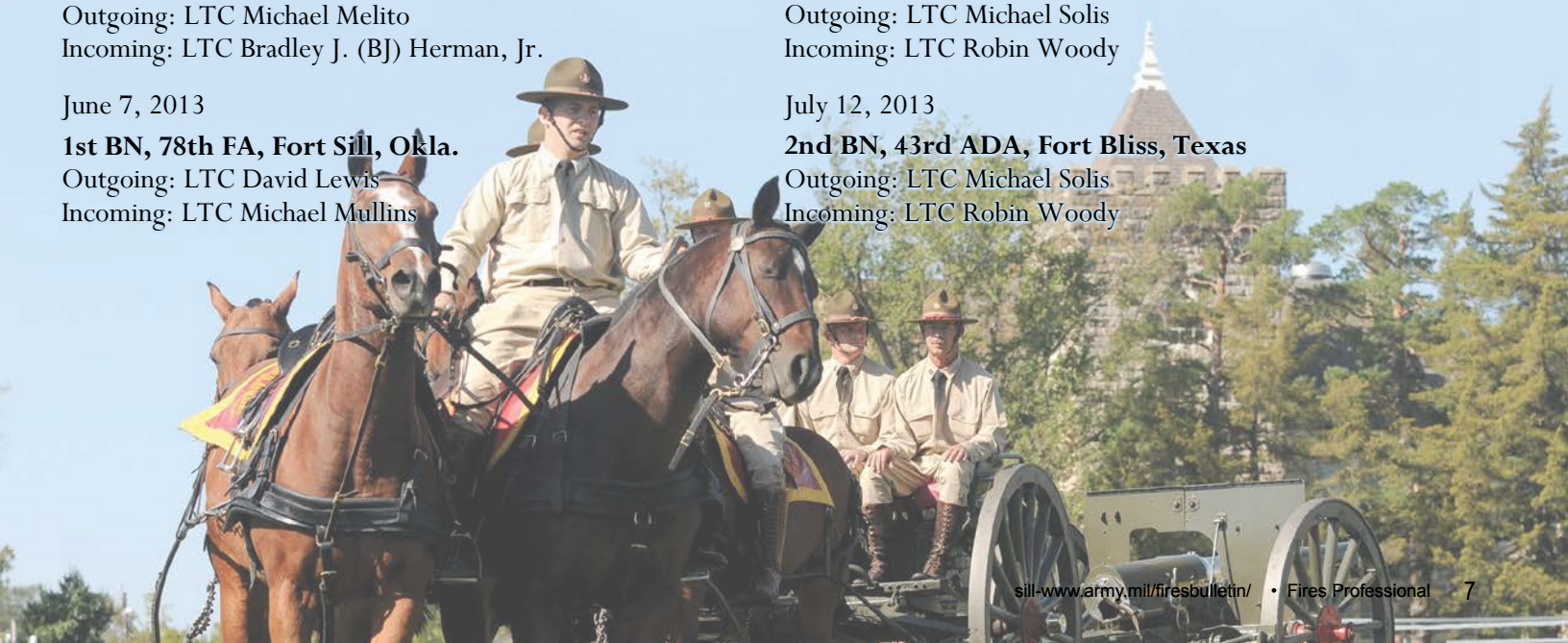
69th ADA BDE, Fort Hood, Texas
Outgoing: COL Randall McIntire
Incoming: COL Brian Gibson

July 10, 2013

10th AAMDC, Fort Bliss, Texas
Outgoing: LTC Michael Solis
Incoming: LTC Robin Woody

July 12, 2013

2nd BN, 43rd ADA, Fort Bliss, Texas
Outgoing: LTC Michael Solis
Incoming: LTC Robin Woody



Live, Virtual, Constructive and Gaming Training Strategy

By BG Brian J. McKiernan
Chief of the Field Artillery and Commandant of the U.S. Army Field Artillery School, Fort Sill, Okla.

The United States Army Field Artillery School (USAFAS) documented a Live, Virtual, Constructive and Gaming (LVCG) Training Strategy that supports and complements our Field Artillery (FA) Training Strategy. In a time of declining resources, commanders will need more tools and options to effectively train, educate and develop agile, adaptive and decisive Soldiers and leaders. This LVCG strategy addresses training opportunities across the three training domains: operational domain, institutional training base (ITB) domain, and the self-development domain.

The operational domain is defined by realistic, unit-collective training. Tenets of this domain are dominantly characterized by combined arms training opportunities and blended training approaches which will soon become the Integrated Training Environment (ITE) as defined in the Army Training Strategy. Read more about the Army Training Strategy at http://go.usa.gov/2sZC. The institutional training base (ITB) domain includes opportunities to train fundamental and advanced Field Artillery skills using emergent technology and immersive simulators. The self-development domain covers professional development and certifications tailored to fit individual needs.

By providing this LVCG strategy, I establish a blue print that drives and focuses FA training and education where simulations might be leveraged. Training and education in the operational, institutional, and self-development domains demand the most challenging situations be presented. Simulations provide opportunities that might be too dangerous, expensive, or otherwise constrained if executed live. Commanders, training units, small group instructors teaching a class, and an individual seeking self-development benefit from a comprehensive LVCG strategy.

Access to adequate home station training (HST) areas or combat training centers (CTC) will continue to be constrained in the near future. Increased urbanization, competition for training areas, limited money, time and resources will continue to exacerbate the problem. Continued creativity in training and leadership development is imperative.

While training in the virtual domain isn't the norm for an FA unit, it can be done and done well through creative planning. LVCG can be leveraged to train everything from gunnery to crew drills, reconnaissance, selection, and occupation of position (RSOP), and leadership and decision making.

Lessons Learned from the 210th Fires Brigade. Recently, the 210th Fires Brigade (FiB) conducted an LVCG Fires culminating training event where commanders at each echelon were able to achieve their stated training objectives through the construct and employment of a comprehensive, open public local access network (OPLAN)-based training event that effectively blended the LVCG domains across a robust seven-day, externally-evaluated scenario.

The 210th FiB Soldiers in the virtual domain were able to execute the brigade support battalion's log pack and convoy movements using the reconfiguration vehicle simulation (RVS). Soldiers from the forward support company were able to simulate convoy procedures, battle drills, and ammunition resupply in the virtual domain using Virtual Battle Space2 (VBS2).

ENDS

Trained and ready Field Artillery (FA) forces enabled by realistic live, virtual and constructive training environments that support progressive training from FA Soldiers to FA Brigade collective-level proficiency

WAYS

Operating Force	Instructional Training Base	Individual Leaders
Realistic Unit Collective Training Combined arms training Blended approach Gated training (FA/FS tables) Train with maneuver Train the Fire Support System together Fires accurately represented in maneuver situations Support commander's training objectives	**Fundamental and Advanced FA Skills** Seamless integration of simulations Increased repetitions Improved proficiency Immersive simulators Precision digital device training FA training aids, devices, simulators and simulations Acquisition Lifecycle Management 2015 Leverage emerging technology Advocate for resources	**Tactically and Technically Competent FA Leaders** Reach-back training Experience Guided self-development Refresher training Certifications Supports critical thinking

MEANS

- Call for Fire Trainer (CFFT) II
- CFFT II-Plus
- Bradley Desktop Trainer (BDT)
- Close Combat Tactical Trainer - Reconfigurable Vehicle Simulator (CCTT-RVS)
- Virtual Battle Space (VBS)-2
- Simulation and Stimulation Fires Integrated Architecture (SISTIM/FIA)
- Fire Support Combined Arms Trainer (FSCAT)
- Multiple Integrated Laser Engagement Systems (MILES)
- Joint Land Component Constructive Training Capability (JLCCTC)
- Live-Virtual-Constructive Integrated Architecture (LVC-IA)
- Engagement Skills Trainer (EST)
- Fire Control Panel Trainer (FCP)

The strategy for a trained and ready Field Artillery force. (Illustration by Rick Paape, Jr., information provided by the FA Commandant's office)

Within the live domain, the Initial Home-station Instrumentation Training System (I-HITS) merged with the Tactical Engagement Simulation System (TESS) helped Soldiers simulate shooting live rockets from a Multiple Launch Rocket System (MLRS) firing battery that was actually deployed in the field.

Units in the constructive environment were replicated in the Joint Conflict and Tactical Simulation (J-CATS) and Fires Simulation (Fires Sim) and were helped through a full suite of Army Battle Command Systems (ABCS) which incorporated the Joint Automated Deep Operations Coordination System (JADOCS) and the Advance Field Artillery Tactical Data System (AFATDS).

Within mission command, the battalions tactical operation centers (TOCs) and the brigade support battalion, the domains were completely transparent and the brigade was able to achieve its training objectives without actually live-firing. Read the entire white paper on 210th FiB's LVCG Fires culminating training event at http://go.usa.gov/2sZd.

Defining the Operational Domain. As the 210th FiB has shown, realistic, unit collective training can be done and done well virtually. Training in the virtual realm enables commanders to save, not only time but money on munitions, fuel, and wear and tear on their equipment. This type of savings is something all units can take advantage of as resources and money will continue to be limited.

A well-thought-out blended training strategy will enable Mission Essential Task List (METL) training at the most efficient cost. Commanders and leaders should always look for the best ways to accurately represent Fires while planning training.

The Field Artillery and Combined Arms Training Strategies, as well as FA gunnery tables can be effectively trained when using a blended approach of LVCG. The use of the Fire Support Combined Arms Tactical Trainer (FSCATT), Close Combat Tactical Trainer –II (CCTT-II), and Virtual Battle Space 2 (VBS2) can achieve a section-level proficiency concurrently with higher collective training in a constructive environment. CCFFT-II can also be used in gaining essential individual certifications like joint forward observer (JFO), and can likewise be used to train critical skills like target mensuration only (TMO).

There are many systems available to accomplish LVCG training, so in order to help FA commanders execute much needed training prior to their unit's Mission Command Training Program (MCTP) supported warfighter exercise, the USAFAS created the Fires Brigade Command Post Exercise-Functional (FiB CPX-F). The FiB CPX-F is the FA's training package that helps commanders outline a constructive exercise, supported by Mission Training Complex (MTC), based on assigned Headquarters, Department of the Army (HQDA) standardized METL, nested

with the Decisive Action Training Environment (DATE), and simulates all assigned Army Battle Command Systems (ABCS). The FiB CPX-F serves as the basis for crawl/walk training events executable for brigade commanders relying on little external support. To read the FiB CPX-F Commander's Handbook Log on http://go.usa.gov/2sB9.

I invite all commanders and leaders to download this valuable training package, and please do not hesitate to reach back to the school if additional information is needed.

Institutional Training Base. Just as in the operational domain, cost-effective LVCG training can also increase Soldier proficiency through increased repetition in high-quality, fully-immersive simulations in the ITB.

Through the collaborate efforts of the Maneuver Center of Excellence (MCoE), Fort Benning, Ga., the Aviation Center of Excellence (AvCoE), Fort Rucker, Ala., and the Fires Center of Excellence (FCoE), here at Fort Sill, Okla., advanced combined arms training coupled with Field Artillery skills can be taught through the use of emergent technology and immersive simulators. The technology used in today's LVCG training environment, can provide realism in the ITB without the expense of live training.

The Call for Fire Trainer (CFFT) and Virtual Battlespace2 Fires (VBS2Fires) are key virtual training and gaming systems that the FA is using to teach these skills.

The CFFT is a lightweight, rapidly deployable, observed fire-training system that provides multiple simulated battlefield environments for instructing fire support specialists, JFOs and Soldiers at the institutional and operational unit level.

The CFFT is capable of training all artillery; Type II and III close air support (CAS), naval gunfire and mortar missions. The system is fielded in multiple continental United States (CONUS) and outside continental United States (OCONUS) locations in three primary configurations: 1:30 (one instructor to 30 students), 1:12 and 1:4. The 1:12 and 1:4 system configurations are deployable.

VBS2Fires includes realistic graphics, comparable to those seen in the video games "Call of Duty" and "Halo." VBS2Fires includes a call-for-fire training application which combines the flexibility and the visuals of VBS2 with a highly sophisticated call-for-fire training and simulation system. The system simulates exterior and terminal ballistics to high levels of detail, enabling gun to target visualization of artillery orders in VBS2. It supports a wide array of munitions, fuse types and firing platforms, allowing instructions to range from basic skills to decision making from individual to battalion level.

Modernizing Gunnery. We are also leveraging the technology and gaming capability of the Training and Doctrine Command's (TRADOC's) Training Brain Operations Center (TBOC) to develop training animation and gaming technologies to support and augment institutional gunnery and ballistic theory institutional training. To date, 52

Soldiers with A Battery, 3rd Battalion, 6th Field Artillery, conduct a live-fire exercise with the M777 at Forward Operating Base Arian in Ghazni province, Afghanistan. (Photo by SFC Kenneth Foss, U.S. Army)

animations have been developed to support our institutional modernization effort.

Using existing technology, such as animations and VBS2 vignettes, we are working to build scenarios that graphically display the principles of ballistics and provide situations requiring application of ballistic theory and understanding of foundational troubleshooting logic to solve the gunnery problem.

In the future, we will provide notebooks or tablet devices to Basic Officer Leaders Course (BOLC), Captains Career Course (CCC) and Warrant Officer Basic Course (WOBC) students, which will make these training applications, animations and gaming tutorials readily accessible to our students. This will be particularly valuable for our gunnery instruction.

Instruction using PowerPoint slides as the primary delivery method will soon be a thing of the past. We have the chance to increase the success of accelerated training, mitigating resource constraints, saving time and money, as well as fostering collaborative and distributive learning.

There is a potential for Soldiers to dramatically increase the number of repetitions within available training time with less maintenance and fuel costs, less safety related injuries and damage to equipment, using these capabilities.

Self-Development Domain. For individual leaders, it is essential to leverage simulations to enhance sustainment and self-development training. We are promoting a life-long learning mindset to ensure our FA leaders and Soldiers are empowered with the tools and resources necessary to continue to learn throughout their careers.

Currently, FA Soldiers conduct self-development and refresher training through web sites such as Army Knowledge Online (AKO). However, there are no simulations that are in a 'take away' medium, such as a CD or DVD that a Soldier can put into their personal computer to conduct reinforcement training and self study. Soldiers need the ability to bring such training with them into operational environments, and not be dependent on limited computer access or limited band width of the internet.

So along that note, here at USAFAS we are continuing to explore ways to expand self-developmental material for our Soldiers, so when they are in the operational environment or assigned to a non-firing mission, they will have the resources to maintain their individual skill proficiency.

We will also continue to leverage new and improved LVCG systems that are aligned with combined arms training strategies in order to give our Soldiers and leaders the best training possible. The best is truly yet to come.

Simulation is an Important Enabler. Virtual training will never replace live training opportunities. However, all FA commanders and leaders will continue to face limited time, money, equipment, support personnel and land resources for live training events. Virtual training offers realistic training opportunities, reduces the unit's training support burden and helps improve unit readiness.★★

Illumination rounds from M109A6 Paladins, assigned to C Battery, 1st Battalion, 178th Field Artillery, South Carolina U.S. Army National Guard, light up the nighttime sky over the impact zone during the unit's annual training at Fort Stewart, Ga. (Photo by SGT Brian Calhoun, U.S. Army)

SPC Taylor Sanders (left) and SPC Richard Gunter (right), geospatial engineers assigned to Headquarters and Headquarters Troop, 1st Brigade Combat Team, 1st Cavalry Division, work at a Digital Topographic Support System terminal during a mission command systems integration training exercise at Fort Hood, Texas. (Photo by SGT John Couffer, U.S. Army)

Setting the Conditions for Mission Command Through the 3-Ts: Time, Trust and Transparency

By Professor Gene Kamena and COL Lou Lartigue

Even a cursory look at mission command reveals a simplistic concept that seems difficult to execute. In fact, the complexities of mission command become more apparent when transferred from a world of white papers to the real world of Soldiers and leaders. Our intent for writing this short article is not to address the history of mission command (I cannot even say Auftragstaktik), or unpack the litany of professional articles and commentaries that currently exists on this subject. What we will address is the importance of setting the conditions for implementing mission command. Specifically, we will cut to the chase and relate nuggets of truth acquired through hard knocks, reflective thought and dialogue with those wrestling to implement this concept. The view of these two old colonels is that mission command is, as with all things of importance in the Army, about people, personalities and professional judgment.

Leaders (people) must connect and communicate with Soldiers and other leaders (people) to get things done. Since no two individuals are exactly alike (varying talent, potential and experience) the concept of mission command cannot devolve into a 'one size fits all' scheme. The amount of latitude offered by leaders, as well as the amount of trust granted by Soldiers, will vary greatly.

Personality plays into the mix of mission command, because the mix of personalities often determines the strength of a relationship between people. Even the most competent leader will struggle if their personality puts people off. Personality is a leader's delivery system for trust and confidence.

An important aspect of professional judgment is the ability

Figure 1: The spectrum of trust. (Illustrations by Rick Paape, Jr., information provided by Professor Gene Kamena)

to see talent in others not only for today, but to gauge future potential. This is important because mission command may prove useful not only on the battlefield, but also in all situations where professional and leader development resides. The judicial application of mission command can 'stretch' a subordinate and organizations into accomplishing more than initially thought possible.

When implementing mission command in a unit, particular factors should be taken into account. Mission command will not work if it is directed, ordered, or imposed on a unit or people. It must be built up slowly and ingrained if it is to work and endure over time (in garrison, field, or combat). Three important considerations in bringing the practice of mission command into being are: time, trust and transparency. Each is an important aspect of connecting leaders and Soldiers.

Time. Anyway you cut it, implementing mission command means change. People do not like change and resist it for countless reasons. Even if your leadership style already looks like mission command, now calling it that may telegraph 'change' to subordinates. It takes time to change the way people think and act. More importantly, mission command grows when fertilized with the knowledge of people and personal relationships, both are time intensive. Understanding that time is always a scarce commodity, effort expended getting to know people and fostering meaningful relationships is always well spent. If mission command is to become the way of doing a leader's business, it must be practiced in garrison, during training, and taught in the schoolhouse. Operations must not be its exclusive domain.

Trust. What is trust? Can it be measured? How does one even know it exists? Again, an apparently simple concept that is extremely difficult to fully grasp and gauge. There are a few things that we do know about trust, it can flow in many directions, up, down, laterally; it takes time to establish and build; it is fragile and can be undercut with one lapse of judgment or irrational outburst. It is tangible to the extent that one can feel it for someone, or knows when it is offered from someone. Yet, it is also intangible as it is not prescribed how to trust, or how much to trust another person. No two relationships will ever establish the exact kind and level of trust, because it exists in the eye and the heart of the beholder. Our experience informs us that with regard to the military there are three discernible levels of trust: respect, confidence, and commitment.

1. **Respect.** Soldiers render respect to superiors for many reasons, initially because they are trained to do so, but usually over time, respect becomes something offered willingly (understanding that it is also earned). All things being equal, leaders receive respect because of their rank, position, education, experience, and personal demeanor. Once given, respect becomes the basis upon which trust is built. Furthermore, as is with all

A Soldier from 2nd Brigade, 1st Armored Division uses a Common Tactical Vision system during the Army's fourth Network Integration Evaluation exercise. The touch screen-based tool is used for mission command planning at various echelons across the brigade combat team. (Photo by Claire Heininger, U.S. Army)

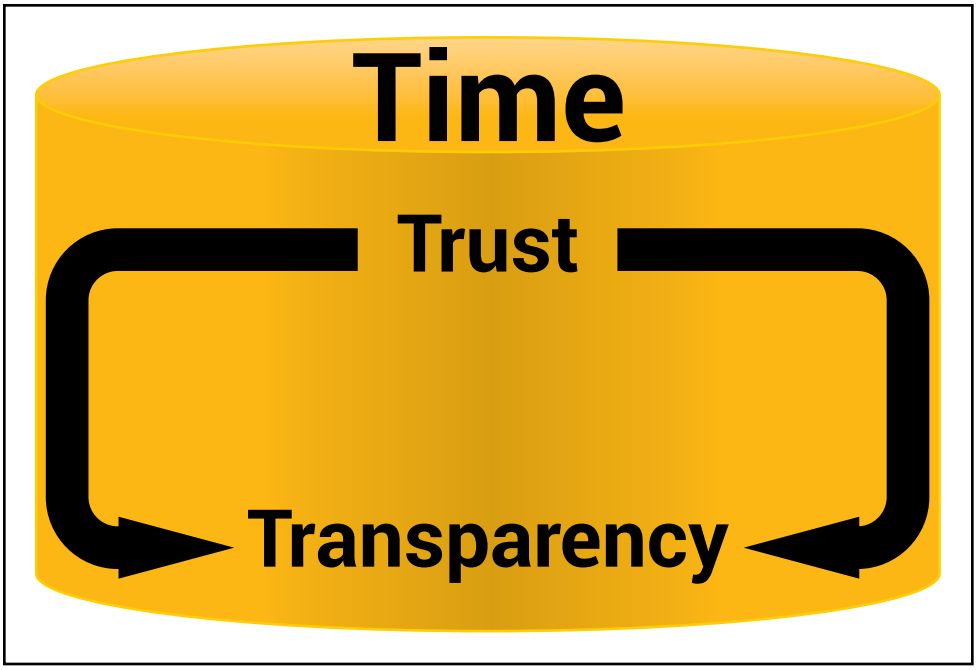


Figure 2: Building the base for mission control. (Illustrations by Rick Paape, Jr., information provided by Professor Gene Kamena)

aspects of trust, respect can be lost much faster than it is earned.

2. **Confidence.** Over time, followers gain confidence in their leaders through personal knowledge of past decisions, competencies and relationships. Likewise, leaders gain trust in their subordinates based on the same factors. Confidence is a belief that a leader or followers will do the right thing in the absence of supervision. It also begins to allow a communication of intent within less prescriptive boundaries. That is, confidence that your subordinates can make decisions and take action given a wide 'range fan' instead of a well-defined 'box,' goes to building trust.
3. **Commitment.** Personal commitment to one's leaders, people, mission, and the organization is a lot to ask, yet in the Army, it occurs every day. We intentionally do not use the term 'loyalty' to a leader, because personal loyalty, in the wrong circumstance, carries with it inherent risk of blind spots with regard to objectivity. Required to make mission command work are leaders committed to their people, the mission, and subordinates committed to the vision their leaders offer and to mission accomplishment. To gain the commitment of others, one must be relevant in the lives of those very people. Some leaders never garner the total commitment of their people. Again, time and energy are required in order to earn the unreserved commitment of others.

Transparency. Personal and professional transparency is an accelerator in the trust building process. Transparency is a byproduct of trust, as is trust a byproduct of transparency. For example, once a modicum of trust is established, leaders and followers tend to be more open in their dealings. It becomes more obvious who they really are, what they expect, and what motivates them. The trust-transparency cycle is the essential environmental-relational ingredient needed to establish a climate right for mission command to flourish.

Mission command is the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive leaders in the conduct of unified land operations. For mission command to work, one must create an environment and climate in a unit that allows mission command to be possible. Implementing a '3-T' approach to mission command that leverages time, trust and transparency, sets the conditions, enables and empowers decision making for right action. Indeed, investing in '3-T,' as defined above, is resource intensive; however, trust does not just happen…it must be established and then consistently reinforced. Without time spent building trust and transparency, mission command will remain a mere concept in a white paper.★★

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Back To The Future?

An Old German Word Makes a Comeback in New US Doctrine

By CPT Thaddeus C. Fox and CPT Jacob N. Hagstrom

"If you would understand anything, observe its beginning and its development."

- Aristotle

In September 2012, LTG David Perkins, the commanding general of the Combined Arms Center (CAC), Fort Leavenworth, Kan., addressed the students of the Field Artillery Captains Career Course, Fort Sill, Okla. Recognizing that the career course is a potential tool for implementing new doctrine, he told students that he was charging them to be the standard bearers of a marked doctrinal shift under the heading of 'mission command.' Perkins' description of a more decentralized approach to command was appealing to junior captains, many of them still chafed from recent deployments, in which centralized rules of engagement and top-heavy guidance seemed to hamper initiative and independent decision making. Where did the concept of 'mission command' originate? We decided to look at the 6-0 series manuals to see how this term came to be the guiding philosophy of the U.S. Army. The introduction to Army Doctrine Reference Publication (ADRP) 6-0, *Mission Command*, contains an intriguing passage:

[Mission Command] traces its roots back to the German concept of *Auftragstaktik*, which translates roughly to mission-type tactics. *Auftragstaktik* held all German commissioned and noncommissioned officers duty-bound to do whatever the situation required, as they personally saw it. Understanding and achieving the broader purpose of a task was the central idea behind this style of command. Commanders expected subordinates to act when opportunities arose.

The rest of the reference work makes no further mention of the German roots of mission command. In fact, the only other historic example of mission command listed in any 6-0 series manual is a short excerpt from the papers of GEN Ulysses S. Grant. Clearly, we would have to search elsewhere to understand the development of mission command.

What are the origins of *Auftragstaktik*? Why did U.S. Army leaders appropriate this term in their most recent doctrine? And what are the practical consequences of adhering to a command philosophy based on *Auftragstaktik*?

The Origins of *Auftragstaktik*. *Auftragstaktik* is a German word that translates literally to 'task tactic.' It is more commonly rendered in English as 'mission orders,' 'mission tactics,' or 'mission command.' In today's military parlance, it is used to denote a philosophy of command in which commanders issue mission-type orders. A commander focuses on his intent and then allows subordinates to fulfill the end state as they see fit. A commander employing *Auftragstaktik* tells his subordinates what to do, but not how to do it.

It is essential to point out that the historic Germans most credited with employing mission command rarely, if ever, used the term itself. The word *Auftragstaktik* gained popularity only after World War II, as historians and staff officers sought to explain the seemingly unlikely operational success of past Prussian and German military operations.

The roots of *Auftragstaktik* can be found in the social structure of the Prussian state. Prussian officers were culled from the ranks of the noble landed class known as *Junkers*. By the mid-17th century, the *Junkers* had achieved a level of power and independence perhaps unrivaled in the rest of Europe. Just as the king of Prussia allowed the *Junkers* autonomy on their land, so he allowed them autonomy on the battlefield. To meddle in the specifics of a military operation would have been a breach not only of military propriety, but of Prussian law, custom and culture.

The problems facing the Prussian and German armies during the 19th and 20th centuries also contributed to the development of *Auftragstaktik*. The nation was surrounded by numerically superior enemies. This geo-political fact could (and did) result in a protracted war on two fronts – a fate that was to be avoided at all costs. The only hope for Prussia or Germany was a 'short and lively' war. Waiting for detailed orders at each decision point would be too slow. German commanders would have to be aggressive to defeat their enemies rapidly and in succession. Speed and decisiveness were essential to any successful German operation. It was only in this manner, operating in a decentralized, initiative-based way, that a German commander could hope for a grand operational maneuver that would destroy his enemy's fighting capability.

Another element in the development of *Auftragstaktik* was the theory of influential Germans. Carl von Clausewitz famously described the 'fog of war,' one element of a philoso-

Ulysses S. Grant, 18th President of the United States. Army Doctrine Publication 6.0, *Mission Command*, references Grant's use of the term 'mission command' in a short excerpt from military documents. (Photo courtesy of the Library of Congress)

phy that saw war-fighting as inherently uncertain – more an art than a science. Helmuth von Moltke the Elder, a student of Clausewitz and long-serving chief of the German general staff, adhered to the notion that war was too chaotic and unpredictable to be captured in neat, tidy operation orders. It would be better to employ a decentralized command structure, with aggressive subordinate leaders ready to take the initiative when appropriate.

Moreover, the growing scope of the battlefield to include entire 'theaters'of war in the 19th century made *Auftragstaktik* more attractive. Moltke wrote in 1874, "The commander, who in our days no longer leads a closed phalanx but different armies in different theaters, cannot manage without the independent action of his subordinate commanders." In fact, Moltke's phrase "independent action" may be more apt than *Auftragstaktik*. As opposed to abiding by 'mission-type orders,' German commanders were virtual free agents on the battlefield, operating on only the broadest of commander's intent: destroy the enemy. Moltke often repeated a story to illustrate this point. Prince Frederick Charles was berating a major for a poor tactical decision. When the major protested that he was following orders from a superior, the Red Prince fired back, "His Majesty made you a major because he believed you would know when not to obey his orders!" It was often German aggression and insouciance towards operations orders which produced stunning tactical victories.

***Auftragstaktik* in the U.S.** The combination of experience in the Vietnam War, observation of tank battles in the 1973 Arab-Israeli War, and a reassessment of Soviet capabilities caused the U.S. to rethink their doctrine. Planners were driven by the serious worry that U.S. Soldiers might have to fight against a numerically superior Union of Soviet Socialist Republic (USSR) force in one massive European campaign. Early attempts to plan an 'active defense' gained little institutional traction and were soon abandoned in favor of a more offensive, maneuver-based response to the Soviet threat. The result was airland battle doctrine, which embraced the U.S. approximation of *Auftragstaktik*. The 1980's editions of FM 100-5, *Operations*, emphasized "flexibility and speed, mission-type orders, initiative among commanders at all levels, and the spirit of the offense," in clear homage to what many considered successful German techniques that had already been proven successful against overwhelming enemy numbers, and against the Russians in particular.

Airland battle gave way to full spectrum operations, which recently has yielded to unified land operations. Throughout these changes in terminology, elements of mission command have remained in U.S. doctrine, but never so prominently or explicitly as in the most recent editions.

The introduction of ADRP 6-0 states matter-of-factly that "the nature of operations and the patterns of military history point to the advantages of mission command," the principles of which are:

1. Build cohesive teams through mutual trust
2. Create shared understanding
3. Provide a clear commander's intent
4. Exercise disciplined initiative
5. Use mission orders
6. Accept prudent risk

It is not difficult to see the influence of *Auftragstaktik* in these six principles. Mutual trust and shared understanding are prerequisites for subordinates to have some semblance of independence on the battlefield. Providing a clear commander's intent and using mission orders harkens back to the German concept of telling subordinates what to do but not how to do it. Finally, exercising initiative and accepting risk are hallmarks of the bold, aggressive style of German operations.

It is interesting to note that 'mission command' is designated by the 6-0 doctrine series as both a philosophy of command, as well as a 'warfighting function.' That is to say, in addition to being shorthand for the six principles outlined above, 'mission command' also refers to the specific tasks that a commander does in the course of commanding and interacting with his staff. It replaces the former doctrinal warfighting function of 'command and control (C2).'

Is *Auftragstaktik* Appropriate for the U.S. Army? There are several important differences between the Prussian-German army that developed *Auftragstaktik* and the U.S. Army currently trying to codify and emplace the concept in support of new FM 3-0, *Doctrine of Unified Land Operations*. Any answer to the question "should the U.S. Army adopt mission command?" should assess differences in capabilities and threats, culture and technology.

U.S. Army Capabilities and Present Threats. The U.S. Army is currently the most powerful land force on Earth. The current Pentagon budget (at the time this was written) hovers around $700 billion per year, more than defense budgets for the rest of the world combined. While this budget includes far more than just Army expenditures, the Army fights in close concert with other branches of service. The figure simply illustrates the unlikelihood of the U.S. military having to fight at a material disadvantage. One of the main reasons for resurgence in popularity for *Auftragstaktik* in the 1980s was its perceived utility in fighting the numerically superior Soviet Union army. This paradigm, it should go without saying, no longer exists. The Prussian and German armies frequently had to contend with fighting at a disadvantage in numbers and firepower. This quantitative disadvantage was a major impetus for the German allowance of independent commanders to attack at nearly any odds. German operational-level commanders needed to conclude conflicts before the economic and manpower resources of rivals could be brought to bear.

Furthermore, the German use of mission command evolved under different strategic realities. For Prussians of the 19th century and Germans of the early 20th, the ultimate goal was to seek decisive battlefield victory, usually in the form of the destruction of an enemy army or the occupation of an enemy capital. Recently, however, U.S. strategic interests have mostly involved maintaining global hegemony and engaging in selective regime change. The means to achieve these interests could involve low-intensity conflict (such as in Vietnam and later stages of Afghanistan and Iraq) or high-intensity conflict (such as in Korea and the Persian Gulf War). Current unified land doctrine is explicitly meant to apply in both cases.

However, our current strategy does not center on a decisive battle or the seizure of an enemy capital. Therefore, our military aims do not seem to depend on a high degree of operational level success, especially if such success requires significant tactical sacrifices. In fact, the U.S. military fared extremely well in the opening (operational) phases of the Iraq and Afghanistan wars, in which firepower (mostly airpower) destroyed enemy forces. These initial battlefield successes did not immediately translate into the achievement of strategic goals. It is unlikely that a greater focus on mission command, especially as the Germans understood it, would have changed these developments. The problems involved with deterrence, counterinsurgency, regime change, and the employment of massive amounts of air and naval fire are not the same as the problems involved with a Prussian-style operational flank maneuver. *Auftragstaktik* clearly had salutary effects on industrial age German operations, but it is unclear whether or not this system has retained its relevance.

Army Culture and National Culture. *Auftragstaktik* grew out of the Prussian army culture. For most of Prussia's and Imperial Germany's history, regimental commanders retained approval over the selection of officers in their units. This differs greatly from the current U.S. system, in which officers are selected upon completion of nationally monitored commissioning programs. It seems likely that the deep level of trust needed for mission command would be more easily attained in the former system than in the latter. In addition, once officers were selected by a German regimental commander, they were trained in a unique way. Through staff rides, field exercises, and war games, officers were drilled in critical thinking and analysis. 'Approved solutions' were seen as limiting creativity and initiative – as such, they were avoided at all costs. Again, this system is different from the typical U.S. approach, which places a higher value on standardized classes and examinations, as well as a tendency to demonstrate 'what right looks like.'

Furthermore, society in Prussia and Imperial Germany accommodated *Auftragstaktik* in a way that the modern U.S. never could. There was never a powerful electorate or an independent media in pre-World War II Germany to the degree they exist in the U.S. today. ADP 6-0 embraces "accepting prudent risk" as one of its six principles of mission command. Prudent risk is defined as "a deliberate exposure to potential injury or loss when the commander judges the outcome in terms of mission accomplishment as worth the cost." Allowing subordinate commanders to engage in risky (even 'prudently' risky) operations implies a tolerance for substantial loss in human life.

Granting subordinates more independence surely increases the speed, flexibility, and initiative of junior leaders. But it also results in a loss of control, the results of which could (and often did for Germans) lead to catastrophic losses in small units. The battlefield losses that mission tactics brought about simply would not be tolerated by the U.S. For

example, episodes such as the Tet Offensive and the Battle of Wanat became memorable incidents in the U.S. media due to loss of U.S. Soldiers. Popular sentiment typically did not focus on the fact that in both of these cases, the U.S. held their ground and inflicted far more casualties than they absorbed. Prussian commanders did not view risk-taking or loss of life in the same way we do today. In fact, they probably would have been encouraged by the results of a Tet- or Wanat-like outcome in their own force.

Less control over tactical units also increases the likelihood of tactics detrimental to strategic goals. The unattributed Vietnam-era quote, "It became necessary to destroy the town to save it" comes to mind. While this type of thinking is not inevitable, it represents the danger of mission command when unaccompanied by robust leader training and trustworthy junior leaders.

Technology. Finally, changes in technology have made mission command less relevant today. In fact, one could make the argument that *Auftragstaktik* was really an operational solution to a historic problem of communications. When orders had to be transmitted by telegraph, motorcar, or horse courier, it made more sense to simply allow subordinates to take initiative under broad commander's intent. Today, these problems are rare, if they ever occur. Already during World War II, improvements in radio communications and air support had taken its toll on the ability of Germans to operate on their own under commander's intent. Long range radios allowed German high command the irresistible temptation to receive instantaneous updates from the front. These increased reports led to more prescriptive commands in battle. The necessity to stay within friendly air support and avoid enemy air strikes simultaneously made German commanders more reliant on higher levels of command and unable to maneuver freely around enemy formations. This technological situation has only become more prevalent today, with helicopters, satellite and digital communications, video surveillance platforms, and Blue Force Trackers greatly expanding the mobility and oversight of top-level commanders. Furthermore, firepower has expanded most potently in Army aviation and Air Force assets. The independence of a modern ground force is severely hampered by its dependence on air assets for fire support. Should the U.S. Army ever find itself fighting an enemy that possessed an air force, they would be doubly hampered by the requirement to maneuver within protection provided by air defense systems.

The U.S. Army could very well benefit from a more decentralized approach to command. However, to call upon *Auftragstaktik* as the historical basis for modern doctrine is to do a disservice both to history and to the current state of the U.S. military. The U.S. Army probably should not want to base its command ideals on a Prussian-German model. If it does, the Army would do well to study the conditions from which mission command sprung and the results that it produced. The 6-0 series ought to address the issues of historical applicability, at the very least in a section of the reference publication. The readers of ADRP 6-0 are assured that "the patterns of military history point to the advantages of mission command." One assumes that this is shorthand for Prussian and German operational success from 1866-1942. However, this can only be an assumption because no historical patterns are discussed. If the authors of Army doctrine want to include *Auftragstaktik* in official literature (which they have explicitly done), it deserves more than an isolated, superficial mention.

Beyond this apparent omission in historical justification, U.S. doctrine writers need to explain the tactical and strategic trade-offs caused by advocating mission command. It is natural for the Army, like every organization, to seek junior leaders who are aggressive, take initiative, and accomplish the mission. However, the more these attributes are cultivated, the less control will be retained by the organization. Does the Army really want to encourage more risk in a lethal system that is intensely scrutinized and materially superior to all potential challengers? The answer very well may be 'yes,' but that answer should not come from a one-sided and misappropriated reading of history.

Doctrine is surely important, but it is not as important as leaders and the way they act. In other words, doctrine can only be effective when it is properly applied by Soldiers. COL Tom Guthrie recently published an article in *Army Magazine*, which he questioned whether or not mission command is appropriate for the U.S. Army. He correctly points out that more "decentralization would require leaders to accept the fact that they will be consciously abdicating the responsibility of the outcome to subordinates." Any real embrace of mission command will lead to a decrease of order and control. It will also require junior leaders who are deserving of a high level of trust. How often are junior leaders tested in scenarios involving trust, creativity, or initiative under commander's intent? The current prerequisite for command seems to be less demonstration of critical thinking and more a case of serving time and avoiding egregious mistakes. *Auftragstaktik*, its historical origins, development, and consequences, should be reevaluated not only by writers of Army doctrine, but by anyone who considers himself a member of the Army profession.★★

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Editor's Note: *Fires is a professional journal and a forum for open discussion on topics of interest or importance to the Fires force. We do not voice an opinion; simply present the argument as written by the author. We would very much like to hear your opinion on this and other topics discussed in the magazine. Send comments and/or articles to fires.bulletin@us.army.mil.*

Today's *Skystriker* leaders planted the regiment's current colors next to the location where its ancestors gave their last full measure at Gettysburg. (Photo courtesy of CPT Will Andrews)

Skystrikers Find Inspiration for Their Future by Emphasizing Their Heritage

By CPT Will D. Andrews

The 3rd Battalion, 4th Air Defense Artillery (ADA) has a history unlike any other. With more battle streamers than any other Air Defense Artillery battalion in the Army, 3-4 ADA places an emphasis on teaching its Soldiers about its rich heritage. The training begins upon reception into the unit, when leaders explain to new Soldiers the relationship between the fish hook and bundled wheat on the 4th Regiment's crest, and the unique shape of the Union's line at Gettysburg and the courageous fight to survive and win on the deadly wheat fields of Gettysburg.

Recently, 21 leaders of the *Skystriker* Battalion had a unique opportunity to fully grasp the rich history of the 4th Artillery Regiment at Gettysburg. On the way back from a leader professional development event on the reset and recap operations of Letterkenny Army Depot, in Chambersburg, Pa., the battalion coordinated for a local expert to test the knowledge of its leaders during a complete tour of Gettysburg. The *Skystrikers*' knowledge of this battle greatly contributed to the professional discussion of mission command, leadership and munitions capabilities during the two-hour tour. The group of *Skystrikers* discussed the important concept of commander's intent, and how not providing a clear and concise 'end state,' in terms of the enemy, terrain, and civil considerations can lead to failure during battle. They saw firsthand how elements of the Union and Confederate Armies struggled to achieve their mission because their leaders had no common 'end state' to work toward when lines of communication were broken.

The 4th Artillery Regiment had elements supporting maneuver forces throughout the Union's line during the battle. This historical precedence of providing fire support is indicative of the current relationship that *Skystrikers*

The memorial where members of C Battery, 4th Artillery Regiment fought along the Union line at Gettysburg. (Photo courtesy of CPT Will Andrews)

have with maneuver forces today. Members of E Battery, 3-4 ADA, the Army's only airborne Air Defense Artillery battery, provide support to the global response force of the prestigious 82nd Airborne Division. These airborne air defense paratroopers can provide air defense coverage as far forward as the 82nd Airborne Division needs, and serve as a game-changing, combat multiplier to the supported maneuver forces.

While the 4th Artillery Regiment did have several units dispersed across the battlefield, the regiment also maintained a battery-sized element in proximity to GEN Ulysses S. Grant's headquarters. C Battery, 4th Artillery Regiment provided defensive Fires in support of the defense of Grant's headquarters. This defensive capability correlates with 3-4 ADA's current ability to provide air defense coverage with its Patriot units. Equipped with a Headquarters and Headquarters Battery, four Patriot batteries, and a Service Battery, 3-4 ADA can provide unmatched, self-sustaining, air defense coverage to critical assets in any environment.

The *Skystrikers*' study of the battle at Gettysburg culminated near the Pennsylvania State Monument. A nearby plaque marked the contributions of C Battery, 4th Artillery Regiment. The *Skystriker* leaders planted today's battalion colors near the very point where their artillery predecessors gave their last full measure. The event cemented the principles LTC Richard Harrison, commander of 3-4 ADA, and CSM Paris Williams, command sergeant major of 3-4 ADA, seek to instill in every *Skystriker*: pride in unit, foundational knowledge of the unit's rich heritage, and the courage and audacity to carry the unit to new victories and success.

"This is why I stress the importance of continuing the legacy of what it means to be a *Skystriker*," Harrison said during the group's stop on top of Little Round Top. "These brave warriors didn't fight and die for political reasons; they fought for each other so they could go home to their families. Their motivations were very similar to the ones we fight for today, which is why understanding their sacrifices is so important," Harrison continued.

The regiment's contributions to our nation, including its heroics at Gettysburg, are memorialized in the 3-4 ADA battalion conference room and throughout the battalion headquarters. The conference room, appropriately named Gettysburg Hall, is filled with all 55 battle streamers, pictures from the unit's multiple deployments, and the current regimental chain of command.

"This is why we chose to capture our unit's history in our headquarters, in order to train our new Soldiers on what it means to be a part of this unit. *Skystrikers* have fought in just about every battle this nation has been in, and it's important that our Soldiers understand the role they play in carrying our predecessors' sacrifices forward," Williams said during the after action review of the group's trip.

The lessons learned at Gettysburg are part of the tenets of inspiration that *Skystriker* leaders use to motivate their Soldiers to continue to uphold the highest standards and achieve superior results. Whether it be on the hallowed ground as part of the Union's line at Gettysburg, or somewhere in the Middle East, 3rd Battalion, 4th Air Defense Artillery Regiment Soldiers know what it means to be a part of the most decorated Air Defense Artillery unit in the Army and will continue to add streamers to the battalion's colors whenever the nation calls on it to fight.★★

Captain Will Andrews enlisted in the Idaho Army National Guard in January of 2002. He served in multiple positions as a full-time service member in the Army National Guard from 2002-2008. During his enlisted service he deployed in support of Operation Iraqi Freedom III from November 2004 – October 2005. In 2008, Andrews graduated Officer Candidate School at Fort Benning, Ga., and was commissioned a second lieutenant. He went on to serve in 2nd Battalion, 44th Air Defense Artillery, from May 2009 – December 2011. During his time in the Strike Fear Battalion, he served as an Avenger platoon leader, executive officer, and assistant S-3 Officer. Andrews also served as a site commander in Eastern Afghanistan training several thousand Afghan National Police for NATO's Training Mission Afghanistan. Andrews currently serves as the 3rd Battalion, 4th Air Defense Artillery Regiment logistics officer and is scheduled to take command of a Patriot battery in the summer of 2013.

Joint Electronic Warfare Comes to the Pacific

By MSG Jesse Potter

The 25th Infantry Division recently hosted the Joint Electronic Warfare Theater Operations Course (JEWTOC), graduating more than 30 noncommissioned officers (NCOs) and officers. It was the first time this course was conducted through a mobile training team (MTT) and it was a first for Pacific Command (PACOM). JEWTOC is normally held quarterly at the Joint Electronic Warfare Center (JEWC), Lackland Air Force Base, Texas.

This course brought together the electronic warfare (EW), spectrum managers, information office planners, and tactical operations officers from every major command and service, to include the 2nd Infantry Division, for two weeks of intensive training.

The knowledge gained from the course greatly increased the graduate's knowledge in preparation for 2nd and 3rd Brigade Combat Team's (BCT) upcoming deployments.

"There are currently shortfalls in the joint integration of electronic warfare," said MAJ Gary Lyke, 25th electronic warfare officer with the 25th Infantry Division. "Instead of compartmentalizing efforts, we learned how to synchronize efforts beyond our service or community."

The JEWTOC course develops the fundamental EW planning, coordination, and operations skills for personnel providing direct operational-level electronic warfare support to Unified Combatants Command (COCOM) and theater units. The instruction focused on joint EW doctrine, Electronic Warfare Coordination Center and service component EW structures, joint EW targeting processes, spectrum management planning and coordination, cyber operation planning, and national EW asset integration.

"One of the best briefs throughout the JEWTOC Course was the joint EW reach-back," said CW3 Richard Fincher, an EW technician with the 25th Infantry Division. This brief was designed to provide Soldiers with an understanding of the reach-back capabilities of the JEWC and other joint organizations. The instructor, Mr. Desmond Savage, emphasized the importance of networking and how essential it is to know these organizations exist solely to provide modeling and support to Soldiers."

The JEWTOC is the only joint certified electronic warfare course in the Department of Defense (DoD). With significant coordination from the 25th ID EW elements and the Joint Electronic Warfare Center, they were able to develop and facilitate the first MTT to be taught throughout the DoD. The JEWC tailored the course for the PACOM by incorporating guest instructors from many of the joint units in Hawaii, to include PACOM, Marine Corps Forces Pacific (MARFORPAC), United States Army Pacific (USARPAC), and Special Operations Command Pacific (SOCPAC).

"The division saved more than $250,000 dollars by bringing the course as a MTT, but the real benefit was being able to train younger NCOs and spectrum managers, who would not normally receive the training until much later in their career and level of responsibility," said MSG Jesse Potter, the 25th Infantry Division electronic warfare NCO in charge.

"This is the first time the class was Army centric so they approached the concepts and scenarios from a land perspective, a first for us," said Mr. Jim Bray, the JEWTOC course manager. "The student's insights and perspectives will enable us to incorporate more Army and Marine focused EW material into the course."

The MTT was such a success that many other Army divisions and corps are now requesting the course be brought to their installations. "The development of this MTT with the 25th ID, the course's positive feedback, and growing demand will allow us to develop more MTTs tailored to the various combatant commands and their components. MTTs will also allow us to train more warfighters in joint electronic warfare and electromagnetic spectrum operations for the joint force commander, giving him joint trained EW force multipliers," said MAJ Michael Woodruff, the JEWTOC branch chief.

Master Sergeant Jesse Potter currently serves as the 25th Infantry Division Electronic Warfare NCOIC. MSG Potter is the senior EW NCO for the army and one of the first NCO's authorized to re-class into the EW Career Field in 2009. He previously served as the RC-North EW NCO during his last deployment in Afghanistan with the 10th Mountain Division in 2010. He will be departing Hawaii to take over as the EW Proponent NCO later this summer.

First surface-to-air missile (SAM) wing "Schleswig-Holstein" muster after integration of army air defense units. As of April 1, 2013, they command all German air defense units. (Photo courtesy of Lt. Col. Michael B. Lipka, German Army)

Germany's Air Defense Detachment at the Fires Center of Excellence in the Near Future

By German Army Lt. Col. Michael B. Lipka

The German Bundeswehr is undergoing a major restructuring process, affecting all services of the German military. One of the most fundamental changes is that the German Luftwaffe (air force) has assumed responsibility for all tasks regarding air and missile defense. As a result, the German army handed over air defense weapons systems to the air force (i.e., counter-rocket, artillery, mortar, (C-RAM), MANTIS, surveillance sensor LUER and Light AD System OZELOT). Consequently several soldiers decided to become airmen.

The restructuring process has also affected the Luftwaffe's command and control organization. The number of command staffs will be reduced from nine to four. The German air force chief of staff is the advisor on all operational aspects of air and space and on the deployment of air forces. The highest ranking air Defender is Lt. Gen. Dieter Naskrent, the vice chief of staff of the German air force.

Together with the subordinate units and military agencies, the German Air Force Operational Forces Command makes up the core of the operational Luftwaffe. In order to ensure the preparation and provision of operationally ready forces the administrative and technical control of all operational units is consolidated in this command, including weapon system-specific, technical training and further development.

For the first time in the history of the Bundeswehr, one service command, the Luftwaffe, will be entirely responsible for all aspects of air defense and air space/space control. This implies unique challenges but also unique opportunities.

All air force air defense forces, including missile defense are consolidated under the Operational Forces Command Ground Capabilities Directorate.

As of April 1st, all German air defense units, the schoolhouse and the detachment at Fort Sill, Okla., will be commanded by the 1st Surface-to-Air Missile (SAM) Wing 1, 'Schleswig-Holstein.'

While closing the German Air Force Air Defense Center at Fort Bliss, Texas, Germany's intent is to find a solution, in close cooperation with the Fires Center of Excellence (FCoE), for how to foster and intensify the relationship with the United States Air Defense Artillery (ADA) and to ensure interoperability in a broad sense with U.S. forces.

In order to achieve these goals, the Luftwaffe needs to maintain a physical representation in continental U.S. (CONUS) and to expand their presence at Fort Sill. The current plan is to integrate German staff officers, officers and noncommissioned officers (NCOs) as military personnel exchange into Training and Doctrine Command (TRADOC), capabilities managers for Army Air and Missile Defense Command (AAMDC) and ADA brigades, Directorate of Training and Doctrine (DOTD), Joint and Combined Integration Directorate (JACI), United States Army Air Defense Artillery School (USAADASCH), and the Fires Battle Lab. Furthermore, it is intended to set up and link the German Air Defense Simulation System (SAAPES) with the Fires Battle Lab at Fort Sill.

The intent is to enable both German and U.S. ADA forces to train together, run tests and experimentations in a simulated environment and to generate future training scenarios. In addition, SAAPES provides connectivity to North Atlantic Treaty Organization (NATO) simulation exercises and access to theater missile defense (TMD) simulation exercises.

Germany will send students to attend Patriot operator and maintainer courses, Patriot related courses and ADA leadership courses at Fort Sill. The mid and long-term expectation is that the air defense philosophies, operations, techniques, tactics and procedures (TTPs) between the two nations, will become more and more harmonized. To support the growing student load, Germany plans to establish a small unit to supervise and manage the German student population.

With this new approach, German air force air defense is very confident both nations will benefit from this new level of integration.

The permanent exchange of vision, strategy and doctrines combined with a chance to synchronize the ongoing modernization of both countries' ADA forces will enable interoperability, leader/user mind sets, technical characteristics, sensor fusion, fire control systems and the tactical and operational attributes of air defense. This new communality would be based on common training standards, common exercises and simulations. In the long run, this new method will result in a decreased cost and an increase in effectiveness.

All-in-all, the German Air Force air defense is looking forward to being integrated into the directorates of the Fires Center of Excellence and becoming an active partner of Team Sill.★★

Lieutenant Colonel Michael B. Lipka is from the State of Nordrhein Westfalen, Germany. He enlisted in the German Bundeswehr in 1981, and completed officers' basic training, artillery basic training and leadership training in 1982. Lipka has held a variety of staff positions, several of which exposed him to a joint and combined training environment with allied nations. He also has commanded several units, including the Armored Infantry Brigade, 19th Independent Company and 4th Army Air Defense Rocket Battery. He is currently assigned as the German Liaison Officer at the U.S. Army Air Defense Artillery School, Fort Sill, Okla.

Lt. Gen. Dieter Naskrent, Vice Chief of Staff German Air Force, is the highest ranking air defense officer in the Bundeswehr. (Photo courtesy of Lt. Col. Michael B. Lipka, German Army)

Soldiers from 2nd Battalion, 15th Field Artillery, 2nd Brigade Combat Team, 10th Mountain Division, await a fire mission with their M777A2 during a live-fire training exercise at Fort Drum, N.Y. (Photo by Mark A. Moore II, U.S. Army)

Allons Artillery Battalion Reinvents Itself for Afghanistan Deployment

By LTC Christopher W. Wendland and MAJ Lucas R. Connolly

The 2nd Battalion, 15th Field Artillery, *Allons* Battalion, organic to 2nd Brigade Combat Team, 10th Mountain Division, deployed to the Joint Readiness Training Center (JRTC), at Fort Polk, La., in March 2012, configured as a standard direct support artillery battalion, comprised of two howitzer batteries, each with two platoons consisting of a fire direction center (FDC) and four M119A2 (105 mm) howitzer sections, for a battalion total of four FDCs and 16 howitzer sections. The battalion controlled all Fires in what is termed as 'centralized control' where each of the batteries' FDC receives their orders to fire artillery from the battalion FDC. The *Allons* Battalion performed exceptionally well and were 'ready for war' in the eyes of our JRTC trainer/mentors by the conclusion of the rotation. However, in late May, the battalion received word that it might deploy to Afghanistan and upon further research on artillery configurations in Afghanistan, the *Allons* Battalion would need to drastically reconfigure and in a very short span of time.

The *Allons* Battalion leadership decided to reconfigure the battalion into 'decentralized hybrid firing platoons' prior to their mission rehearsal exercise (MRE) at the National Training Center (NTC), Fort Irwin, Calif., rotation in October 2012. 'Decentralized' would require each firing platoon to no longer take fire orders from the *Allons* Battalion FDC; instead it would require each artillery platoon to embed directly within a maneuver unit and take commands directly from that maneuver battalion. Firing platoon leadership (lieutenants/sergeants first class) would no longer have the direct mentorship and oversight from the battalion leadership (artillery major/captain/master sergeant), who previously worked at the platoon level and traditionally managed the gunline, FDC standard and ammunition management across each of the platoons within a battalion/battery, but would now need

to manage all artillery related items on their own.

The 'hybrid' portion of 'decentralized hybrid firing platoons' would require each of the firing platoons to certify and qualify on two different howitzer systems: the traditional light howitzer, the-M119A2 and the towed M777A2 howitzer. The intent would be for a firing platoon to manage both howitzer systems simultaneously. The FDC would process the requests and send data down to the gunline, and the howitzer sections would need to be proficient on both howitzer systems. The *Allons* Battalion leadership wanted to ensure the battalion would be prepared for any mission or contingency. With the current force cap requirements continuing to decrease in Afghanistan, leadership was uncertain if some forward operating base/combat outpost (FOB/COP) locations established as artillery pure (all M777A2 or all M119A2) would require a hybrid configuration to maximize maneuver commander options on the ground. The *Allon*'s leadership did not want to certify sections in combat on a system that they did not train on extensively in peacetime and did not want to delay combat operation support to maneuver commanders due to either manpower or equipment shortfalls.

The *Allons* Battalion also identified that they would need to field two security force advise and assist teams (SFAAT) as part of the requirement to improve the Afghan National Army's (ANA) ability to deliver critical enablers, such as artillery Fires. The battalion would field one team to advise and assist the combat support battalion, a battalion within the ANA brigade made up of three subordinate units, an artillery battery, an engineer company and a reconnaissance company. This SFAAT would provide advice on how to employ and sustain the brigade's combat enablers and was a perfect fit for an artillery battalion S3 to lead. The team received experts from the brigade's special troops battalion for the necessary engineer experience and also received experts from the brigade's reconnaissance, surveillances, and target acquisition (RSTA) squadron for reconnaissance experience. The *Allons* Battalion also created a specialized artillery team, subordinate to the combat support battalion SFAAT, to specifically advise and assist the Afghan artillery battery comprised of D30 howitzers. This task was previously accomplished by NATO Training Mission-Afghanistan Operational Mentors/Liaison Teams (NTM-A OMLTs) with support from the full strength artillery battalion deployed in sector with the full support of the commander of the International Security Assistance Force (ISAF) Joint Command (COMIJC) who made developing ANA Fires capabilities a top priority. With a limit to the number of Soldiers it could deploy, the *Allons* Battalion met this requirement by hand-selecting the best and brightest *Redlegs* in the formation to support this critical mission.

Hybrid Training. The *Allons* Battalion leadership intended to bring three decentralized hybrid platoons to NTC for their MRE. Each firing platoon would be embedded with a different maneuver battalion and they wanted to ensure the maneuver battalions were familiar with their respective platoon. To achieve this goal, the *Allons* Battalion developed a three-month training program that gradually improved Soldier proficiency on both weapons systems, as well as gradually transitioning them from centralized to decentralized control, all while ensuring maneuver battalion and company fire support officers (FSOs)increased their understanding of the decentralized firing platoon soon to be at their disposal.

June 2012. M119A2 Certification/ Qualification Completed; all howitzer section chiefs, and FDC section chiefs, 'Big 3' completed certifications and qualification on M119A2s; four FDCs and eight howitzers.

Artillerymen from 2nd Battalion, 15th Field Artillery, 2nd Brigade Combat Team, 10th Mountain Division, load an 155 mm artillery round in to the M777A2 during a live-fire exercise at Fort Drum, N.Y. (Photo by Mark A. Moore II, U.S. Army)

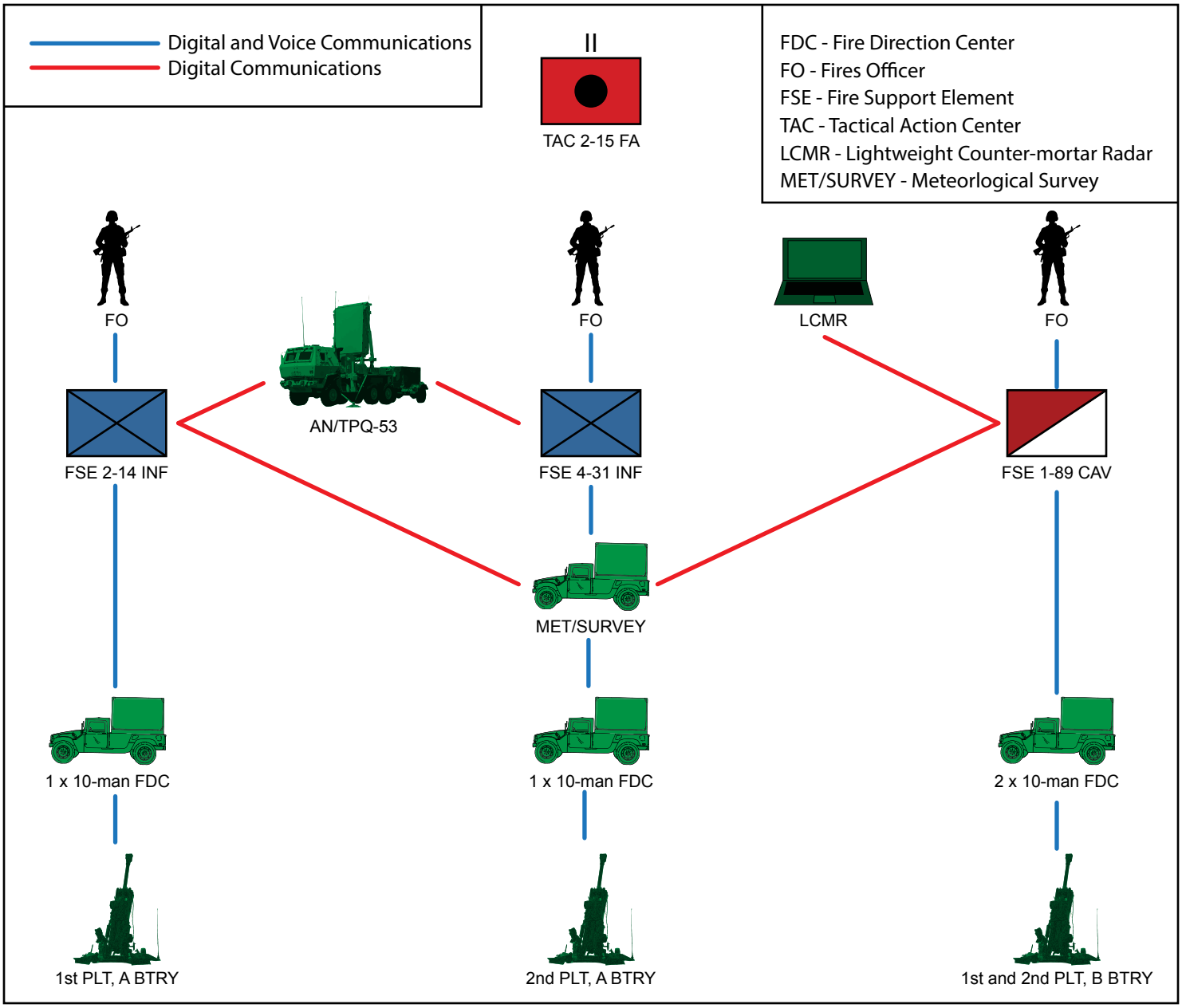


Figure 1: Task organization for phase 1 full sensor-to-shooter digital rehearsal validation. Communications architecture employed to validate the sensor-to-shooter links during Operation Allons Fusion. (Illustration by Rick Paape, Jr., information from CPT B. Gatrell, 2nd BN, 15th FA)

July 2012. M777A2 New Equipment Training / New Equipment Fielding.

- Three FDCs and six howitzer crews (formed from two M119A2 crews) completed their necessary three-week training and conducted their live-fire
- Rebuild platoon FDCs each with two Advanced Field Artillery Tactical Data System (AFATDS), two CENTAURS, and two charts (one per howitzer type); inventory all brigade digital Fires equipment for communication exercise (COMMEX)

August. Three-Week Allons Fusion Operational Concept.

Week One. Certify Howitzer Crews and Conduct Brigade-Wide Digital COMMEX.

- Three FDCs and six howitzer crews completed M777A2 section Table VI
- Digital COMMEX with all artillery equipment and all brigade fire support teams from sensor to shooter; forward observer (FO) (MARK VII) to company fire support officer (FSO) Precision Forward Entry Device(P-FED) to battalion fire support element (FSE) AFATDS to platoon FDC, AFATDS to gunline gun display unit (GDU) (either M777A2 or M119A2)
- Included in COMMEX; maneuver battalion mortar systems; radars; lightweight counter-mortar radars (LCMRs); meteorological section

Week 2. M777A2 Live-Fire Exercise (LFX) Familiarization, Digital Sensor to Shooter, FDC/FSEs co-located.

- Three FDCs and six howitzers completed M777A2 live-fire familiarization; one FDC for two howitzers with maneuver company fire support officers (FSOs) conducting call for fire (CFF) to their respective maneuver

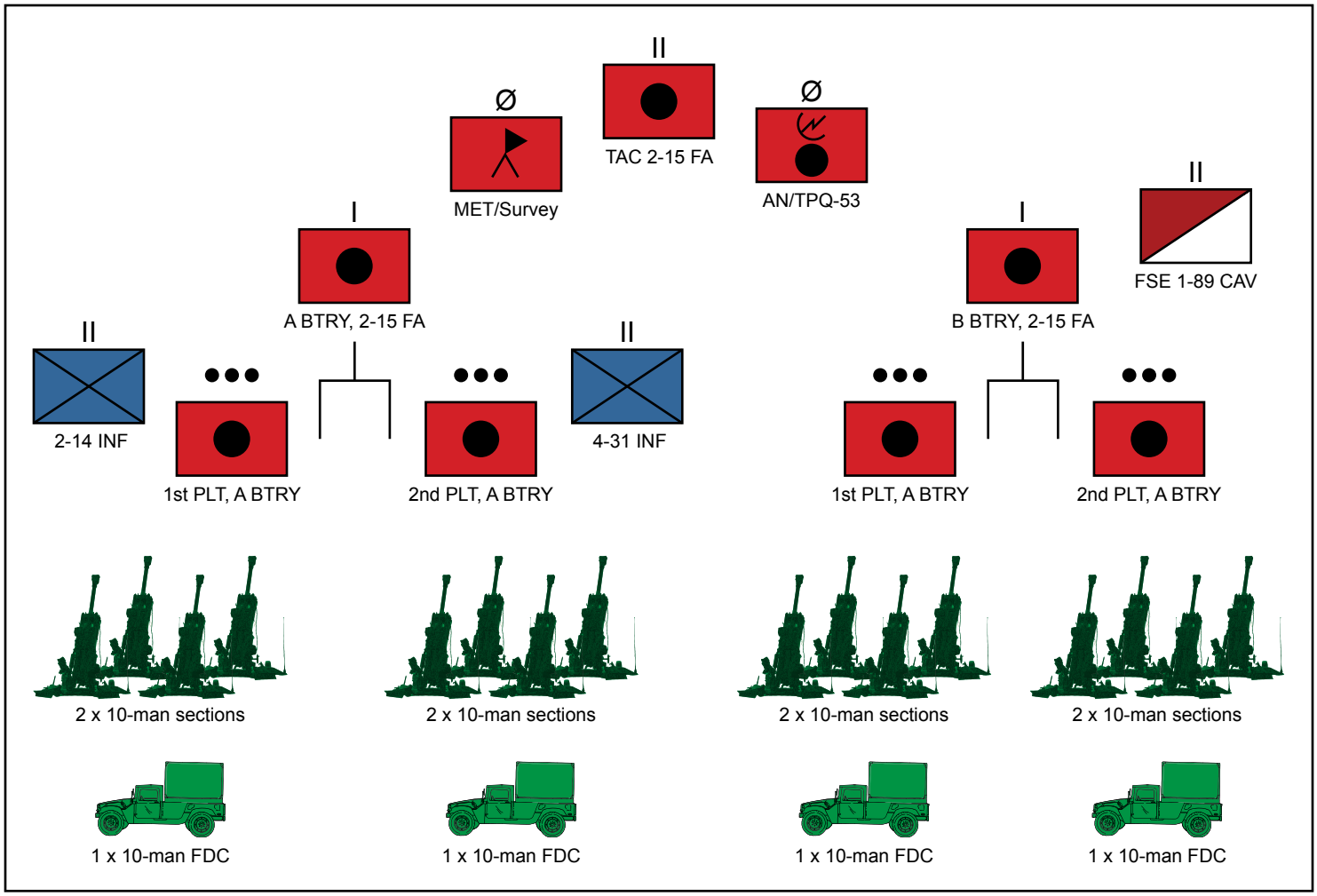


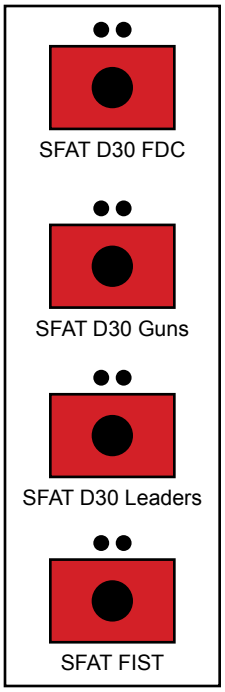
Figure 2: Initial task organization developed for Operation Allons Fusion, the reorganization of 2-25 FA BN for decentralized hybrid platoon operations. (Illustration by Rick Paape, Jr., information from MAJ Lucas R. Connolly, 2nd BN, 25th FA)

battalion FSE co-located with their respective firing platoon.
- All CFFs sent digitally sensor to shooter

Week 3. Capstone Events; M119A2/M777A2 Fires.
- Company FO sends mission requests to battalion FSEs/firing platoons to gunline digitally and request either M777A2 or M119A2
- Gunlines rotate from M119A2 and M777A2 employment and conducts coordinated illumination utilizing both M777A2 (illumination) and M119A2 (high explosive).

Upon conclusion of *Allons* Fusion, the battalion deployed to the NTC for its mission rehearsal MRE. Each platoon FDC worked inside their respective maneuver battalion alongside the FSE. The fire direction officer controlled two M119A2 howitzers and one M777A2 howitzer during the rotation and quickly learned the importance of decentralized ammunition management, especially with two different howitzers systems and multiple ammunition lots. The firing platoon leader and platoon sergeant also learned about their added role of maintenance and sustainment in a decentralized role. Normally a battery commander and first sergeant oversee the logistical functions of the firing battery, but in the decentralized mode, the platoon leadership had to become extremely proactive in communicating their requirements to the maneuver commander and keeping their organic artillery headquarters routinely informed.

SFAAT Training. To ensure the SFAATS were adequately prepared for their wartime mission, all available training options were explored. Each SFAAT member attended the SFAAT Academy at JRTC, which provided the necessary advise and assist baseline knowledge. To increase this knowledge base on the artillery aspect of the mission, each of the D30 team members attended two additional courses; one was held at Picatinny Arsenal, N.J., and consisted of a two-day basic familiarization on the D30 howitzer. The second was held at the Joint Maneuver Readiness Center (JMRC) in Hoenfels, Germany, consisting of a 10-day, D30 certification course. With the advisor basics covered by JRTC, and the D30 specifics covered by Picatinny and JMRC, the battalion tested the team's temperament under realistic conditions at NTC. In an effort to allow the team to understand the mundane aspect of their new function while deployed, the team taught and advised non-13B Soldiers 'Afghan role-players' on how to fire a M119A2 howitzer during their 14 days in the 'box' and trained fire direction Soldiers (also Afghan role players) on manual gunnery. The capstone event was a successful M119A2 live-fire executed en-



Team Mushawar Tobchee

D30 Training Team

Mission: The 2nd BN, 15th FA D30 SFAT advises, assists and trains 201st Corps Afghan National Army Field Artillery elements in the art and science of the delivery of close Fires in support of combat operations.

Key Tasks:

- Reinforce conventional force (CF) partnership activities
- Train Afghan cannoneers, fire support teams (FIST) and fire direction centers (FDC)
- Advise Kandak leadership on techniques, tactics and procedures for artillery employment
- Assist Kandak and Corps leadership in the development of a sustainable Fires capability in a post transition environment
- Advise CF leadership on the KDK's level of readiness and provide recommendations for integration into joint combined combat operations

Possible Manning

13A	O4	Team Leader
13Z	E8	Team NCO in charge
13A	O3	Team Executive Officer/S3
13A	O2	Fire Support Officer Trainer
13A	O2	Fire Direction Center Trainer
13A	O2	Platoon Trainer
13B	E7	Platoon Trainer
13F	E7	Fire Support Element
13D	E6	Fire Direction Center Trainer
13B	E6	Fire Support Team Trainer
25B	E5	Signal Trainer
68W	E5	Medical Traininer
63B	E1-4	Maintenance Trainer

Figure 3: Initial concept for D30 Security Force Advise and Assist Teams (SFAAT) fielding. (Illustration by Rick Paape, Jr., information from LTC Christoper Wendland)

tirely by the ANA on the last day of the NTC rotation.

Deployment to Afghanistan. Following the battalion's rapid transformation, reorganization and retraining it deployed to Paktika province in southeastern Afghanistan. Artillery advisors from the Red Team reached their destination FOBs and COPs on Paktika's eastern-most frontier, where they began mentoring and training the D30 cannon crews of the Afghan army's 4th Battalion, 2nd Brigade 203rd Corps. Their training helped them immensely, some even commenting that the Afghans they were training were more competent than the role players at NTC, whose complete inexperience and deliberate malingering was near maddening. Howitzer crews from the battalion deployed to the same location and were not unpacked for long before they faced enemy rocket fire, which they answered in kind with 155 mm and 105 mm counter-fire. Green Team advisors moved to a camp called Super FOB, where they immediately began working with the remainder of the 4th Battalion coaching, teaching and mentoring the senior leaders of the battalion along with the leadership of the engineer and reconnaissance companies. *Allons* Battalion fire support noncommissioned officers and officers helped staff the remaining SFAATs as Fires advisors spread throughout the remainder of the infantry battalions deployed across Paktika province to develop the ANA's ability to employ artillery, as well as mortar Fires. As of March 2013, one would be hard pressed to travel to a COP, FOB or outpost in Paktika province without encountering an *Allons Redleg* hard at work firing, surveying, teaching, training, mentoring or engaging, embedded with or alongside an Afghan army counterpart.

The *Allons* Battalion completely reinvented itself in more than 180 days in preparation for deployment to Afghanistan. It became completely decentralized and hybrid capable, with platoons trained to operate independently and work alongside maneuver battalion FSEs. Howitzer crews became certified to fire either M777A2 or M119A2 howitzers dependant solely on their respective maneuver commander's mission and intent. It fielded two SFAAT teams prepared to advise and assist Afghan National Army counterparts on Fires employment, as well as D30 howitzer sustainment and ammunition management. The *Allons* Battalion remains deployed at this time. *Allons*!★★

Lieutenant Colonel Christopher W. Wendland graduated from the United States Military Academy in 1994, and was commissioned as a second lieutenant in the Field Artillery. Wendland's academic degrees include a Bachelor of Science in Mechanical Engineering (Aerospace) from the United States Military Academy, 1994; Master of Science in Space Operations Management from Webster University, 2005; and Master of Science in Joint Campaign Planning and Strategy from National Defense University, 2009. He is currently the commander of the 2nd Battalion, 15th Field Artillery, 2nd Security Force Assistance Brigade, deployed to Paktika province, Afghanistan.

Major Lucas R. Connolly graduated from the University of New Hampshire in 1997, and was commissioned as a second lieutenant in the Field Artillery. Connolly's academic degrees include a Bachelor of Arts in Sociology from the University of New Hampshire, 1997; Master of Arts in Management and Leadership from Webster University, 2009. He is currently an SFAAT team leader, Headquarters, 2nd Battalion, 15th Field Artillery, deployed to Paktika province, Afghanistan.

1LT Audrey Griffith (left) and SPC Heidi Gerke, both with the 92nd Engineer Battalion, stand guard during a force protection exercise at Forward Operating Base Hadrian in Uruzgan province, Afghanistan, March 18, 2013. (Photo courtesy of the U.S. Army)

Un-Gendering Service

By Professor Gene Kamena

Any commentary offered by a man to women regarding their military service is suspect. A commentary written by a retired infantryman expressly for women, who desire to serve in the infantry, or any direct combat position, is very suspect. My sergeant major once admonished, "Sir, talk about only what you know." Thirty years in the infantry, two wars, multiple deployments, and time to reflect, strengthens my thoughts and my desire to "talk about what I know." My motives are pure, but reader beware, this work may fall outside of the restricting boundaries of political correctness from time to time. That is okay; in the infantry talk is plain and direct.

Wrong Lessons. Our recent wars in Iraq and Afghanistan will define, for this and the next generation, perceptions of what combat is and what it is not. For the most part, the term 'frontline' in Iraq and much of Afghanistan has little meaning. There were and are, noted exceptions; the battles of Najaf, Fallujah, and the fighting in the mountains of Afghanistan, offer glimpses into the world of the infantry. Conditions are severe. However, after the initial assault into each theater of operation, the 'frontline,' more often than not, devolved into the front gate of one's forward operating base (FOB.) Once outside the relative safety of the FOB, all were equally vulnerable to attack.

Women certainly did their part and did it well. On today's counterinsurgency battlefield, women were, and are killed, wounded, and taken prisoner alongside their brothers-in-arms. More than that, women made significant contributions to the mission at hand. No one questions, least of all this author, their intelligence, bravery, and patriotism. I have seen what women can do in combat, and respect their abilities. Never-the-less, service rendered by women in Iraq and Af-

1LT Krista Searle, an intelligence officer with 1st Battalion, 94th Field Artillery, 17th Fires Brigade, before she attends the selection for the U.S. Army Cultural Support Program, March 7, 2013. If selected, Searle will join a Cultural Support Team, an all-female element that conducts missions with Special Forces units in Afghanistan. (Photo by SPC Nathan Goodall, U.S. Army)

ghanistan, exceptional as it was and is, does not equate to being in the infantry.

We must take care not to carry our current view of combat with us into the next war. No one knows what the future holds; the next fight might not be a counterinsurgency fight among the people. Extended periods of time in remote areas under harsh conditions is the standard against which all frontline troops must train.

Our Enemies Do Not Care. Our current and future enemies might find interesting the fact that we, as a nation, believe in diversity and act on it, but they really do not care. For them it is all about winning and losing. So it must be with us. Whatever actions we undertake, the outcome must be a better military, more capable and deadlier. The purpose of the military is to protect our nation's interests, to deter our enemies, and if need be, to fight and win our nation's wars. My experience informs me that diversity has a place in making the force better, but diversity must never become the single measure of merit or the ultimate objective.

Enforce Standards, Not Gender Barriers. Present day standards for the infantry work, but we must watch the temptation to wield standards as gender-barriers. The physical requirements for becoming an infantryman are merely the price of admission; battle always exacts a higher payment. The women with whom I served would not want the standards diluted. They want to make it on their own. Remember, there are many men who cannot qualify, and achieving physical standards is no guarantee for success. Common standards also go a long way to ensure social cohesion. There must be one standard for all, it must be reasonable, published and fairly enforced.

What Matters. Heart and desire matter…a lot. The unwritten dictum of the infantry is "stick together, never give up, and always take the fight to the enemy." Women want to become part of the infantry for a myriad of reasons. Some women seek a different or more challenging venue for their service. As with my infantry brothers, women do not like being told that they cannot do something. However, activists need not apply. The impure motives are a distraction. People in the infantry could not care less who the first female will be to break the gender-barrier, what matters is if she can do the job, take care of herself, and accomplish the mission--results matter. On the battlefield, only results matter.

Create More Paths To The Top. There is increased emphasis to have the military mirror civil society. That is a nice thought, but when less than one percent of the nation risks all to defend the other 99 percent, that is a tall order. Yes, we should try, within reason, but never at the expense of capability or talent. More important than mirroring society is to ensure that the best people, male and female, within the ranks have multiple paths to the top of the military profession. Mere service in any job or specialty should not guarantee a predetermined outcome. Talent and potential, fairly gauged, must be the keys to upward mobility. All services can and must do more to open paths to the top for the best people, regardless of gender.

Finally, a personal word for women who want, really want, to join the infantry. Be strong, never give up, do your best, and know that if you meet all standards and do your job, you will be accepted. Life in the infantry is primal and severe; but it is also fair.

Now is the time to 'un-gender' military service by allowing the standard to be the standard, understanding that acceptance cannot be mandated, that it must be earned.★★

Professor Gene C. Kamena, is a seventh year faculty member at the Air War College; he serves as the course director for the Joint Strategic Leadership Course in the Leadership and Warfighting Department. He retired from the Army as a colonel of infantry and holds a B.A. in history from Auburn University, Ala., and MMAS degree from Fort Leavenworth, Kan. Past assignments include: commander of the 2nd Brigade, 1st AD; chief of staff for the 1st Infantry Division; director of staff of U.S. Space Command; and the deputy chief of staff for U.S. Northern Command. In 2004, he served as director for all Iraqi security forces. In 2005, he recruited, trained, and led an Iraqi special commando border brigade in the Al Anbar province along the Iraq-Syrian border. His last active duty assignment was as the senior Army advisor to the Air University at Maxwell, AFB. He is a well-published author in the areas of leadership and ethics.

Chris Geurtsen (left), a field program officer for the U.S. Agency for International Development (USAID), and U.S. Navy Lt. j.g. Matthew Stroup (third from left), public affairs officer for Provincial Reconstruction Team (PRT) Farah, meet with Farah Director of Information and Culture, Farid Ahmad Ayubi (right) during a key-leader engagment at the director's office in Farah City, Oct. 30. PRT Farah's mision is to train, advise, and assist Afghan government leaders at the municipal, district, and provincial levels in Farah province Afghanistan. Their civil military team is comprised of members of the U.S. Navy, U.S. Army, the U.S. Department of State and USAID. (Photo by Lt. Benjamin Addison, U.S. Navy)

Unburdening Culture:

Implications for the United States Army Training and Education

By COL (Ret.) Eric W. Stanhagen and Daryl K. Liskey, Ph.D.

Experience from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) made clear the importance of cultural competence for successful mission execution. In 2009, the U.S. Army subsequently published the Army Culture and Foreign Language Strategy to organize cultural training and education for the general purpose forces (GPF). The Army today confronts how best to institutionalize cultural training and education in an austere fiscal environment while drawing down in Afghanistan. Looking forward, cultural competence will remain a key enabler for an adaptive, expeditionary, and regionally aligned force that is capable of operating as part of the joint force globally in the 21st century.

In our judgment, Army cultural training and education outcomes for the GPF to date have been mixed. This, in part, is because there is a lack of a common understanding of what culture is and how it concretely adds to warfighter outcomes. Culture is a phenomenon we all recognize but have difficulty precisely defining. Frequently, it is defined by stringing together different and sometimes incompatible concepts, which metaphorically defines the swamp but obscures the key terrain. As commonly used in the Army, culture is an over-burdened term. By meaning too much, it means very little that is operationally relevant. Multiple and unclear understandings of culture have contributed to ambiguous learning objectives, conflicting lines of effort, and disagreements about curricula content. A common understanding of culture relevant for warfighter outcomes is needed for culture to be a useful conceptual tool for military operations, training and education.

This paper advances an argument for an academically grounded, narrow understanding of culture that can be integrated into military methodologies. While these views are contested among academics, we seek to highlight the importance of this debate for military cultural training and education. We then discuss the implications of our understanding

of culture for training and education in the U.S. Army. We conclude with a set of recommendations on a way forward for institutionalizing cultural training for the GPF. We argue that learning about culture is necessary to understand the human dimension of the operational environment, but is not sufficient. It must be augmented with knowledge from other social science disciplines and history.

SGT William Russell, a security force team member for Provincial Reconstruction Team Farah (left), pulls security during a key-leader engagement at Farah City Hospital. (Photo by Chief Petty Officer Josh Ives, U.S. Navy)

Unburdening Culture. The word 'culture' originally comes from the Latin word 'cultura' meaning 'cultivation.' From this origin, we inherited two basic traditions for understanding culture. In German, 'kultur' originally referred to a process of becoming civilized. Towards the middle of the 19th century, 'kultur' came to mean a mental state shared among a people. The second tradition is inherited from the British where culture is understood as civilization (e.g., Western civilization and American culture). According to Edward B. Tylor, widely regarded as the founder of British social anthropology, "Culture or civilization… is that complex whole which includes knowledge, belief, art, law, morals, customs, and any other capabilities and habits acquired by man as a member of society." These two understandings of culture—shared mental activity and the complex whole—are current in American academia and influence different understandings of culture in the U.S. Army.

Complex Whole. The challenge in applying a Tylor-inspired concept of culture for military training and education is that an understanding of the 'complex whole' of human activity can rarely be achieved and is analytically intractable for existing military methodologies. To be clear, the holistic approach made important and useful contributions. Anthropologists established the importance of belief (symbolic) systems, a native perspective, affiliation patterns (like kinship and patron-client relationships), status structure, social functions, non-state societies, detailed field work and linguistic competency, to name but a few. Their goal is to develop a holistic understanding about the activities of a people.

While such a holistic methodology is helpful as an academic approach, it is unlikely to be a useful approach for the training and education of Soldiers beyond perhaps a few highly educated specialists. The standard methodology for cultural research requires specialized advanced education and long, unobtrusive participant-observation. Soldiers rarely stay among a foreign people for long, and they are not unobtrusive observers; they are noticed and impact

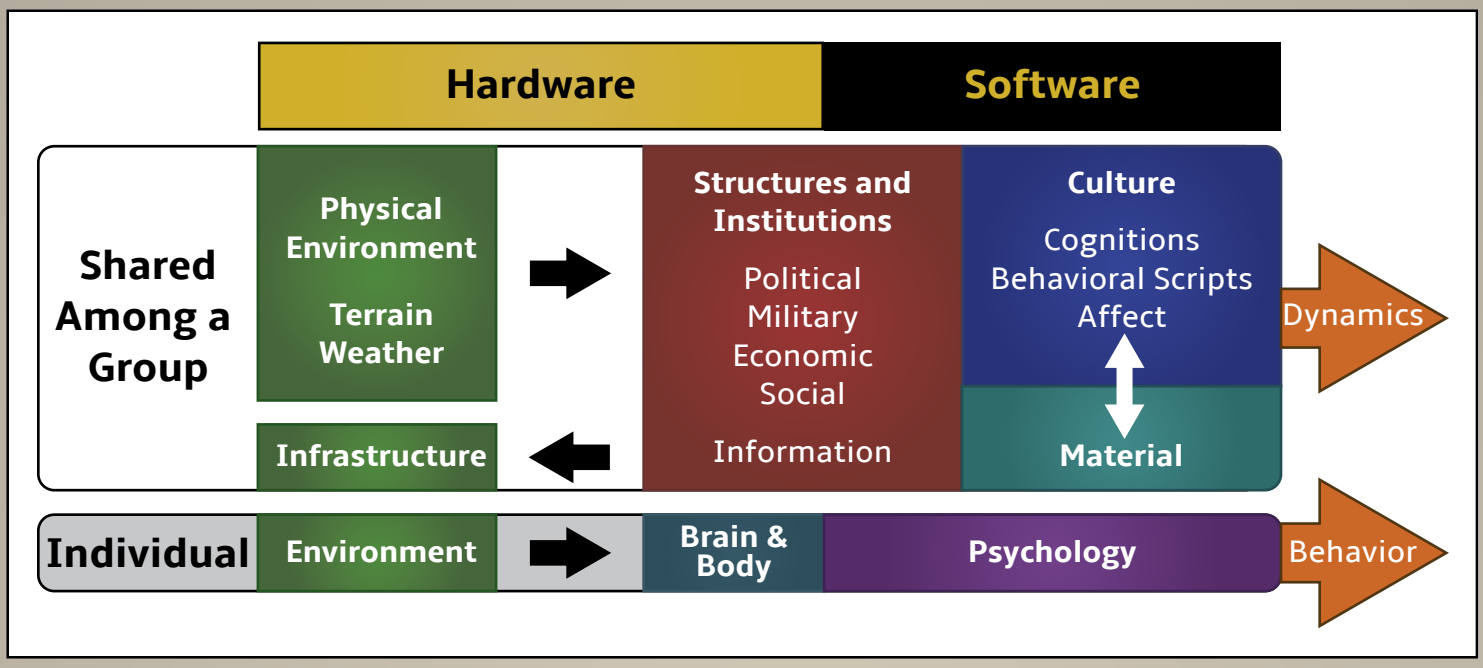


Figure 1: Cultural hardware and software. (Illustration by Rick Paape, Jr., information provided by COL (Ret.) Eric W. Stanhagen and Daryl K. Liskey, Ph.D.)

substantially what they observe. Additionally, time is not available for the significant amount of training, education and experience necessary to achieve such a capability, particularly for the general force.

Further, holistic cultural judgments are simply not achievable using existing military analytical methods. Military analysis is performed by functional staff elements, manned by generalists not specialists, and consists of using doctrinal approaches that can be learned quickly. Knowledge must be immediately accessible and comprehensible, it must exist in a form that can be clearly communicated, and it is usually constrained to the immediate situation at hand. While suitable for its intended purpose, it is unreasonable to expect the military analytical methodology to produce insight at the level of a realization of the whole of human activity suitable to inform a judgment.

Useful Understanding. On the other hand, culture defined as a shared mental state of a people in the German tradition can be incorporated into military methodologies, similar to the disciplines of history, politics and economics.

In his book, *Cultures and Organizations: Software of the Mind*, Geert Hofstede explains his understanding of culture with the analogy of 'shared software' among a people. Similarly, anthropologist Clifford Geertz in The Interpretation of Cultures writes:

"Culture is best seen not as complexes of concrete behavior patterns—customs, usages, traditions, habits, clusters—as has, by and large, been the case up to now, but as a set of control mechanisms—plans, recipes, rules, instructions (what computer engineers call 'programs')—for the governing of behavior."

According to Hofstede, culture is not behaviors per se, but shared software that programs behaviors. Shared behaviors, like common material artifacts, are the outcome of shared programs—i.e., culture. Based on Hofstede's understanding of culture as shared programs, culture is understood to be: "the pattern of shared cognitions, behavioral scripts, and affects that is learned and inherited by a people." The component elements stated briefly are:

- 'Pattern' is regular interconnected elements
- 'Shared' is what is held in common by a group of people
- 'Cognitions' refers to values, beliefs, and ways to think: perceptions, understanding, and protocols for making decisions
- 'Behavior scripts' refers to mental models for behaving (norms) and communicating
- 'Affect' is the shared feelings of what is significant
- 'Learned' is what is acquired that is not a biological inheritance
- 'Inherited' is what is received from other people across time

By analog, and as shorthand, culture is the shared 'software' that is learned and inherited; the programs (cognitions, behavior scripts, and affect) that direct responses to people and the environment. This statement is subject to two important clarifications. What is 'shared' is not fully the same as individual psychology. Culture includes belief systems that evolve 'outside the head.' And not all learned software is based on 'inheritance.' Software in the present is based on universal responses and the subject of study for most of the social sciences.

The shared software of culture is run on the hardware of environmental variables; similar to the software of psychology which is run on the hardware of the brain, endocrine and nervous systems of the body. Environmental variables are observable entities, institutions and behaviors, many of which the military traditionally includes in analyzing the operational environment; however, often missing is the 'software' of culture. Cognitive psychologists have robustly demonstrated that knowledge of software is essential to understand outputs

or actions. The same hardware with different software can lead to different outputs.

How output or action differs among foreign populations was identified as a gap in understanding the operational environment during OEF and OIF. To not consider cultural software implicitly assumes people respond to their environment similarly – an assumption often proven through hard experience to be false. Understanding culture as shared software that is inherited and learned allows us to better assess the motivations of foreign populations that differ from our own.

Implications for Army Military Cultural Education and Training. Defining culture as a pattern of shared cognitions, behavioral scripts, and affect learned and inherited by a people reduces the scope of what culture contributes to the warfighter, and it illuminates the greater need for the other social science disciplines in U.S. Army education and training. In our view, defining culture as a holistic understanding contributed to unrealistic expectations for what cultural education and training could contribute to the military. Culture is only one of a number of factors important for developing competence and it may not always be the most important. For example, engagement with members of foreign populations requires individual-level skills, an area where psychology may contribute more than culture.

Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3126.01A, *Language and Regional Expertise Capability Identification and Planning*, provides guidance for the identification and evaluation of proficiency for foreign language, regional expertise and cultural competencies. The instruction identifies 12 regional expertise and cultural competencies and groups them into three categories: core, leader/influence, and regional/technical. These competency categories contribute to military outcomes on the battlefield as follows:

1. **Awareness (Core).** Decreases cultural friction with foreign populations among which we operate.
2. **Skills (Leader/Influence).** Increases operational effectiveness when operating with partners across the joint, interagency, intergovernmental, and multinational (JIIM) or populations with different cultural backgrounds.
3. **Knowledge (Regional).** Fills gaps in understanding of the operational environment and improve course of action (COA) development, execution, and assessment of effects achieved.

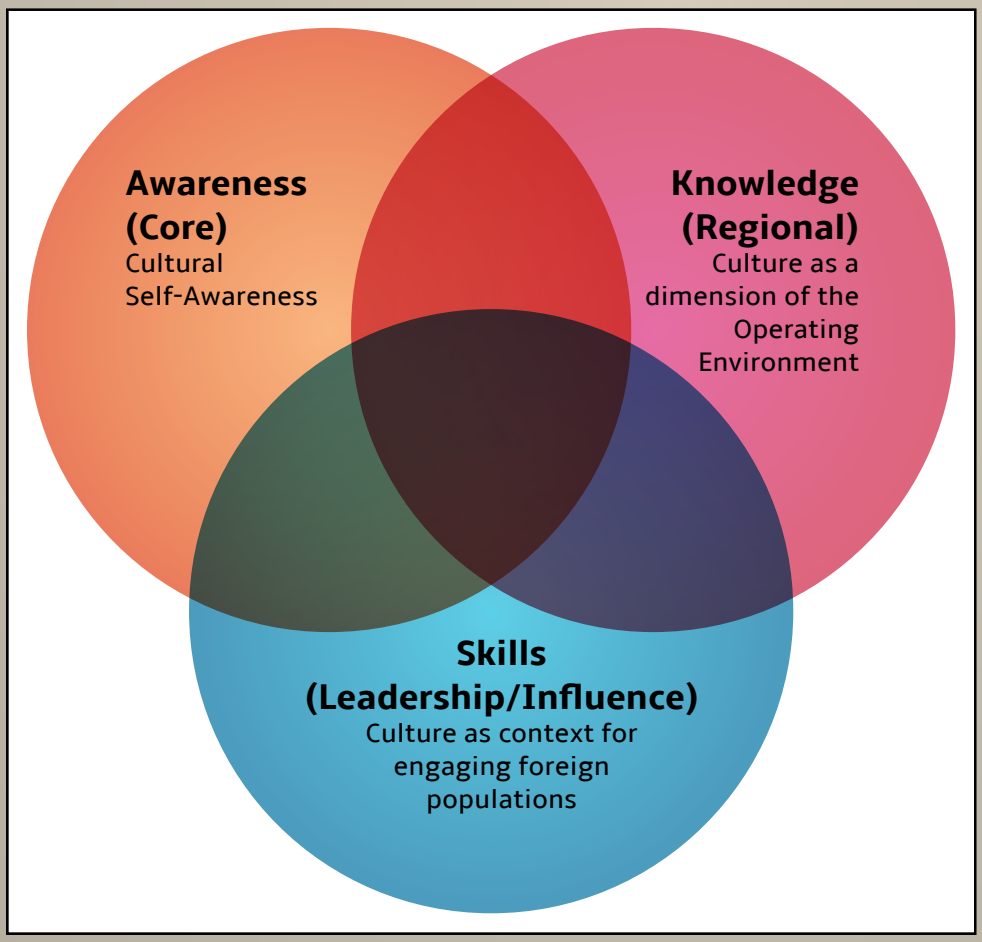
Clearly identifying how culture contributes to the 12 regional expertise and cultural competencies is critical to developing a balanced education and training program. Mapped out below is what culture, defined as shared software learned and inherited, contributes in relation to other capabilities needed to achieve the military outcomes for each competency category.

Awareness (Core): Decreasing Friction When Operating Among Foreign Populations. Cultural self-awareness is the comprehension of one's own cultural biases and appreciation of how cultures differ from one's own. Cultural self-awareness education and training includes the four competencies that CJCSI 3126.01A refers to as 'Core:' understanding culture, applying organizational awareness, cultural perspective taking, and cultural adaptability. Differences in cultural software between American and foreign populations can lead to frustration, prejudice, and animosity when cultural self-awareness is lacking. Self-awareness of our and their cultures, the cultural stress cycle (culture shock), and valuing self-discipline, mission, and respect can help moderate or suppress behaviors that contribute to friction, particularly among those with personalities that are not naturally open and respectful.

Much of the friction between U.S. troops and foreign populations is rooted in individual personality factors, rather than cultural ones. While personality factors may be the most important, cultural self-awareness training can contribute to reducing friction and provides an effective tool with fewer ramifications than screening personalities and reassigning those who are at greatest risk for creating incidents.

Cultural self-awareness training should be part of Army-wide charac-

Figure 2: Culture and competencies. (Illustration by Rick Paape, Jr., information provided by COL (Ret.) Eric W. Stanhagen and Daryl K. Liskey, Ph.D.)



ter and leadership training to enable effective operations globally and with JIIM partners. Such training should be on par with other core Army training programs for character, such as equal opportunity or sexual harassment prevention. In fact, training in these areas can be positively reinforcing in shaping the Army's culture. In addition to Army-wide training, cultural self-awareness training should continue as part of pre-deployment training where specific culture practices and beliefs for the target country are emphasized.

Skills (Leader/Influence): Operational Effectiveness Among Foreign Populations. Skills for operating effectively among foreign populations and partners include the CJCSI 3126.01A, 'leader/influence' competencies of building strategic networks, cross-cultural influence, organizational competence, and utilizing interpreters.

Foreign population engagement skills should be integrated as part of human dynamics training, rather than taught as stand-alone, cross-cultural skills training, similar to the practice at the U.S. Army John F. Kenedy Special Warfare Center and School (SWCS), Fort Bragg, N.C. Psychology likely contributes more that is central for training individual-level warfighter skills, while cultural considerations largely are supporting. For example, effective techniques for negotiating are similar

SPC Hussein Farhadikia, an interpreter/translator, assigned to 51st Translator Interpreter Company, takes notes during a mock regional medical meeting at Fort Irwin, Calif. His company provides host nation translation and culture advice to units during their training at the National Training Center to prepare them for their missions prior to deployment. (Photo by SSG Antwaun Parrish, U.S. Army)

Soldiers participating in Yama Sakura 63 at Camp Sendai, Japan, learn about calligraphy in a recent cultural exchange. (Photo by SGT William Jones, U.S. Army)

across cultures. A poor negotiator can fail regardless of the amount of cultural training. However, culture does contribute an understanding of a wider array of possible behaviors and ways of thinking that are not common in one's own culture. Understanding cultural differences can provide an edge: a better insight into the opponent, possible tactics to employ that are not common in one's own culture, how they communicate, and their expectations. Incorporating cultural considerations, as part of training only for specific military tasks where it matters will, have a positive impact on developing capabilities, while reducing the chance that it will be ignored based on a perception that cultural impact is over emphasized.

The requirement to address cultural considerations in military engagement skills training varies across military occupational specialties (MOSs). MOSs that involve little engagement with foreign populations need little training on cultural factors. At the other extreme, MOSs that involve operations immersed among a foreign population or that specialize in directly influencing foreign populations require intensive training in relevant skills and related cultural considerations. Each branch or functional proponent should identify tasks and required skills, and related cultural considerations for training and education programs under their cognizance.

Knowledge (Regional): Operational Environment. Culture, understood as inherited software, is a dimension for each of the military operational variables: political, military, economic, and social (PMES). Before explaining this claim, it should be mentioned these military operational variables are also disciplines within the social sciences. These disciplines were established around explanatory goals for directing research on critical human activities. In his 1951 book, "The Social System," Talcott Parsons identifies several critical human activities or operations:

- Political – power and decision making
- Military – employment of physical force
- Economic – production and distribution of resources
- Social – solidarity and polarization
- Information – communication
- Infrastructure – macro engineering and management systems

In common military practice, these operational variables are often used to classify institutions (rather than effects), which conflate explanation (causal analysis) and description. (For example, a religious organization may fit in multiple explanatory categories depending on the analytical objectives.) An institution, as commonly used by social scientists, is routinized behavior or practice such as ringing a bell to start a class, a law, or an organization. Institutions are 'behaviors' or hardware (see Geertz's view above). As noted, outcomes or effects are the result of the interaction between hardware and software. That is, culture is a dimension that crosses the PMES operational variables—it is present and provides independent explanation across these operational variables.

Both components of software—universal responses (drawing from the social sciences) and cultural inheritance (drawing from anthropology and history)—are important for analyzing effects. Inclusion of both provides an analysis of similar responses given the situation and institutions, and differences in response given cultural inheritance. Reality usually is mixed and it is the interaction between environmental and cultural factors that provide critical insights into population motivations and behaviors.

The importance of culture across the PMES in academia is evidenced in the establishment of the sub-disciplines of political culture (which includes military culture), cultural economics, and cultural sociology. These sub-disciplines identify important cultural factors—such as legitimacy, cultural based ways of war, and subsistence economic beliefs—as related to institutional structures.

Not including culture in the analysis of the operating environment risks

creating gaps in the analysis as a result of not systematically considering differences in factors motivating separate groups. For example, legitimacy often is considered to be derived from the rule of law (rational-legal institution), a view that misses what Max Weber referred to as traditional and charismatic (cultural) sources of legitimacy, such as may exist among tribes. Additionally, risk increases for introducing error and ethnocentric bias where explanation of differences is left to common sense inferences rather than systemic analysis.

CJCSI 3126.01A Regional/Technical competencies include understanding cultural considerations and other regional factors. Culture should be taught in military education as a dimension for describing and analyzing the operational variables—culture as the inherited software dimension for PMES. When cultural instruction is taught separately it is not always clear to students how culture relates to the PMES variables; students are left to draw these inferences by themselves or may dismiss culture altogether.

Specific and General Knowledge. Recognition that cultural and regional knowledge can be general or specific is important for organizing culture and regional education.

Culture-general, like principles of military operations, can be understood in terms of general principles—such as belief systems, high/low context, status structure, legitimacy, or dynamics of historical threat perceptions. General principles are derived from understanding commonalities across multiple specific cultures similar to deriving military operational principles drawn from multiple specific engagements.

Culture-specific refers to the culture of a specific group: their specific customs, values, beliefs, rituals, ways to express them etc. Culture-specific is detailed knowledge of a specific culture that can vary greatly between countries and even villages. For example, in Japan, it is customary for men to exit an elevator first, while in the United States, women customarily exit first—which is culture-specific. From a culture-general point of view, gender appropriate behavior can vary and such knowledge is important to not cause offense or misunderstanding.

Culture-general knowledge provides a framework to organize training for culture-specific, intellectual agility, and 'system thinking.' Each specific culture is complex and requires a long time to master, longer than most Soldiers will have during a deployment. Culture-general identifies what is most important. It does not substitute for the hard work of learning about a specific culture but does provide guidelines to organize and focus on what is more critical from what is less important to enable rapid adaptation.

Further, culture-general knowledge is important to develop intellectual agility for operating amongst foreign populations. Generalizations enable considerations beyond the immediate situation. Intellectual agility requires not only thinking 'outside the box,' but an understanding of the range of possible ways to think and act.

Culture-general knowledge also enables 'system thinking.' System thinking includes understanding how cause and effect percolate across units. This is done by identifying common causes, effects, and units across the system to enable analysis as a system, such as the structure of power or resource flows, and system-of-systems analysis. Otherwise, analysis is mired in learning 'one history after another,' each lesson learned being idiosyncratic. Thinking is limited to each specific historical instance, which may build intuitive judgments but adds little for generalized knowledge that enables systems thinking.

Like cultural knowledge, regional knowledge can also be region-general or region-specific. 'Region' can be understood to refer to a large geographic area often including multiple countries, or it can be understood to refer to an 'area' that may be a continent, a sub-division of a continent, a country, or a village. Here, 'region' is understood as to refer to a specific 'area.' Observations about cultural knowledge above also apply to regional knowledge. Region-general refers to knowledge generalizable across any area. Region-general knowledge is usually the goal of the social sciences. Given that culture is a dimension of regional knowledge, culture-general knowledge is a component of region-general as cultural-specific is a component of region-specific knowledge.

The implication for military education and training is that there are two orders of knowledge; specific and general. Specific knowledge is unique to each operational environment and

Specific Area Knowledge Regional Expertise – Critical for tactical operations and decision making	**General Principles** Social Science Expertise – Guidance on what is important to know – Critical for operational and strategic decision making
Culture-Specific Awareness Skills Cultural Knowledge	**Culture-General** Awareness Skills Cultural Knowledge
Region-Specific Geography Political Military Economic Social Information Infrastructure	**Region-General** Geography Political Military Economic Social Information Infrastructure

Figure 3: Specific area knowledge and general principles. (Illustration by Rick Paape, Jr., information provided by COL (Ret.) Eric W. Stanhagen and Daryl K. Liskey, Ph.D.)

critical for concrete knowledge of the environment. Because specific knowledge, like learning a foreign language, is information intensive, unique to the area, and memory fades over time, it is most economically provided to Soldiers when deployment to a specific area is clear. General knowledge is useful regardless of the specific area to be deployed. As mentioned, it enables rapid learning of specific knowledge, intellectual agility, and systems thinking. In settings where deployment to a specific area is uncertain, such as during professional military education courses, general knowledge should be taught. Prior to deployment, such as during pre-deployment training or among regionally aligned forces, specific knowledge is needed to be effective in that particular environment.

For culture-general and region-general knowledge to be useful, understanding must be focused on military missions and grounded in specific knowledge, as well as the converse. A holistic understanding of culture obscures the importance of specific and general knowledge, as well as what is the central focus for military missions. In a military context, we're interested in increasing awareness of what social science, history, and culture has to offer for military missions, how to use it, and what not to expect from it. There needs to be a clear understanding of what is useful for military operations, as distinct from what is useful for social science research or civilian missions. Where the military supports civilian agencies, relevant culture and social science knowledge for policy development or planning and executing civilian missions should be sought from the agency or agencies supported, both for efficiency and consistency. An appreciation for this dynamic and knowledge of the capabilities and limitations of civilian agencies is a necessary part of professional military education for senior and field grade officers.

Recommendations for Army Cultural Education and Training for the General Purpose Forces (GPF). This paper proposes an understanding of culture as a discrete dimension—the pattern of shared cognitions, behavioral scripts, and affects that is learned and inherited by a people. A central implication of this view for military training and education is that culture, with the exception of cultural self-awareness, should be integrated into existing training and education only where it serves to increase understanding of the human dimension of the operational environment and improves individual and unit performance of military missions. Understanding of culture must also be combined with history and the other social science disciplines in education and training intended to develop a more complete understanding of the human dimension of the operational environment. War is at the core a human activity; understanding cultures, using our definition, only offers a partial understanding of the range of human nature that Soldiers and leaders must understand. Based on this view, the following recommendations are made for organizing cultural training for the GPF in the U.S. Army:

1. **Awareness.** Cultural self-awareness training and education lessons and materials Should be developed by an academically qualified cadre, de-

livered Army-wide, with oversight from HQDA or HQ TRADOC. Cultural self-awareness should be part of the Army's character-building effort. Cultural self-awareness is critical to minimize cultural friction when operating with foreign forces and foreign populations, and to enable the U.S. Army to operate effectively and globally in the 21st century. Such awareness is required across the Army.

To ensure quality, effectiveness, and consistency, cultural education and training programs must be based upon a sound academic understanding of the concepts involved. Cultural self-awareness should be nested within a larger context of character training; for example equal opportunity and sexual harassment prevention, since each of these

Leader of 3rd Platoon, B Company, 5th Battalion, 20th Infantry Regiment, 1st Squadron, 14th Cavalry Regiment, 2LT Matthew Domenech meets with one of the village elders for the first time during a patrol conducted by his platoon. The patrol is the company's first to the village of Shinkai since moving to Forward Operating Base Sweeney, Afghanistan. (Photo courtesy of the 2nd Infantry Div.)

reinforce the others through the underlying theme of respect for others. As is the case with most training and education within the Army, establishing a single proponent organization would provide the consistency and quality necessary to ensure effectiveness and minimize risk. To reduce duplication of effort, existing social science faculties should be engaged for this work, under the direction of either HQDA G-3 or TRADOC.

2. **Skills.** Continue research to develop greater understanding of the requirements for understanding cultural considerations that are inherent in military skills and tasks. Skills to engage foreign populations and partners are individual level competencies for which culture is largely a context. Training of such skills must be grounded in rigorous research and be validated rather than derived from popular understandings. Given the current state of the art further research is needed to develop reliable training that will be effective on the battlefield.

The Army Research Institute's (ARI's) research in this field has contributed to a better understanding for training and should be continued. Such research should support the skills training needs of TRADOC and FORSCOM.

3. **Knowledge.** Establish, as an enterprise, a regional studies and social science (RS3) faculty, to support training and education, and conduct or guide research into the operational variables (PMES). Faculty members would provide subject matter expertise for training and education on the operating environment conducted throughout the PME system, and also provide operational support to brigade and higher echelon units while undergoing combat training center rotations and conducting operations in support of the global combatant commands. When implemented, educational instruction in cultural knowledge for the GPF should be integrated with instruction on the operational variables and cover both general (social science) and specific (area) knowledge. Developing cultural understanding and social science knowledge has not been a goal of a systematic education program for the Army's GPF any more than it has been for the foreign area officer (FAO) community. As a result the Army faces an educational challenge in developing foreign language, regional expertise and culture (LREC) competencies beyond a very basic level of proficiency. Increased participation in operations and activities conducted under the current National Security Strategy tenet of 'shaping' will place increased demands on regionally aligned Army forces for competence in the full range of LREC competencies described in CJCSI 3126.01A.

Selected members of the faculties of the United States Military Academy (USMA), Command and General Staff College (CGSC) and the United States War College (USAWC) who possess advanced degrees in the social sciences and history are uniquely well qualified to serve as the faculty, organized as an enterprise facilitated by virtual collaboration. Training for understanding the operational environment must be grounded in rigorous academic research as opposed to popular understandings.

Although improving cultural education and training will have many benefits for the Army and the Soldiers receiving the instruction, it will not be possible to develop deep subject matter expertise in more than a few uniformed personnel. Units conducting activities and operations in culturally complex operational environments will need to be augmented with small numbers of experts to improve the effectiveness of their planning, operations, and assessments. Drawing expertise from the RS3 faculty will have the additional benefit of rapidly transferring the experience gained in the field to the classroom. Under the guidance of the RS3 enterprise, a training and information unit may be established to develop and disseminate academically-grounded training and information for PME and the operational forces. Such an enterprise will provide authoritative guidance for training and education on the operational environment for the development of our future leaders who are capable of effectively operating globally across U.S. Army PME institutions.

The Army is globally responsive and regionally engaged; it is an indispensable partner and provider of a full range of capabilities to combatant commanders in a JIIM environment. As part of the joint force and as 'America's Army' in all that we offer, we guarantee the agility, versatility and depth to 'Prevent, Shape and Win' (Army Strategic Planning Guidance 2013).

The Army Strategic Planning Guidance 2013 envisions a force to prevent, shape, and win conflicts. Prevent entails a globally deployable force; 'shaped to influence human behavior;' and win through 'robust capacity, expert and agile capabilities and total force readiness.' Cultural self-awareness, engagement skills, and knowledge of the cultural dimension of the operational environment will be important enablers for achieving a globally responsive and regionally engaged force.

Our efforts to institutionalize cultural training and education have been hindered by multiple and overburdened definitions of culture. A holistic understanding of culture has led to unrealistic expectations of what culture can offer. By understanding culture more narrowly, we can better understand what culture can and cannot offer for military training and education and better align resources. Such training must be more rigorously grounded in academic research than has previously been the case. By shifting resources to an Army-wide cultural awareness program, providing skills training based on rigorous research, and establishing authoritative knowledge of the operational environment for training under an enterprise RS3 faculty, we can deliver training and education that better adds to warfighter capabilities needed for the 21st Century.★★

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During Network Integration Evaluation (NIE) 12.2, 1LT Chance Panter leads his advanced party and prepares the landing zone for his platoon's occupation during an air assault artillery raid. (Photo SGT Sean Harriman, U.S. Army)

An Open Letter From 4th Battalion, 27th Field Artillery to Other Field Artillery Units Fielding WIN-T Inc II

By MAJ Peter Sittenauer, CPT Joshua Grubbs and CPT John Turner

In the May-June 2012 and July-August 2012 editions of *Fires,* MAJ D.J. Hurt authored two articles which list beyond-line-of-sight communication as a "capability gap" we must close "…to win the next fight." We agree with him whole-heartedly and share his vision. Imagine a direct support Fires battalion supporting its brigade combat team (BCT) on a brigade-level attack with an assigned area of operations (AO) that is 70 kilometers in length and 50 kilometers in width. Each of the firing platoons are beyond the range of each other's weapon systems, but are connected to each other with satellite based, secure internet protocol router (SIPR) connectivity with on-the-move (OTM) capability. The maneuver battalion and cavalry squadron fire support elements (FSEs) are also interlinked with OTM SIPR connectivity with the brigade fire support elements, Fires bat-

A Mine Resistant, Ambush Protected (MRAP) all-terrain vehicle equipped with a Soldier Network Extension (SNE) assigned to Headquarters and Headquarters Battery, 4th Battalion, 27th Field Artillery Regiment uses the limited foliage of McGregor Range, Fort Bliss, Texas, during the Network Integration Evaluation 12.2, May 10, 2012. (Photo by SGT Robert Larson, U.S. Army)

talion fire direction center (FDC), and each firing platoon FDC. After a successful attack on three different objectives, the BCT transitions to a wide area security mission and the firing platoons are spread out over 150 kilometers from each other within the BCT AO.

The reality is, the technology is here, and it is likely coming very soon to an installation near you.

The 4th Battalion, 27th Field Artillery Regiment, recently completed Network Integration Evaluation (NIE) 12.2 as the direct support Field Artillery (FA) battalion for the 2nd Armored Brigade Combat Team (ABCT), of the 1st Armored Division. During this exercise, the battalion supported a brigade attack covering 70 kilometers from the line of departure to the objectives. As the 2nd ABCT transitioned to a wide area security mission, the battalion's two M109A6 platoons and two M777A2 platoons were spread out over 150 kilometers. Utilizing the Warfighter Information Network – Tactical (WIN-T Inc II), 4-27 FA was able to meet and exceed the vision depicted above.

As a part of the Army's Capability Set 13, the battalion tested various components of Increment II of the WIN-T Inc II. WIN-T Inc II is designed to provide units with on the move (OTM) SIPR connectivity, as well as its associated applications. The purpose of this article is to provide an early assessment of the impacts that WIN-T Inc II has on a brigade Fires' and a direct support battalion's operations. The intent is to advise the first BCTs and FA battalions who are fielding WIN-T Inc II during fiscal year 2013.

The NIE is the final evaluation of systems identified to fill critical gaps identified by the Training and Doctrine Command (TRADOC) for use by the force in the near-term. This process is now known as the 'agile process.' With the expected progression of the objective network to fielding, there may be a change in the name of these exercises to the Capabilities Integration Evaluation. For the artillerymen of the *Iron Thunder* Battalion, the NIE is a six-week field exercise, similar in nature to an extended combat training center (CTC) rotation. Our units conduct operations as we would normally, in support of the 2nd ABCT while integrating new hardware or software into our formation to gain doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) feedback from a standard unit prior to it being fielded to deploying units or other elements of the operating force.

4-27 FA consists of two batteries of eight M109A6 Paladins by the modified table of organization and equipment (MTOE). We have a Q-36 and Q-37 section, Profiler, two Improved Position and Azimuth Determining Systems (IPADS), and our combat observation and lasing teams (COLT) operate the M1200 system with the Fire Support Sensor System (FS3). To support the NIE mission, B Battery placed its Paladins in low usage and operates six M777A2 howitzers, in two of three platoons. Combined, the brigade's fire support

elements employ four different types of Fire Support Vehicles (FISTV) in order to support the brigade's current test mission. These FISTVs are comprised of M3A3 Bradleys, M1240 MATVs, M1200 Knights, and a Stryker FSV.

WIN-T Inc II Platforms. Just as the brigade has various FISTV variants, it also employed several different mobile WIN-T Inc. II 'nodes.' First, there was a tactical communications node (TCN) at each battalion headquarters, as well as the brigade. With its telescoping antennae, the TCN provided mobile SIPR connectivity for local subscribers within the headquarters, as well as an improved bandwidth in a static configuration with the employment of a satellite tactical terminal (STT). Each battalion level headquarters had the military all terrain vehicle (MATV) Mounted Vehicle Wireless Package (VWP,) which were virtually tethered to the TCN for connectivity. Select leaders in the brigade and battalion had a Point of Presence (PoP) vehicle while key mission command nodes had the Soldier Network Extension (SNE). The VWP, SNE, and PoP are all currently mounted only on MATVs or HMMWVs. This limitation is one of the top considerations with which FSEs and FA battalions should be concerned.

Fire Direction. For NIE 12.2, our FDCs were augmented by a SNE, which brings the WIN-T network to the troop/battery/company level and below. Currently the SNE can be mounted on a MATV or HMMWV; our platoons used the MATV version. Unfortunately, neither vehicle's physical configuration supports FDC operations by itself. Therefore, each platoon FDC requires either a physical cable from the SNE vehicle to the Advanced Field Artillery Tactical Data System (AFATDS) in the M1068 for A Battery, or the Caiman-MRAP for B Battery. This solution does not allow for use of the WIN-T on the move, an expectation for WIN-T increment 2. Alternatively, to overcome this issue, an AN/PRC-117G mid-tier networking radio using the ANW2 IP based waveform was placed in both vehicles with one plugged into the AFATDS and the other into the SNE.

Providing satellite communications at the platoon FDC level through the use of the SNE, allows the firing platoons to increase their range of mobility, without concerns of maintaining line-of-sight communications with the battalion FDC. In addition to transmitting firing data, the SNE provides SIPR access to the platoon. This capability could allow the FDC to pull its own meteorological data in the event that the Profiler is unable to do so. During this NIE, we established communications between all four platoon FDCs and the battalion at distances in excess of 150 kilometers. However, all satellite communications are subject to degraded performance in poor weather conditions, such as the dust storms of Fort Bliss, Texas. While this is a beneficial capability it should not be the only solution as degraded weather continues to be an excellent time to conduct offensive operations; not being able to provide Fires at these times is unacceptable.

Battalion and Squadron FSEs. FSEs at the battalion level were provided the VWP mounted on a MATV as a possible WIN-T solution for mid-tier Fires communications. This solution provided FSEs with both static and OTM SIPR connectivity; however, VWP's require users to operate within close proximity to the headquarters TCN. The range of this particular system made it difficult to properly execute digital Fires threads during the evaluation because the capabilities of the battalion commander's vehicle far exceeded the capabilities of the battalion fire support officers (FSO's). For example, the battalion FSO, typically positioned near or simultaneously with the battalion commander, was forced to either lose visibility of his AFATDS operator by leaving them at the tactical operations center (TOC) or to sacrifice any digital connectivity by pulling them forward with the tactical command post (TAC CP). As a result, it has become quite clear that for digital firing capability to exist the battalion FSEs need a mid-tier WIN-T platform comparable to that of a commander or S3.

Addressing this capability gap, 1-35 Armored Regiment FSE implemented a solution by integrating their AFATDS operator with the S3 PoP vehicle when deployed forward with battalion TAC CP. By doing so, the battalion FSO was able to effectively control and monitor digital Fires with the brigade FSE, while remaining co-located with the battalion commander. The VWP was not without usefulness; it still possesses potential for any battalion TOC if properly used. One of the VWP's benefits is its immediate use as a work station while the TCN is on the move or while establishing the TOC. Unfortunately however, the VWP's connectivity is restricted to its parent TCN and cannot connect to other units' TCN.

FA Capabilities. During NIE 12.2, 4-27 FA discovered several advantages with the addition of WIN-T Inc II at the firing platoons and battalion level FSEs.

1. TOC/TAC control: With the use of SNEs and a PoP, the battalion TAC CP has the capability of running AFATDS via SIPR, as well as utilizing several other Army Battle Command System (ABCS) from anywhere in the brigade's AO. This means that when the TAC has control of the battalion's operations, there is very little degradation of digital capabilities.
2. Platoon FDCs as an alternate battalion command post: As tested during NIE 12.2, if needed, the SNE provides platoon FDC's the ability to control the battalion's Fires as a battalion FDC. This provides the Fires battalion another option to consider in alternate CP considerations.
3. RETRANS: With increased use of satellite based communications (WIN-T Inc II and BFT), there is less of a need to employ RETRANS to support line of sight communications.
4. Meteorological (MET): With the advantages of the Profiler, a battalion's MET station can be located anywhere in the operational environment with the TOC or TAC and provide specific MET for each firing unit location (mortars and radars included) as often as the mission requires.
5. Firing platoon task organization flexibility: With connectivity to the brigade's WIN-T Inc II network, firing platoons have greater flexibility and can now support non-standard platoon missions in a direct support role to maneuver battalions with greater ease.

Recommendations - Near Future (1-2 years). In order to take full advantage of WIN-T Inc II's OTM capability, platoon FDC and battalion FSEs require PoPs or a similarly capable device mountable on the FDC's primary vehicles. In its current configuration, platoon FDC's radio based work-around (between the SNE and the primary FDC vehicle) creates greater risk for connec-

The Soldiers of B Battery, 4th Battalion, 27th Field Artillery Regiment, prepare to fire upon opposing force anti-air weaponry during an air assault artillery raid May 20, at White Sands Missile Range, N.M. The operation, just one of many held during the course of the eight-week Network Integration Evaluation, allows the Soldiers an opportunity to use and provide feedback on current and future network capabilities. (Photo SGT Sean Harriman, U.S. Army)

tivity errors, as well as increased latency in transmissions. Similarly, battalion level FSE's benefit very little from their VWP equipped MATVs and require a direct link into the WIN-T Inc II network anywhere within a unit's operational environment and require a PoP or SNE to fully benefit from the advantages of WIN-T Inc IIs OTM capability.

Future Capabilities (3-5 years). As a composite artillery battalion, we have quickly learned the benefits of employing both M109A6s and M777A2s. The M109A6s provide rapid maneuver and firing capability that an armored force needs, while the M777A2s provide the air mobility that a brigade requires when assigned to a large operational environment. Similarly, a composite, towed, or light battalion requires WIN-T Inc II equipment that is just as agile and flexible as its weapon systems. As a lesson learned from NIE 12.2, B Battery's platoons lost their WIN-T Inc II connectivity when conducting air assault artillery raids. In the future, towed battalions could increase their capabilities with a lightweight man-portable WIN-T Inc II node that is designed for air assault operations. This would allow a brigade to employ its towed howitzers on a 'deep strike' operation and still maintain its connectivity to digitally control Fires and adjust fire plans.★★

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SSG James Barnes, with the 519th Military Intelligence Battalion, provides security during a checkpoint assessment at Afghan Border Police checkpoint in Spin Boldak district, Kandahar province, Afghanistan. (Photo by SSG Shane Hamann, U.S. Army)

Utilizing Single-Source Intelligence Disciplines in a Fires Brigade S2

By SPC Nicholas J. Hermann

The transformation of corps artillery, division artillery, and Field Artillery brigades into Fires brigades is among the most significant structural changes undertaken by the U.S. Army as part of its post-9/11 transformation. Army intelligence and Fires professionals must address how intelligence support to artillery operations has changed, as a result of this transformation. The difficulty of this task is compounded by the fact many Army Field Artillery units have not been conducting standard artillery missions, during their frequent deployments to the Afghanistan and Iraq theaters of operation over the last decade. Consequently, intelligence professionals in artillery units, along with their *Redleg* counterparts, have not focused on traditional artillery tasks, or how intelligence supports a standard artillery mission. Among the items requiring attention by intelligence professionals is how Fires brigade S2s will exploit single-source intelligence disciplines in future operations, primarily to locate potential targets on a battlefield.

Intelligence professionals, from experienced staff officers to junior enlisted analysts assigned to artillery units, can quickly become dismayed by the absence of a robust supply of organic intelligence collection assets available for tasking. This lack of assets often results in S2 personnel feeling their mission is less important than missions of other units. Though Fires brigades do not enjoy operational control over many collection assets, it is the S2s incumbent responsibility to proactively exploit single-source intelligence disciplines to satisfy intelligence gaps and information requirements to better support the artillery commander's mission. Fires brigade S2s must capitalize on their time in garrison to plan for utilizing these disciplines on a battlefield and should record their plan in the intelligence chapter of their unit's tactical standard operating procedures. Planning for the use of single-source

LTC Dean Somers, the senior intelligence adviser assigned to 3rd Brigade Combat Team, *Rakkasans*, 101st Airborne Division (Air Assault), calls on an Afghan National Army intelligence officer to answer a question during a class on military intelligence on Camp Parsa, Khowst province, Afghanistan. The class will help enable Afghan National Army intelligence officer's plan missions and anticipate enemy actions. (Photo by SGT Kimberly Trumbull , U.S. Army)

intelligence disciplines on a battlefield is essential for Fires brigade S2s, as these disciplines assist them in satisfying one of their core tasks, identifying targets.

Single-source intelligence disciplines are used as part of a unit's intelligence collection plan to fulfill intelligence gaps and information requirements to aid the commander in executing the unit's mission. The primary role of single-source intelligence is to collect intelligence information, while the primary role of all-source intelligence is to analyze and disseminate the collected information. As with nearly everything the artillery S2 does, planning for single-source intelligence exploitation should be conducted with a targeting mindset.

Counter-intelligence (CI) might seem among the less likely single-source disciplines available for Fires brigade S2s to use. This is mostly correct. While the Fires brigade S2 staff officer is the principle authority for CI activities in the brigade, Fires brigades themselves retain no control over any strictly CI assets, though some CI organizations on a battlefield may identify targets for the artillery in the course of their work. This lack of CI assets does not restrict the S2 from proactively establishing CI measures for the brigade. Unlike the other single-source intelligence disciplines, which collect information on threat forces, the role of CI is to prevent threat intelligence collectors from collecting intelligence information on friendly forces.

Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines CI as, "information gathered and activities conducted to identify, deceive, exploit, disrupt, or protect against espionage, or other intelligence activities..." Interestingly, the only Army doctrine addressing CI activities in artillery units was published more than 60 years ago. Field Manual 6-130, *Field Artillery Intelligence*, (dated June 1948 and is no longer available) listed CI measures tailored to the needs of artillery units with the intent of ensuring the integrity of information, personnel and physical security, and protecting artillery positions from detection. The measures listed would be familiar to intelligence and Fires professionals today and included such cautionary procedures as ensuring secrecy discipline by restricting careless talk, the effective use of cover and concealment by batteries, to mask their positions from enemy observation, and properly handling classified materials.

Though Fires brigades can use CI on the battlefield, S2s can be proactive by

brainstorming potential CI measures to implement on deployment better safeguarding their unit from threat intelligence collectors. A good practice for garrison-based S2s is to develop a list of artillery-specific CI measures for their unit, which can be recorded in the intelligence section of their unit's tactical standard operating procedures (TACSOP) or in the execution paragraph of a template for Appendix 2 (Counterintelligence) to Annex B (Intelligence), for operation plans or orders. Upon deployment, the S2 should revisit its list to add or detract, as necessary, CI measures applicable to its unit's mission. Some CI measures may be included in other information, personnel, or physical security documents, like a security SOP for operating in a tactical operations center.

Human intelligence (HUMINT), which is derived from information collected and provided by human sources, is another single-source discipline many intelligence, and Fires personnel would suspect as not being highly exploitable by a Fires brigade S2. This belief is likely rooted in the fact that, as with CI, Fires brigades do not retain operational control (OPCON) over any HUMINT collection assets. Artillery S2s may discover some targets on a battlefield through human sources, but there are opportunities for them to proactively utilize this discipline as well.

For a considerably dated publication, FM 6-130 again reveals its usefulness by highlighting the benefit of exploiting human sources, particularly enemy prisoners of war, as well as local civilians, to obtain intelligence information valuable to the artillery mission. The FM advises artillery S2s to provide HUMINT collectors with a list of artillery-specific questions to ask enemy prisoners of war (EPWs) and provides examples in an appendix. Specific questions are written to ask enemy military personnel both in and out of the artillery branch. For instance, an enemy prisoner of war (EPW) not assigned to an artillery unit, might be asked a question such as, "Were there any guns in the area where you were captured?" Enemy artillery personnel might be asked more specific questions of artillery activities, such as, "Does your battery conduct counter-fire missions?" Here is an example of how HUMINT has directly supported artillery: in 1951, the U.S. Far East Command published an interrogation report which pieced together interrogations and interviews of EPWs, as well as other military and civilian personnel, which was used in the study of North Korean artillery tactics, organization and equipment.

For modern Fires brigade S2s, developing a survey of artillery-specific questions for EPWs is one way to proactively use this discipline. The questionnaire can be written in garrison as a tab to Appendix 4 (Human Intelligence) to Annex B for OPLANs/OPORDs and refined when the S2's unit is activated for deployment. When completed, the S2 can forward the survey to its higher headquarters (division or corps) G2X to pass along to the appropriate military intelligence unit, providing HUMINT collectors at interrogation and internment facilities on the battlefield. Fires brigade S2s should coordinate with their respective division or corps G2X while in garrison to refine this process.

JP 1-02 describes geospatial intelligence (GEOINT), for which the National Geospatial-Intelligence Agency is the proponent intelligence organization, as "the exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the Earth." The contemporary use of imagery provided by space-based satellites is the latest example of how aerial assets have assisted intelligence professionals and their commanders in military planning. Previous examples included photographs taken from reconnaissance aircraft, a practice going back to at least World War I, and similar operations conducted by balloon in the American Civil War and Spanish-American War. GEOINT thus has a history of being valuable to artillery intelligence personnel, and that usefulness has only been enhanced with the passage of time.

While GEOINT can support targeting, this would likely occur at a higher echelon than a Fires brigade, such as the combatant command level, and would support missions like the one targeting Al-Qaeda leader Osama bin Laden. This discipline is actually employed in target vetting processes at the national and theater levels. GEOINT may not be suitable to support targeting in Fires brigades due to the rapidity with which missions will likely be conducted (assets with full motion video capabilities, such as unmanned aerial systems, would be much more practical). That does not make GEONT irrelevant to the targeting process in a Fires brigade. This discipline's usefulness is presented in its ability to assist in post-firing mission battle damage assessments and munitions effectiveness assessments.

In a Fires brigade, GEOINT assists intelligence analysts and geospatial engineers in conducting terrain analysis during planning, aiding them in beginning to visualize the terrain prior to a deployment. GEOINT helps identify key terrain features presenting themselves as optimal areas for positioning artillery by friendly or enemy forces, such as reverse slopes offering range to kill zones, including those that arise from shifting terrain features (particularly in a desert environment). Similarly, current GEOINT products depict up-to-date civilian infrastructure (e.g., areas which are either growing urban zones or simply within national borders which preclude easy travel, such as Iran or Syria). Identifying civilian infrastructure constructed since mapping occurred can help prevent unexpected collateral damage and may influence the development of no-Fires areas. Also during planning, the S2 may identify some enemy defenses and unit locations, particularly for artillery batteries. For a Fires brigade S2, GEOINT, and its subdiscipline imagery intelligence (IMINT), can be of great assistance when conducting a garrison study of the terrain of a future area of operations, leading to the development of a modified combined obstacle overlay clearly depicting possible position areas for artillery and other brigade assets (radars, TOC, etc.).

During operations, GEOINT assists the S2 in identifying enemy unit locations, possibly revealing the locations of some high-value or high-payoff targets. By exploiting imagery, the S2 may ascertain enemy artillery movement patterns, what artillery equipment is being employed, and the strength of threat batteries. Also during operations, if applicable, the S2 should be able to determine the effectiveness of friendly batteries' attempts to achieve cover and concealment by exploiting terrain features to mask themselves from enemy observation. Additionally, unclassified imagery can help orient EPWs or civil-

ians unfamiliar with map reading or military symbology when interrogated or interviewed for information.

Being perhaps the most obscure of the single-source intelligence disciplines to many intelligence and Fires personnel, it has likely been overlooked that measurement and signature intelligence (MASINT) is the most used, and among the most valuable, single-source intelligence disciplines in Army artillery units. MASINT is intelligence obtained by quantitative and qualitative analysis of data derived from specific technical sensors, and is a highly exploitable discipline whose use goes back to World War I.

As a junior officer in the British Army, William Lawrence Bragg, who won the Nobel Prize for physics with his father in 1915, was a leading scientific mind in developing techniques to locate enemy artillery batteries on the battlefield. Bragg's procedure consisted of recording the sound of firing artillery with a series of emplaced microphones, a method known as sound-ranging. Bragg was approached by superior officers in the summer of 1915, to advance sound-ranging methods already started by the French. He and his team enjoyed their first success in November 1915. His method was also employed by the British to provide more accurate counter-fire. As with single-source intelligence disciplines today, it was at that time desirable to confirm these scientific results with other reconnaissance and surveillance methods, such as aerial photography or forward observers.

Today, the AN/TPQ-36 and AN/TPQ-37 Firesfinder radars fall under the MASINT-radar umbrella. These radars, essentially being the only intelligence collection assets organic to Fires brigades, are particularly useful on the battlefield where they detect projectiles launched from enemy indirect Fires systems and adjust friendly Fires to direct counter-battery missions. For intelligence analysts, data retrieved from these radars greatly assists in predictive analysis to determine the position areas and movements of enemy artillery units. The use of these radars is not limited to a linear battlefield. On a non-linear battlefield, like the ones experienced by the U.S. Army in Afghanistan and Iraq, the radars assist analysts in predicting movements of enemy mortar teams and other trends in threat indirect fire (IDF) team activity. While the S2 is responsible for producing the target acquisition tab and associated radar deployment orders for the Fires annex (Annex D), the projected use of these radars should also be highlighted in the Fires brigade's reconnaissance and surveillance (R&S) plan.

Army intelligence professionals are responsible for maintaining their situational awareness of overseas events relating to their threat area of study (artillery for analysts in artillery units, air defense for analysts in aviation units, etc.). Open source intelligence (OSINT) is among the most valuable disciplines available for meeting this requirement. OSINT, which is "information of potential intelligence value that is available to the general public," and is widely and readily available for artillery S2s to use in garrison. Despite the consistently highlighted value of OSINT in our recent engagements in Afghanistan and Iraq, this discipline remains a disturbingly under-utilized resource by Army intelligence professionals, especially those assigned to brigade and battalion S2s, who do not easily see the asset's value.

For artillery intelligence personnel, OSINT presents its value by reporting on such items as, which overseas nations are acquiring new artillery systems and advancing artillery-related technologies. OSINT can potentially reveal enemy artillery tactics, techniques and procedures. The best example of this is the ongoing situation in Syria, where the Syrian army's artillery assets have played a central role in the conflict. In one open source report, seasoned journalist Robert Young Pelton revealed Syria's apparent employment of electronic warfare assets to locate targets (usually civilians and journalists) in cities for their artillery. Syria likely learned this tactic from its Russian advisors who have employed similar tactics against Chechynan rebels in the North Caucasus since the 1990s.

S2s should monitor OSINT reporting for such information since, while the fighting styles of many potential threat nations have been influenced by the military doctrine of the former Soviet Union (which has also formed the basis for the U.S. Army's OPFOR guides), that doctrine does not dictate how those various nations will fight. OSINT can provide insight into how each nation will tailor Russian doctrine to its needs. Despite OSINT's usefulness in garrison, S2s may not have much time to consult this resource on deployment since they may be instead occupied with receiving and analyzing intelligence information through more traditional reporting channels, such as spot reports.

The popular discipline of signals intelligence (SIGINT), defined as "intelligence derived from communications, electronic, and foreign instrumentation signals," has a long tradition of support-

ing targeting of enemy artillery systems going back to World War I. In that war, U.S. Army LTC Frank Moorman led a group which developed traffic analysis techniques to locate German army radio stations and reconnaissance aircraft supporting artillery units. The information provided by Moorman's group assisted U.S. and French troops in finding enemy artillery to support counter-fire operations. Since that war, SIGINT methods, such as traffic analysis, have been invaluable in revealing the movement of artillery units and piecing together the order of battle of enemy artillery organizations. The SIGINT sub-discipline electronic intelligence (ELINT) may also be used to hinder enemy counterbattery operations in hybrid threat conflicts. Used properly, SIGINT, for which the National Security Agency is the proponent national intelligence organization, can be an invaluable asset for targeting.

Technical intelligence (TECHINT), "intelligence derived from the collection, processing, analysis, and exploitation of data and information pertaining

Leaders of the newly organized Intelligence Academy, CPT David Miller (left), analysis control element chief, and SFC Brian Gardner, senior intelligence sergeant, both with the 7th Infantry Division, demonstrate a few teaching methods they use while giving a class. The Intelligence Academy was developed in an effort to standardize intelligence training and introduce incoming Soldiers to the Pacific Command area of responsibility. (Photo by Austin Owen, U.S. Army)

SFC Nathaniel Young (right), a military intelligence mentor with the 109th Military Intelligence Company, 201st Battlefield Surveillance Brigade, Combined Joint Task Force - 1, explains how to conduct low-level voice interception to Afghan National Army soldiers from the 2nd Military Intelligence Company, 203rd Thunder Corps, at Paktia province, Afghanistan. (Photo by SGT Aaron Ricca, U.S. Army)

to foreign equipment and material…," is another single-source discipline available to Fires brigade S2s, but while its usefulness is usually highlighted as being limited to the battlefield, it offers much to garrison-stationed units as well. TECHINT is useful to the artillery S2 as it provides such information as the capabilities, limitations, and vulnerabilities of threat IDF systems. Many artillery systems employed by countries posing a potential threat to the U.S. are of Russian lineage, and unclassified TECHINT information is readily available on these systems. For Army intelligence and Fires personnel, the Training and Doctrine Command G2-produced, Worldwide Equipment Guide, which is the most suitable resource for the study of threat artillery equipment.

The Q-36/-37 radars are currently the only organic intelligence collection assets in Fires brigades. It is possible they may receive the Raven Unmanned Aircraft System (UAS) in the future; however, this system may only be used to monitor brigade support area security and will not serve in an intelligence collection role aside from observing any rear area threat activity. Another opportunity for Fires brigade S2s to monitor possible threat activity in rear areas is ensuring brigade support battalion (BSB) convoys are effectively debriefed by the BSB S2. This practice is applicable to operations conducted on linear and non-linear battlefields. On a linear battlefield, Soldiers in firing batteries should report suspect activities witnessed in the vicinity of their position areas to their battalion S2. Brigade and battalion S2s should develop SOPs for these 'every Soldier a sensor' related activities while in garrison.

How Fires brigade S2s will utilize single-source intelligence disciplines in the future is one of several issues concerning artillery intelligence practices that must be addressed by the Army; other items include 'artillerizing' the military decision making process, intelligence preparation of the battlefield, R&S synchronization, and writing artillery-focused intelligence estimates. These subjects could be addressed in the upcoming or future version of Army Training Publication 3-09.24, *Techniques for the Fires Brigade*. It would also be beneficial for the Intelligence Center of Excellence, Fort Huachuca, Ariz., to develop new doctrine addressing intelligence support to warfighting functions other than maneuver. Concerning targeting, the Army artillery branches are doctrinally well-equipped to readdress how intelligence supports targeting in artillery units. Refocusing on operations on a linear battlefield will help rebuild the connection between the artillery and intelligence branches. Meanwhile, Fires brigade S2s should develop plans for the utilization of all single-source intelligence disciplines to better support their unit's mission.★★

Editor's Note: *This article is part of the author's attempt to revitalize the study of artillery intelligence practices, given the need for this topic to be updated, in light of the transformation of the U.S. Army Field Artillery branch and the withdrawal of U.S. troops from Iraq. More information on 'artillerized' intelligence products and processes can be found on the Intellipedia-U page Intelligence Support to Fires Operations at http://go.usa.gov/TjZC.*

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World Dynamics are Changing:
Everything is Either Growing or Dying – Nothing Stays the Same

By CSM Dennis J. Woods

World dynamics are changing, in fact, they are always changing. It is this artilleryman's opinion though that, as a combat arms branch we have not kept pace with that change; in fact many of us long for a grand and glorious massed fire past. A past based on maneuver warfare and mass killing that no longer applies to today's counterinsurgency fight. Make no mistake though; high intensity maneuver warfare has its place in the kick-off game or invasion. However, as most future world population growth will be in urban areas, insurgency warfare among the populace is here to stay.

In order to remain relevant as a combat arms branch we must adapt to meet this change head on. At one point in time, we, as a career field, were innovators. Over time we became caretakers, and may eventually become undertakers. If we as a combat arms branch continue to cling to a grand and glorious mass fire past, we will unquestionably atrophy and die.

In order to develop the emotional energy required for change, one needs only to follow the example set forth by God in nature. In nature everything is either growing or dying, nothing stays exactly the same, nor should the Field Artillery. In order to address this need for change, I propose the branch develops not only precision strike artillery munitions, but munitions that tailor the amount of force applied.

If you're going to take the time to fire large-bore weapons at someone, they should die. However, we should also be able to tailor the amount of force delivered to meet current needs.

Viewing artillery systems and their various munitions as a tool set, it is a fair assessment to state that we have the tools for maneuver warfare's mass killing, tools that allow us to crush all who would oppose us. What we lack are the tools that will allow us to create a negative peace on urban terrain through the application of accurate scalable destruction, which others may then turn into a positive peace. Our current tool set developed for open warfare does not lend itself well to the current fight on restricted terrain.

(Illustration courtesy of CSM Dennis J. Woods)

Suggestions for an Interim Tool Set:

1. Employ the low-cost indirect training round (LITR), commonly referred to as the SMERF bullet due to its blue color, as a less lethal method of adjusting fire on restricted terrain.
2. Base the 'no fire exclusion areas' on actual range and probable error as opposed to a one size fits all methodology. No-fire exclusion areas eventually become part of the enemy's avoidance strategy. As range and probable error changes with distance and types of fire, enemy forces will experience difficulty determining our exclusionary 'no-fire areas.'
3. Reduce the range and probable error factor with the addition of precision guidance kits for ballistically matched training and high explosive rounds.

Suggestions for Near-Term Development:

1. Develop less lethal artillery munitions to capture the 'holy grail of fire support,' long-range, low-cost, near-precision to precision accuracy, with tailored effects that range from

Soldiers assigned to B Battery, 4th Battalion, 42nd Field Artillery Regiment, 1st Armored Brigade Combat Team, 4th Infantry Division, fire a round from an M109A6 Paladin self-propelled howitzer during the direct fire portion of Table VI team qualifications at Udairi Range in Camp Buehring, Kuwait. (Photo by SPC Andrew Ingram, U.S. Army)

death-dealing force, to what might equal an artillery-launched hand grenade.

2. Take action now to address the above needs, reducing the cost of a typical fire mission and expediting use of less lethal training munitions in combat.

Why the SMERF Round? The M804A1 LITR round, aka, SMERF, is a cast iron replica of the HE M107 155 mm artillery round. The M107 is a NATO standard artillery round and is the most widely used of all 155 mm rounds. The M804A1 is a ballistic match for the M107 that is internally and externally similar in every aspect with the exception of effects on target. It stores, transports, loads, fires and flies to the target exactly like its live high explosive twin, the M107. For the average logistician, gun crew, and fire direction operator there is no change in operations. For the fire direction officer or noncommissioned officer (NCO), it represents a mental shift to 'just do it.' The forward observer is the only one in the fire support loop who needs to be alert for the smaller report of an M804A1, as compared to that of an HE M107. In Afghanistan, on dry rocky terrain under ideal conditions, the observed visual differences between the two impacts are barely discernible.

Note: The aforementioned also applies to the more accurate (HE) M795 and M1122 less lethal training round. These rounds also feature a smaller probable error, but keep in mind that initial runs of the M1122 are demilled steel M795 HE rounds, and will be recoverable as opposed to the less survivable iron version of the M804A1.

How the SMERF is Employed in Combat Today. In the current conflict, incidents of civilian death and unnecessary collateral damage have occurred due to the effects of artillery fire. In order to avoid this, less lethal M804A1 rounds are used in the adjustment phase of a fire mission, and then switched out for the HE M107 in the fire-for-effect phase.

Whether one is firing in a training mission or in support of troops in contact, the effects are the same. The target is neutralized, suppressed or destroyed, using less actual high explosives, all while lowering cost, and unnecessary environmental contamination. NOTE: When lethal and less lethal munitions of differing weight zones are employed, a data inference is required between the adjust fire and fire-for-effect phases.

What We Gain By Reducing Collateral Damage. First, we sustain our core principles that support U.S. exceptionality by avoiding unnecessary civilian death. In this current war, when fighting on restricted terrain among local citizens, our actions to avoid intentional damage is the moral lever against which history will judge us.

Secondly, reducing collateral damage reduces the cost of a long war, enabling leaders to distribute limited resources elsewhere.

Third, as a combat arms branch we are viewed internally and externally as a mass killing area fire weapon. If this image persists we will most certainly be reduced in future budgets. As a branch we must become applicable across the entire range of conflict. This breadth of utility across all spectrums of conflict as artillerymen must also be heavily advertised. If future budget cuts are too extensive, we may not be available for the next invasion, where massed Fires could be a requirement.

In this war, we have done everyone else's job, but no one has done ours. No Soldier from another career field has been given an operator's manual and a howitzer, and then informed that they had to certify in 14 days or be fired. As a combat arms branch in this current conflict, we have been quite successful at everyone else's job. The price of our success at other endeavors, coupled with our lack of adaptation to the current fight, may be our undoing during the next drawdown.

World dynamics are changing, as they always have. Adapt, or fade into irrelevance.★★

Command Sergeant Major Dennis J. Woods is the CSM for 191 Infantry Brigade, First Army, SFAT Team 7, Afghanistan. Some of his previous deployments include: Grenada, 1983, 82nd Airborne Division; Desert Shield/Storm, 1990-91, 82nd Airborne Division; Hurricane Andrew, 1992, 82nd Airborne Division; Operation Desert Fox, 1998, 5th Group Support; Operation Enduring Freedom, 2002, 82nd Airborne Division; Operation Iraqi Freedom I, 2003-04, 1st Armor Division; Operation Iraqi Freedom VI extension into the Iraq surge, 2006-07, 1st Armor Division; Operation Enduring Freedom X into the Afghan surge, 2009-10, 173rd Airborne; Operation Enduring Freedom XII, 2012-13. Woods has a Masters Degree from North Central Arizona.

CPT Andrew Jenkins, commander of B Troop, 1st Squadron, 33rd Cavalry Regiment, 3rd Brigade Combat Team, 101st Airborne Division (Air Assault), and 1LT Joseph Anglin, the fire support officer for B Troop, take cover and observe an explosion in the Shamul district in Khost province, Afghanistan. (Photo by SPC Brian Smith-Dutton, U.S. Army)

Clausewitz and Counterinsurgency:
Decisive Victory in Afghanistan Through Targeting and Non-Lethal Operations

By CPT Richard M. Ingleby

In 1981, COL Harry G. Summers published, "On Strategy: The Vietnam War in Context," a U.S. Army War College study designed to study the strategic lessons learned from the (then) less than a decade-old Vietnam conflict. Summers broke from many of the contemporary arguments, many that still subsist in strategic and academic environments today, and argued that American failure in Vietnam was directly the result of failing to appreciate basic military theory and strategy laid out by 18th century author Carl von Clausewitz. Specifically, the failure to properly identify and focus all efforts toward what Clausewitz termed an enemy's center of gravity. The result, Summers claimed, was "the exhaustion of the [U.S.] Army against a secondary guerrilla force and the ultimate failure of military strategy to support the national policy of containment of communist expansion [in Vietnam]." On the 11th anniversary of the conflict, the Army is making the same error in Afghanistan today.

In "On War," Clausewitz stated, "a certain centre of gravity, a centre of power and movement, will form itself, on

SPC Christopher Pearsall, a cannon crew member, with B Battery, 4th Battalion, 42nd Field Artillery Regiment, 1st Armored Brigade Combat Team, 4th Infantry Division, uses a 50-foot lanyard to fire the first round from an M109A6 Paladin, during Table VI Certifications at Udairi Range in Camp Buehring, Kuwait. (Photo by SPC Andrew Ingram, U.S. Army)

which everything depends; and against this centre of gravity of the enemy, the concentrated blow of all the forces must be directed." As a graduate student in Norwich University's military history Master's program, we had studied Clausewitz in depth several semesters before and this most prescient, yet understudied passage repeatedly came to mind as I worked as a targeting officer and assistant S3 in Afghanistan. Below is a short synopsis of how my group went through the targeting process, effectively applying Clausewitz's axiom along the way. My hope here is that it will serve to improve the focus and effort of current and future leaders in Afghanistan toward non-lethal operations, and possibly serve as a model in improving our performance therein. Failure to understand the principles laid out in this article and adjust our mindsets accordingly may have grave consequences for our Army, and our nation. In light of 9-11, such a failure is unacceptable.

Assigned to B Battery, 4th Battalion, 319th Airborne Field Artillery Regiment, and attached to 2nd Battalion, 503rd Parachute Infantry Regiment, 173rd Airborne Brigade Combat Team, I was deployed as part of the 'surge' in support of Operation Enduring Freedom VII to Forward Operating Base (FOB) Blessing in the border region of N2KL, Regional Command (RC)-East in Northeast Afghanistan. Isolated and firing complex combat missions in support of troops in contact several times a day throughout the majority of the deployment, my platoon became experts in our trade and were able to see firsthand the life and death impact that the effective use of artillery Fires could make on the battlefield. An artilleryman could not have had a more rewarding and choice deployment.

After completing the Field Artillery Captains Career Course, 10 months later in June 2009, I was back in N2KL at FOB Kalagush with 2nd Battalion, 77th Field Artillery, 4th Brigade Combat Team, 4th Infantry Division. Only a few FOBs away from where I was deployed previously, this time I found myself working as a plans officer and assistant S3 in charge of our battalion's targeting operations in our area of operations. After a few months of the familiar operations as before, it began to dawn on me that no matter how much fire we effectively brought to bear on the enemy during engagements, the country of Afghanistan had not changed much since the first time I stepped foot in theater years before.

Looking to change this mold, I began to ask myself, "What is the center of gravity for this area of operations (AO)? What do these people want? What makes them really tick?" Over the course of several weeks I began to analyze the area along these lines. The further I studied these questions I realized that, like any American at home, what the people really desired was a roof over their head, some food on the table and an opportunity for their children. Not massive amounts of riches and wealth (although I am sure none would have turned it down), but financial stability enough to provide for opportunity in the future. The center of gravity in AO Steel therefore, was economic, and the local economy was agricultural. I knew exactly where we needed to target.

One of the other issues I had noticed was how it seemed that the majority of non-lethal operations conducted in Eastern Afghanistan were quick, short-term projects that did not require

pro-coalition support once the funds had been disseminated or the project completed. For example, the construction of a water pump, sports complex or even hiring temporary labor to clean up a certain area were common operations. Recipients of such projects could easily put on a smile for a picture, shake some hands, then turn and do the same to anti-Afghan forces or criminals the second we left their village. Even the insurgents themselves could sometimes benefit from these projects. Bottom line, sacred tax dollars were being thrown at quick projects that had no lasting impact on area stability the second they were completed. Our non-lethal efforts needed to be long-term, projects that required continued coalition involvement and therefore required solely unilateral support.

Fortunately my battalion S3, MAJ Billy Siekman, and battalion commander, then LTC Michael Forsyth, were supportive and began to increasingly direct battalion focus toward this developing effort. Our first step was to reach out and make contact with the closest agricultural development team (ADT) in the neighboring province. They brought us in and showed us their local operations and capabilities, then gave recommendations on how we should proceed in our area.

The process that I am about to describe took months, but our first step in building a strong and self-supporting agriculturally-based economy from almost non-existence was to hire through the United States Department of Agriculture, several permanent, bi-lingual, and most importantly, trustworthy agricultural 'interns' from the Kabul University agricultural program. These gentlemen were educated and understood the culture and agricultural environment far better than we could, and advised us accordingly. They also could travel without escort, and therefore could inspect our projects at will, gathering vital intelligence that would have been impossible to gain ourselves. It also gave an Afghan face to our efforts, legitimizing the Afghan government in the eyes of the populace as we executed our non-lethal targets. In short, their assistance was invaluable.

We brought the ADT up for several days and conducted multiple reconnaissance patrols through the area to determine lines of effort for our future economic development initiative, now termed 'long-term economic projects' (LTEP). We traveled throughout the area observing agriculture and horticulture and spoke with many of the farmers regarding their practices and difficulties. Through this process we found several key locations that showed some potential promise for future targeted operations.

Most importantly, we visited the local market in the area and conducted a market analysis. After conversing and inquiring with many of the vendors, we discovered that of the handful of fruits and vegetables sold there, only one crop was grown locally, cauliflower. All other produce sold was imported from Pakistan and sold at a rate significantly higher.

This finding proved decisive in shap-

Artillerymen of B Battery, 2nd Battalion, 319th Airborne Field Artillery Regiment, 2nd Brigade Combat Team, 82nd Airborne Division conduct a fire mission at Normandy Drop Zone, Fort Bragg, N.C., during a live-fire exercise. The exercise, which was the conclusion of an airborne operation, tested the readiness of the *Black Falcons* to deploy anywhere in the world on short notice. (SGT Joseph Guenther, U.S. Army)

ing our lines of effort. In our discussions afterward, we realized that if we could get farmers to grow these same imported crops locally, prices in the market would drop significantly, putting more money into the pockets of the area populace. This additional money circulating would in return generate increased sales for the vendors. All around, being able to grow crops in demand locally would stimulate the economy for the long-term. We realized that this was the exact line of effort that we needed to target to effectively engage our area's true center of gravity.

With this target now in mind, we then picked out strategically located villages that we wanted to target, and with our interns found approximately 20 farmers from those areas that were competent and trustworthy. We invited them to a two-day agriculture and horticulture seminar that we put together on our FOB. The ADT sent several representatives out and assisted with our seminar, wherein we conducted hands-on instruction with these farmers in areas such as proper fertilization, seed placement, and crop cycling, along with instruction on animal care, nutrition and vaccination. This training was also designed to assist us in identifying and selecting farmers we felt were competent and trustworthy enough to work with on the projects we were planning in the future.

Upon 'graduation' from our course, we selected two farmers who lived in our two largest population centers, near and along the main road that led into the area market, and negotiated a deal to assist in growing the above mentioned crops locally. Working with village elders, we offered to build each of these farmers a large, quality-built and therefore permanent, greenhouse and watering system. We further promised to assist initially with fertilizer and seeds. In exchange, we required a written security promise and to allow our interns to come and inspect their crop growth, and to conduct further agricultural training on-site in the future. Naturally, both the village elders and the farmers were more than willing to accept these terms.

Our next, and in my case final, initiative was to build a dairy. During our patrols, we found a village that had somewhat healthy livestock (in a comparative sense for Afghanistan), and the only village we found that actually corralled their animals. The village was in another key area and was one of our more pro-coalition villages. However, in order to start, we found that we needed to find local farmers to convert their annual crop growth to growing specialized feed for dairy cows. Once done, we planned to purchase quality dairy cows (not the 'all-purpose' cows roaming freely throughout most if not all of Afghanistan) and eventually equipment for the processing and production of dairy products. This naturally would be a significant boost to the local economy, even expanding the economy to now allow for exports.

At this point I was reassigned to battery command for the final few months of our deployment. I was able to return once and see the results of the greenhouses and farmer training, and they were producing crops never before produced in the area, and abundantly. More importantly, the areas we invested in were significantly more stable for at least the time remaining on the deployment. Whether or not our replacements finished the dairy or sustained our LTEP plans is unknown; however, for the time being, there was permanent, measurable and most importantly, effective progress made in our area of operations.

The intent with the above narrative was not to give a recount of a personal story, however. It was given to describe an example of a targeting process from the ground up: a from-scratch step action drill on how to effectively identify a center of gravity, and then fully engage it. Herein lies a significant issue with current military doctrine, thinking and operations in regards to our conflict in Afghanistan today, and is one of the primary reasons that after 11 years of conflict, we are still struggling to make headway, both with the population and against the insurgency.

In "On Strategy," Summers states: "One of the most frustrating aspects of the Vietnam War from the Army's point of view is that as far as logistics and tactics were concerned, we succeeded in everything we set out to do… In engagement after engagement the forces of the Viet Cong and of the North Vietnamese Army were thrown back with terrible losses. Yet, in the end, it was North Vietnam, not the United States that emerged victorious."

Summers goes on to cite commentary from Brigadier Shelford Bidwell, the editor of the British military journal of the Royal United Services Institute (RUSI), wherein he argued against the prevailing belief that the Vietnam War had never been a "winnable" conflict in the first place. "All this...would have been avoided," he stated, "by adopting the classical principles of war by cutting off the trouble at the root... If this was not politically realistic, then the war should not have been fought at all."

Both Summers and Bidwell believed that the North Vietnamese center of gravity was North Vietnam itself. He argued that military action in the country, specifically its invasion and occupation, would have rapidly caused the pro-communist government to completely collapse and its support-base to disintegrate. Undoubtedly such a course of action would have at a minimum severely disrupted the North Vietnamese, buying time to stabilize its counterpart to the south. In retrospect, such actions may have had a better result than what actually occurred. In the end however, politicians and military leaders were unwilling to clearly identify and target the North Vietnamese center of gravity. Conversely, and to their ultimate success, the North Vietnamese did not make the same mistake in identifying and targeting ours. As a result, the United States withdrew in defeat, and notably its first major counter-insurgency conflict.

Fortunately for Summers, he had the benefit of writing in retrospect, years after the conflict had concluded. We do not have the same prerogative in Afghanistan today; another failure in the still-recent wake of Vietnam will have a significantly detrimental effect on the Army and this nation. Yet both of these conflicts are remarkably similar, especially in regard to our failure to identify and decisively engage our opponent's center of gravity. Current military strategists and leaders, therefore should comparatively study the example of Vietnam, then unemotionally analyze our performance in this war, especially our most recent performance.

As Field Manual 3-24, *Counterinsurgency*, states, "The stability a nation enjoys is often related to its people's eco-

Soldiers assigned to 2nd Cavalry Regiment prepare for a fire mission with an M777A2 towed 155 mm howitzer during the regiment's mission rehearsal exercise at the Grafenwoehr Training Area, in Grafenwoehr, Germany, on March 12, 2013. The rehearsal exercises develop combat skills, counterinsurgency tactics and interoperability between military forces of the U.S. and its partner nations before a scheduled deployment. (Photo by Gertrud Zach, U.S. Army)

nomic situation." This is absolutely the case in Afghanistan. If we are then to engage this true center of gravity a proper balance in focus and effort between lethal and non-lethal operations in effective counterinsurgency operations should lie somewhere around a 20 to 80 percent ratio respectively, area dependant. Using this as a guide, we should then ask ourselves, has 80 percent of all focus and effort actually been given to non-lethal operations, particularly in regard to area economic stability, during the course of a deployment? Upon leaving a battle-space, do physical improvements on the ground in agriculture and other areas of economic security reflect such an 80 percent effort? Most likely they do not.

Naturally, counterinsurgency (COIN) has many lines of effort (five according to the FM 3-24), requiring balanced attention in other areas. But in all honesty, even today, for most combat-arms leaders this is a go-ahead ticket to continue to allocate a significant amount of focus on more appealing combat and civil security operations. Naturally, they will argue, and to a degree correctly, if a population cannot be protected from insurgent violence, no other line of effort should be overly pursued in an area. Although such logic is to a degree true, "The military forces that successfully defeat insurgencies," the FM 3-24 states "are usually those able to overcome their institutional inclination to wage conventional war against insurgents."

Leaders must recognize that effectively securing the populace will most likely never be achieved. Pursuing such security is a slippery slope and plays exactly into what the insurgents desire: to extend the war long enough to wear out the resolve of the American populace; our center of gravity. This is exactly where we find ourselves in the current conflict today, and we simply cannot win this conflict following this line of operations.

As Summers argued with Vietnam, the more we focus on security operations or anything else that distracts from what should be our main effort, the more we are not fully focusing and targeting the enemy and the local populace's center of gravity, and we are therefore acting indecisively. As a result, the conflict then becomes more protracted, which in turn begins to conversely attack our center of gravity and success is put in jeopardy as a result. Again, 'the dangers,' as Thomas Hammes argues in *The Sling and the Stone: On War in the 21st Century*, "lay in our thinking in conventional terms and seeking to dominate that battlefield at the expense of being prepared to fight on other fields," or lines of effort.

Assuming risk to security is not easy

The six-man gun team of 2nd Battalion, 3rd Field Artillery Regiment, 1st Brigade Combat Team, 1st Armored Division demonstrate the actions involved with receiving and executing a fire mission, March 26, as part of SMA Raymond F. Chandler III's visit to Forward Operating Base Frontenac, Afghanistan. Chandler visited with Soldiers and leaders to gauge the effectiveness of the Army during the retrograde process. (SGT Uriah Walker, U.S. Army)

to do. Having the personal responsibility for U.S. Soldiers as a commander in a combat environment is extremely difficult. To assume risk on American subordinates that we know and live with in order to focus the majority of effort against the enemy's center of gravity, is an extremely difficult decision to make. However, as FM 3-24 states, "Soldiers and Marines may also have to accept more risk to maintain involvement with the people." Like wars in the past, effective military leaders must see the bigger picture and accept risk in order to accomplish their over-arching mission successfully: to stay focused on decisively attacking the enemy's center of gravity. Higher echelons should likewise recognize this need and fully support and shield subordinates in their subsequent decision to do so.

The truth of the matter is there is dominance in focus toward combat and civil security in operations conducted in Afghanistan, still. And the effects on the ground are proof. In more than a decade, nowhere near an 80 percent worth of effort in economic development has been achieved. We have failed to aggressively target and decisively attack the enemy's center of gravity. We have failed to adjust our mindset, to what Summer's says, "overcome [our] institutional inclination to wage conventional war." It is no wonder, therefore, on the 11th anniversary of the outset of this conflict, we are still struggling to find success.

Although the focus in effort has evolved somewhat in recent years, the priorities in RC-East still reflect an inclination toward security operations. Currently, as with the majority of operations in theater, the focus is empowerment and transition to the Afghan military. Let me be clear, this is naturally a necessary line of effort. However, the intent behind this strategy undercuts its strategic logic: to allow the Afghans to eventually carry the majority of the burden of their own self defense in order to allow the U.S. to transition out.

Our true intent is written clearly in the vision statement: not to successfully and decisively defeat the insurgency, but to withdraw from the battlefield. Afghan self-security is undoubtedly a necessary action. However, much like the 'Vietnamization' policy of the early 1970s, action along this line of effort does not constrain or destroy the insurgency; the insurgency will still be there – if not strengthened – at the end of the day. And more importantly, the still not won-over populace will likely not have the will to resist. Security in Afghanistan, therefore, will not be sustainable, and we will have failed.

Recently, *Foreign Policy*, a political

and economic journal, published an online article by Gordon Lubold detailing an interview with the current the International Security Assistance Force (ISAF) commander, USMC Gen. John Allen, titled, "Are We Winning in Afghanistan?" Most of the interview focuses on gains in Afghan military transition; however, it devotes a significant portion to commentary regarding recent local uprisings against insurgents in places like Andar, Wardek and Camdesh. After discussing the need for the Afghan government and military to take the lead on supporting these uprisings, Allen shows he understands the need for more-critical, non-lethal operations in conjunction to exploit the gains.

[The Afghan government] has to be sensitive to why [these uprisings] started and how conceivably [they] can help the people. They ought to want to help the people. And how they might help the people is going to be different in each place. It could be about local employment. It could be about a school. It could be about a clinic. It could be about fresh water. Just a little bit of help gives the people in that village, or cluster of villages, a choice for the first time, because right now their only choice is fighting the Taliban or being repressed by the Taliban.

The question is do current subordinate leaders fully understand this same concept as Allen does? Further, is it understood to be decisive in permanently exploiting these uprisings, and therefore requiring the majority of focus and effort? Or is the focus primarily on Afghan transition and response? Again, this strategy of transition is a needed line of effort, but not the paramount one. If current leadership fully grasps and embraces this, then we may have a huge opportunity and potentially a turning point for victory in these 'awakenings.' If they do not, however, this potential opportunity will likely come and go, and the U.S. will have to satisfy itself with our current outlook of an overall marginal campaign performance at best as we transition and exit the country.

Although it will allow our exit, primary focus towards combat operations, to include Afghan transition, falls short of the mark: it does not target the enemy's center of gravity. It therefore does not attempt to successfully defeat the insurgency, and it does not attempt to decisively win the war. Like the strategy of 'Vietnamization' in the early 1970s, we are surrendering complete victory so we can withdraw. These are not the results we as an Army should see as acceptable. We should of course continue to significantly develop and empower the Afghan military. But that is just one critical line of effort. What we must do is show strength in the face of adversity and focus primarily on decisively attacking the enemy's center of gravity with as much time as we have left and defeat this insurgency completely.

Make no mistake about it, this war is still winnable. Much more difficult counterinsurgency conflicts have been successfully won, and won decisively. Decisive warfare requires attacking the center of gravity with maximum effort. This is essential if we are to succeed in this conflict or in any COIN conflict in the future. Our enemy's center of gravity is the populace. As soon as the local populace decides it is worthwhile to cut the insurgents off completely, this conflict will be over; for both us and the Afghans. The center of gravity for the populace therefore should be our primary target. And in the agrarian nation of Afghanistan, the populace's center of gravity is long-term economic, and primarily agricultural, development along the lines outlined above. This should be our primary focus and line of effort, and it is not too late to implement.

As historian Brian McAllister Linn states in his study of the U.S. Army in *The Echo of Battle: The Army's Way of War*, "As the Army entered the 21st century, it faced an almost insurmountable problem. It had to overcome its own past, and its own mythology about that past, if it was to prepare for the future." As artillerymen, we are uniquely positioned by both our expertise in targeting and our infusion throughout every echelon in combat units to do just this, to make the changes necessary to decisively impact the direction of our operations at every level. No other branch contains the leaders that are as expert as us at identifying the most decisive target on the battlefield, then engaging and exploiting it.

The artillery is undoubtedly still the King of Battle, even in the ever-evolving warfare faced at present, including particularly the counterinsurgency conflict that requires an emphasis on the non-lethal that we have been called on to face today. We artillerymen have had a sacred trust and special responsibility placed upon our shoulders by our nation to salvage this struggling conflict and turn it into a real victory. This responsibility of saving lives and decisively shaping battlefields is one that we are used to; it is one at which we have always excelled, time and again in our history. We can do it again in Afghanistan today.★★

Captain Richard Ingleby was commissioned from the University of Utah ROTC with a BA in History in 2006. He earned a MA in Military History from Norwich University in 2011. He has served as a fire direction officer for B Battery, 4th Battalion, 319th Airborne Field Artillery Regiment, 173rd Airborne Brigade Combat Team, where he deployed for 15 months to N2KL Afghanistan in support of OEF VII-VIII, attached to both 2nd Battalion, 503rd Parachute Infantry Regiment and 1-91 CAV, where he fired more than 4,500 155 mm rounds in support of combat operations. Ingleby then served as a battalion fire direction officer, assistant S3 and targeting officer with Headquarters and Headquarters Battery 2nd Battalion, 77th Field Artillery Regiment, 4th Brigade combat Team, 4th Infantry Division, where he again deployed for 12 months to N2KL Afghanistan in support of OEF XI-X, where he developed and executed the Long-Term Economic Projects (LTEP) initiative described in this article. During this deployment he also took command of B Battery, 2-77 FAR, 4/4ID, serving for 18 months in both N2KL Afghanistan and at Fort Carson, Colo. He is currently serving as a recruiting company commander in the Vancouver, Wash. Recruiting Company.

Left: MSG Juan Gonzales fires a D-30 howitzer at Kabul Military Training Center, Afghanistan. These test fires are the final step for this refurbished artillery weapon. (Photo by Tech. Sgt. Joseph B. Prouse, U.S. Air Force)

FIRES

Submission Guide

Article Subjects. Fires strives to be a 'forward-thinking,' professional magazine for the Fires force Soldiers. Many exciting things are taking place in the Field and Air Defense Artillery branches. Article subjects should therefore be current and relevant. Articles written to share good ideas and lessons learned with their fellow Soldiers as a means of exploring better ways of doing things remains a high emphasis with Fires.

If an article subject is significant and pertains to Field Artillery or Air Defense Artillery 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 (Army Regulation 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 our more traditional articles, we are dedicating several upcoming issues specifically to articles focusing on building resilient Fires Soldiers (Sep-Oct 2013), spotlighting the National Guard and Reserve Fires Force (Nov-Dec 2013), and building on lessons learned from both in theater and at home station. We can always use articles on leader development, especially when addressing something innovative or particularly challenging. Submissions for the Sep-Oct magazine must reach us before June 30, 2013. Submission deadline for the Nov-Dec magazine is Aug. 30, 2013

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. Try not to include detailed information on your entire deployment. The article's emphasis should be that your unit has a good idea or some lessons-learned to share.

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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. Put the bottom line up front and write clear, concise introduction and conclusion paragraphs. Follow the writing standard established in Army Regulation 25-50, Preparing and Managing Correspondence, Section IV (the Army writing style), and Department of the Army 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. Maintain the active voice as much as possible. Write "Congress cut the budget" rather than "the budget was cut by Congress."(Department of the Army Pamphlet 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. Although we have no specific word limit, we recommend between 3,000 and 3,500 (or less), but no more than 5,000 words, including inline citations as appropriate. More importantly is the subject is thoroughly explained and all questions answered.

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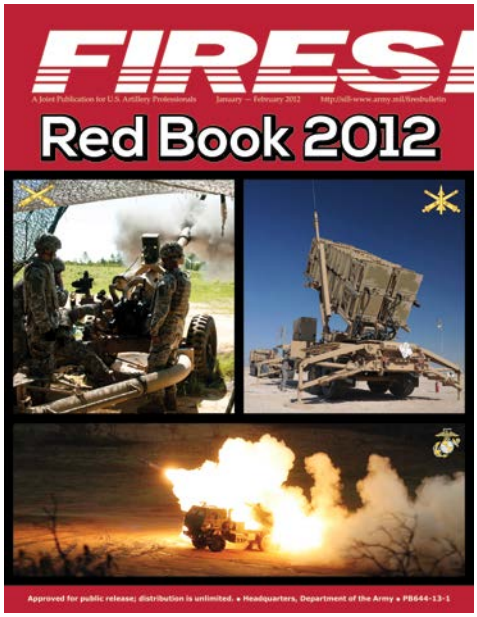

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A Stinger missile is fired from the Avenger weapon system at an aerial target off the coast on Onslow Beach, Camp Lejeune, N.C., March 15, 2013. The target scale is one-fifth the size of an actual aircraft, giving units a realistic target with which to train. The training allowed the 2nd Battalion, 263rd Air Defense Artillery to set up in a deployment formation versus the usual static formation at other smaller training sites. (Photo by Cpl. Austin Long, U.S. Marine Corps)

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