Happy Holidays

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REDLEG Update

The United States Army Field Artillery Branch's Newsletter

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NCOs create smooth transition for women integrating into Field Artillery

College Credit for FA Courses

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Purpose: Founded in 2011, the *Redleg Update* provides past and present Field Artillery leaders with a monthly update of informational highlights to assist in their individual, collective and professional training efforts, as well as report on activities occurring throughout the Field Artillery community.

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Stephen J. Maranian
Colonel, U.S. Army
Commandant,
United States Army Field Artillery School

Stephen J. Maranian

RFIs, Notes, and Notices: To submit a Request for Information (RFI), please email the POC listed below.

Points of Contact:
We appreciate those who have provided announcements, notices, articles and lessons learned.

Additionally, if you have a story of interest or wish to initiate a discussion on any topic or issue facing the Field Artillery community, contact Mr. John Folland, (580) 558-0831, or the editor of the *Redleg Update*, Ms. Sharon McBride, Field Artillery STRATCOM officer, (580) 558-0836.

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Inside This Edition

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From the Commandant's desk

Honing our Core Competencies

In this edition of the *Redleg Update* we are highlighting how we are "Honing our Core Competencies," and how Redlegs throughout the Army are making a significant impact on the Fires War Fighting Function. In order to keep this momentum going, it is incumbent on our senior leaders to continue consistent dialogue with our Fires and Maneuver operational leaders.

The Chief of Staff of the Army reinforced at AUSA that our number one priority is "Readiness," and it is clear in my travels and engagements that the Field Artillery community clearly understands this and is engaged at every echelon.

Army leadership is taking a hard look at Fires trends at the Combat Training Centers (CTCs). Currently, the CTCs are reporting that our "ready to fire" times are meeting standards. I know this success is due to our branch's tireless efforts in training, certifications, and the leader development our Soldiers and leaders are receiving. We have seen visible improvements across our gun lines and Fire Direction Centers due to the hard work of our force in getting back to core competencies.

Although our firing units have significantly improved, getting steel on target in a timely manner still remains a challenge. For the most part it is due the absence of integration and synchronization of Fires and Maneuver. We are clearing Fires that don't need to be cleared, and not designing our battlefield geometry to facilitate rapid delivery if Fires. Many of today's FSOs, due to deployments and years of performing non-Artillery duties, grew up outside of a conventional fire support pathway, so the burden is on senior Field Artillery leaders, to teach subordinates the art and science of integration and synchronization of Fires and Maneuver. It's important to coach them on how responsive Fires may be obtained through the proper use of fire support coordination and airspace coordination measures.

The single most important block of instruction we teach during the Brigade Combat Team Pre-Command Course (BCT PCC) is the roles, functions, and importance of Fires cell integration with the Air Defense Airspace Management/Brigade Aviation Element or most commonly known as the ADAM/BAE cell. The ADAM/BAE cell provides situational awareness that encompasses the entire aspect of military operations and nonmilitary activities such as those of the host nation or humanitarian organizations. In a round-the-clock tactical operations center (TOC), the Fires cell provides invaluable information to the BCT commander. Most BCT commanders are surprised to learn that this capability resides inside their TOCs and that most cells are not adequately trained to provide the commander the necessary situational awareness and capability to clear airspace in real time.

Our renewed focus on digital sustainment training and enhanced Institutional training on the Advanced Field Artillery Tactical Data System (AFATDS) will enhance the Fires cell's ability to leverage a real-time, three dimensional airspace clearance tool. Fort Sill currently runs an ADAM/BAE cell functional course and I strongly encourage everyone to attend so they can fully understand systems integration and the powerful enabler the FC/ADAM/BAE provides the BCT.

To further enhance understanding of how to clear Fires, there are some great articles we have previously published in the *Fires Bulletin*, and previous *Redleg Updates* on the topic. For ease of download and reading convenience they all can be found on FKN. Log on with a CAC @ *https://www.us.army.mil/suite/files/47525084.*

"Speaking Truth to Maneuver" by then LTC Pat Proctor, PhD., is geared toward helping Fire Support Coordinators, Brigade Fire Support Officers (BDE FSOs), and FA Battalion staffs understand the challenges with clearance of Fires, both air and ground. The other two articles, also penned by COL Proctor, ran in previous *Redleg Updates* and are entitled "Ground Clearance of Fires: Part I" and "Clearance

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FA CMDT ...Continued from Page 4

of Fire Part II: Air Clearance of Fires." These might be of interest to incoming BCT commanders. All are good reads, and discuss the majority of recurring fire support coordination issues commonly seen.

Additionally, to further this training effort, I want to draw your attention to some older documents produced by the National Training Center and published by the Center for Army Lessons Learned (CALL). The "Fighting with Fires" bulletins describe fire support trends, both positive and negative, which were observed during NTC training rotations, and although they were distributed in the mid-90s they still have significant relevance to our force today.

I am confident, that a renewed focus on training and coaching our Fire Support community will most certainly improve the lethality of our BCTs and, most importantly, impact the "Readiness" of our Army.

Lastly, I want to draw attention to the reading list found at the end of this *Redleg Update*. Since our arrival, CSM Parsons and I have been asked by various audiences in several venues about what we recommend for professional reading. This list is manageable in size and by no means all-inclusive, and I've received several suggestions for additions, many of which will be added in the next version. It is intended to offer leaders at different levels some of what we believe are exceptional professional readings. Please feel free to circulate as you see fit. As always, your feedback is always welcome.

King of Battle!
Redleg 6
COL Stephen J. Maranian

THIS MONTH IN HISTORY "NOVEMBER & DECEMBER

1 November 1946, the War Department redesignated the Field Artillery School as The Artillery School with the Antiaircraft Artillery School at Fort Bliss, Texas, and Sea Coast Artillery School, at Fort Winfield Scott, California, as branches of The Artillery School. The merger did not mean physical collocation. Each school stayed at its existing location.

5 November 1899, SGT Clarence M. Condon, Battery G, 3rd U.S. Artillery, received a Medal of Honor for action on this date. While in command of a detachment of 4 men, he charged and routed 40 entrenched insurgents, inflicting on them heavy loss near Calulut, Luzon, Philippines.

14-17 November 1965, at the Battle of the Ia Drang in Vietnam, American field artillery demonstrated airmobile artillery's and aerial rocket artillery's ability to furnish effective fire support and played a key role in defeating more than 3,000 North Vietnamese Army/People's Army of Republic of Vietnam regular forces.

7 December 2006, The Field Artillery School's 30th Field Artillery Regiment became the 428th Field Artillery Brigade. The 30th Field Artillery Regiment had served the school since 1 February 1989.

8 December 1987, President Reagan and Soviet General Secretary Gorbachev signed the Intermediate-
Range Nuclear Forces Treaty to reduce nuclear arms. The treaty led to the elimination of the Army's Pershing II missile and the Soviet SS-20 missile and the inactivation of Field Artillery Pershing units.

10 December 1930, Secretary of War Patrick J. Hurley designated Fort Sill as the permanent home of the Field Artillery School after years of debate over the best location.

17 December 1944, During the Battle of the Bulge, the Americans employed the VT fuse for the first time against ground targets. The fuse increased the effectiveness of Field Artillery fires.

From the Desk of the Field Artillery CSM

Field Artillery NCOs are valued as leaders and trainers. These competencies are developed and perfected through realistic training, strict adherence to standards, professional military and civilian education, and service in the most demanding positions in the FA and across the Army. We must develop NCOs who are uniquely qualified to support Army and Joint Forces commanders. FA NCOs serve in every combined arms formation in the United States Army -Infantry, Armor, Aviation, and Special Operations units – they must be adequately educated, trained and experienced to achieve effects.

We've been working on a concerted effort to provide the most concise guidance to assist Soldiers and their leaders in identifying the right path so each Soldier, from Private to Command Sergeant Major, has a clear understanding of their respective Career Progression Plan and understands what opportunities lie at each level to facilitate their career advancement. This effort includes analysis and adjustment of the Professional Development Proficiency Codes (PDPC) for Command Sergeants Major and Sergeants Major, succinct Centralized Selection List board guidance, revision of our portion of the *U.S. Army Noncommissioned Officers Professional Development Guide (DA PAM 600-25)* and interrelated adjustment to the Professional Development Models (PDM) for each MOS. The end result is that Private Redleg will not have to ask his or her leaders what they did to get promoted, or assume he or she is on the right path, but will know exactly what is needed to make it from the far left of the formation to the highest levels of the Field Artillery.

There are numerous career opportunities that exist for qualified FA Soldiers to enrich their careers. Soldiers should always be interested in seeing the FA professional career map for their particular MOS; the PDM will assist in guiding leaders and their Soldiers to the inventory of assignments and/or positions within CMF 13. This PDM can be used as a guide to assist in the development for progression within their particular MOS. A number of Soldiers aren't aware of this valuable resource which is easily accessible on the Army Career Tracker site at *https://actnow.army.mil/wps/myportal/act/plan/pdm.*

Any effort we make to provide the most concise guidance to assist Soldiers and their leaders won't help if the products aren't used. Frankly, too many of our Soldiers and leaders I encounter have no knowledge *DA PAM 600-25* exists, yet there is a chapter (Artillery Career Progression Plan) that lays it out for each MOS by skill level; duties, goals for development, institutional training, operational assignments, self-development, additional training and special assignments. It provides what leaders should be professionally counseling their subordinates to achieve and what opportunities those leaders should be providing, and their Soldiers should be pursuing, to build the next generation. The PDM, used in conjunction with *DA PAM 600-25*, will clearly establish all opportunities and requirements to provide Soldiers with the best chance to be highly competitive for promotion.

It is not a question of how many schools can you get, but do you have the right schools; nor is it a question of what assignment/duty position do you want, but what assignment/duty position do you need at the appropriate time to remain competitive for promotion. If you desire to advance your career and your Soldiers' career, you need to make informed decisions based on the current Field Artillery guidance that directs the future of our force; *DA PAM 600-25* provides exactly that in black and white.

There is no secret to promotion. It is the sum of having achieved the requisite level of knowledge and experience in all developmental domains at each level and maintaining the character of a professional Soldier. Start by developing our Soldiers into confident, competent NCOs using the appropriate guidance. Those NCOs of high character, who are technical and tactical experts, with exceptional leadership skills meeting the institutional training requirements, key developmental required assignments, self-development requirements, attended necessary functional training courses, and have performed exceeding well in broadening assignments are most qualified and are competitive for promotion – review your respective PDM, get your hands on the DA PAM and get into the Artilery Career Progression Plan and lay out your path and execute your way to higher levels.

King of Battle!
Fires Strong!
CSM Berk Parsons

Happy Holidays from the the United States Field Artillery School

Happy Holidays! Season's Greetings!

Leaders and Soldiers,

Command Sergeant Major Parsons and I want to extend best wishes to you and yours this holiday season. The holidays are a perfect time to reconnect with family and friends as we take part in a many holiday festivities. This time of year can pass extremely fast, and we would like to tell everyone to take a few moments to savor the time you do get to spend with family and friends, and to focus on what's really important for yourselves and family. As we all know, time at home can be short, as deployments are still occurring at a rapid pace.

Also take time to remember all our fellow Soldiers, Marines and civilian leaders who are deployed around the world. Their service is essential, as is yours and we appreciate all the sacrifices each of you and your families make. We can never thank you enough for the life of service and sacrifice you've chosen as a part of the Field Artillery.

Now more than ever is the time to remember your family and extended Army family – battle buddies, coworkers and neighbors. As you travel or attend celebrations, remember to be mindful of your actions and surroundings, keeping safety and responsibility to your teammates and families in mind.

We wish you and your families a happy holiday season, prosperous New Year and look forward to starting 2017 with each member of the Field Artillery Branch.

Fires Strong! King of Battle!

BERK PARSONS
CSM, USA
Command Sergeant Major,
United States Field Artillery School

STEPHEN J. MARANIAN
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Field Artillery Commandant

Improving communications between digital fire systems

By MAJ Mathew Neyland, FA, U.S. Army Command and General Staff College, Fort Leavenworth, KS

"The Mission of the Field Artillery is to destroy, defeat, or disrupt the enemy with integrated fires to enable maneuver commanders to dominate in unified land operation."

There are many aspects necessary for the Fires WfF to accomplish its mission, arguably one of the most important is the ability to synchronize and mass effects across the battlefield. In order to accomplish this, it is critical that the Fires community maintains the ability to communicate quickly and effectively from sensor to shooter, across the entire fires spectrum. This involves taking targetable data from forward observers (FO), radars, and other sensors and passing it along to Fire Support Elements (FSE) for analysis, and then forwarding to firing elements for execution. At some point, targeting data is generally converted into a digital format for further processing and dissemination through the Advanced Field Artillery Tactical Data System (AFATDS). While it is possible to transfer all fires information via voice communications, doing so increases the risk of information being misinterpreted, as well as tying up radio nets for longer than necessary. The sooner fires data is converted into digital form, the faster and more efficient the entire fires process works. However, voice communications are still important in the confirmation process assuring that the message sent was the message received. Problems arise however, when our FOs, FDCs and FSEs struggle to establish and maintain digital communications. Observations from CTCs indicate training and equipment deficiencies are preventing reliable digital communication resulting in an over reliance on voice coms. This leads to slower mission processing times and exponentially increases the likelihood of introducing human error into the process.

Within the Field Artillery, the most reliable and stable method of digital communication is the upper tactical internet (TI) which S6 signalers provide and maintain. This form of communication generally restricts the digital information flow from AFATDS to

AFATDS only, and excludes most FO or gunline digital systems (PFED, SCU, RHC, AFCS, PDFCS, etc.). The use of upper TI has proven itself reliable and fast.

However, its use puts the Fires community at the mercy of the S6 and other outside agencies to establish and maintain the network. This type of network generally requires units to be static. As the Army shift its focus back to the Decisive Action environment (DA), command posts at all levels have to remain mobile to varying degrees. Observations at the CTCs show that during times of transition the digital flow of fires is halted until one of two things: The S6 reestablishes the upper TI network (SNAP,CPN,JNN), or the unit transitions to a secondary means of digital communication. This is usually provided by ASIP, HF, or SATCOM radios. However, the trend is that fire mission processing is paused until the command posts (CP) are reestablished, which typically take 4-6 hours.

At the tactical level, digital data transmitted over ASIP remains the most common form of data transmission. It allows fires personnel to remain mobile, yet maintain communications with each other. This method is the primary form of digital communication from FOs and gunlines to the AFATDS; however, serious problems arise with its use. ASIP radio data networks are built using the MIL STD 188-220C protocol. Establishing and maintaining this type of network can be challenging for even the most well trained units. These challenges stem from the difficulty in establishing the network, slow data transmission rate and the reduction in range that occurs when transmitting digitally over ASIP. The use of frequency hopping (FH) compounds the range problem even further. Additionally, if a single operator within the network incorrectly enters the parameters into their device, it can cause the whole network to fail. Finally, the ASIP radio is incapable of

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transmitting voice and data simultaneously requiring two radios on separate frequencies to maintain effective communications, one for voice and one for data.

Digital fire missions transmitted via ASIP provided a significant advantage when first introduced, but advancements in communications allow for increased capabilities beyond the ASIP radio's limitations. It is time for the Fires community to catch up.

The ability to modernize and upgrade digital fire support networks currently resides in Army inventory in the form of the Harris PRC-117/G and PRC-152A radio systems.

These radios are an all-in-one package allowing users to communicate using SINCGARS, SATCOM, VHF, and UHF spectrums. One of the particular capabilities of interest is its ability to establish reliable digital networks utilizing the Adaptive Networking Wideband Waveform (ANW2).

The ANW2 waveform allows the creation of a multi user network with reliable connections and high bandwidth rates. It creates a standard internet connection between the radio and the devices it is connected to. By using standard IP addresses, ANW2 allows for seamless connections between digital fires systems. Furthermore, ANW2 creates a self-healing mesh network that allows the radios to enter and exit the net without interruption and the radios will correct themselves to determine the best path to transmit data from one point to another. The data can "hop" through several radios in rout to its final destination even if the two radios do not have line of sight with each other. This is a similar operation to the traditional EPLRS type network. Furthermore, the radio can be paired with a BGAN satellite transceiver that would provide true "over the horizon" capabilities. Effectively and efficiently creating a link between Observers, Fire Cells, Fire Direction Centers, and Gun lines that could operate worldwide.

Another advantage over digital ASIP data is the ANW2 waveform allows for simultaneous transmission of voice and data on the same net. This capability reduces the number of required radio in half compared to a traditional ASIP data network which requires one radio for data and one radio for voice on separate nets. The 117G can operate as a base station or vehicle mounted, extending its range through a power amp, or it can be configured as a man pack and used dismounted along with the 152a.

Multiple rotational training units (RTU) tested the ANW2 system at the National Training Center at Fort Irwin with great success. The test initially began as a way for the Fire Direction OC/Ts to monitor in real time the data being processed through the RTU's AFATDS during live fire exercises. OC/Ts monitored the data using the Effects Management Tool (EMT) software or though their own AFATDS. As NTC acquired more 117G radios, the test expanded to include data and voice transmissions between FDCs, BDE and BN FSEs and FOs during the live Fire Support Coordination Exercise (FSCX) and BDE LFXs at the NTC.

The use of the PRC-117G and the ANW2 network proved to be an invaluable tool at NTC; helping the OC/T's better train, coach and mentor the RTU as well as ensure safety during live fire events. The use of this new system proved viable and a far superior replacement to the ASIP radio systems currently in use. Testing at NTC demonstrated reliable digital communications out to 30 Km. While the desert training environment of "The Box" provides good conditions for radio transmissions, the system is capable of providing simultaneous voice and data over distances at or exceeding those of the ASIP radio in all other environments. Furthermore, radios operating in a mesh network, such as ANW2, significantly simplify retrans operations. If a radio receives data meant for another radio in its network, the radio automatically "hops" the data forward to the next radio until the data reaches the intended destination. This is similar to using indirect routing in AFATDS, except the 117G radio will do it automatically and it is transparent to all users on the network. If the radio system is paired with a BGAN satellite antenna and direct line of site connectivity cannot be established with the intended destination, the system will automatically switch to SATCOM to pass the data. This provides the Fires community true "over the horizon" capabilities worldwide. Additionally, since the connection between the radio and the end device is a standard internet connection, any device capable of commu-

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nication via LAN can operate on the network. This includes, AFATDS, Profiler, JADOCS, EMT, and FOS (RHC and SCU).

In addition to a more reliable network, the bandwidth available is much greater. This allows for high data usage systems, such as EMT or JADOCS to operate effectively over the network. One proposed use of the capability is to outfit the FSCOORD's vehicle with the 117G radio and a small laptop running the EMT program as a client to the BDE FSE AFATDS. This would allow the FSCOORD to monitor the BDE fire Support situation in real time, while remaining in a mobile command post or TAC.

Based on initial testing and analysis, a BCT'S Fires network will require 52 radios. Proposed distribution is to first focus on establishing connections between AFATDS systems within the DS FA BN, followed by upgrading the BDE Fires Net, and then to outfit the maneuver battalions.

BDE Fires NET (10)	Maneuver BN Fires Net (8)	DS FA BN Direction Net (10)
BDE Main CP (Fires Cell)	BN Main CP (Fires Cell)	BN FDC
BDE TAC	BN TAC (FSO)	BN TAC
MNVR BN 1	A Co FIST	A BTRY FDC 1
MNVR BN 2	B Co FIST	A BTRY FDC 2
MNVR BN 3	C Co FIST	B BTY FDC 1
CAV SQDN	D Co FIST	B BTRY FDC 2
DS FA BN	Retrans 1	C BTRY FDC 1
BDE FSCOORD	Retrans 2	C BTRY FDC 2
Retrans 1		Retrans 1
Retrans 2		Retrans 2

Upgrading the BDE fires net and the FA BN fire direction net in ABCTs, SBCTs, and IBCTs would not require any new or specialized equipment that does not already exist within the Army inventory. Fielding a BCT will require only the PRC-117G, vehicle or TOC power amp kit, and the appropriate cables. This requirement holds true for the battalion FIST elements in ABCTs, and SBCTs, as well. The SCU and RHC digital fire support systems in the BFIST, and the Stryker FSV will accept LAN data connection making the system plug and play compatible. For IBCTs the current PFED devices in use do not have a LAN type connection available. However, since the platform is Windows or LINUX based it is possible to create that functionality within the PFED, resolving one of the primary complaints from light units against the use of digital FO systems. The fact that a FO must carry two radios, at least one ASIP for data and then a second ASIP or similar radio for voice; as well as, the batteries required to operate it, often negate the tactical advantage digital communications provides. An upgraded PFED paired with a PRC-152A running the ANW2 network would help alleviate that challenge, extending digital and voice communications down to the light fighter FO in one radio. Extending the network down to the cannons presents another friction point. The current AFCS and PDFCS systems on the M777 and M109A6 are configured to operate over the ASIP radio and have integrated cables to facilitate. However, since both systems are Windows/LINUX based, the capability to upgrade exists and specific cables to support would have to be created.

The Army spent a lot of time and money to improve capabilities throughout the force. Within the Fires realm, this included advancements in weapon systems, munitions, target detection/sensor systems, and software. However, it did not include any improvements to help these new systems communicate digitally with each other. The ASIP will always pro-

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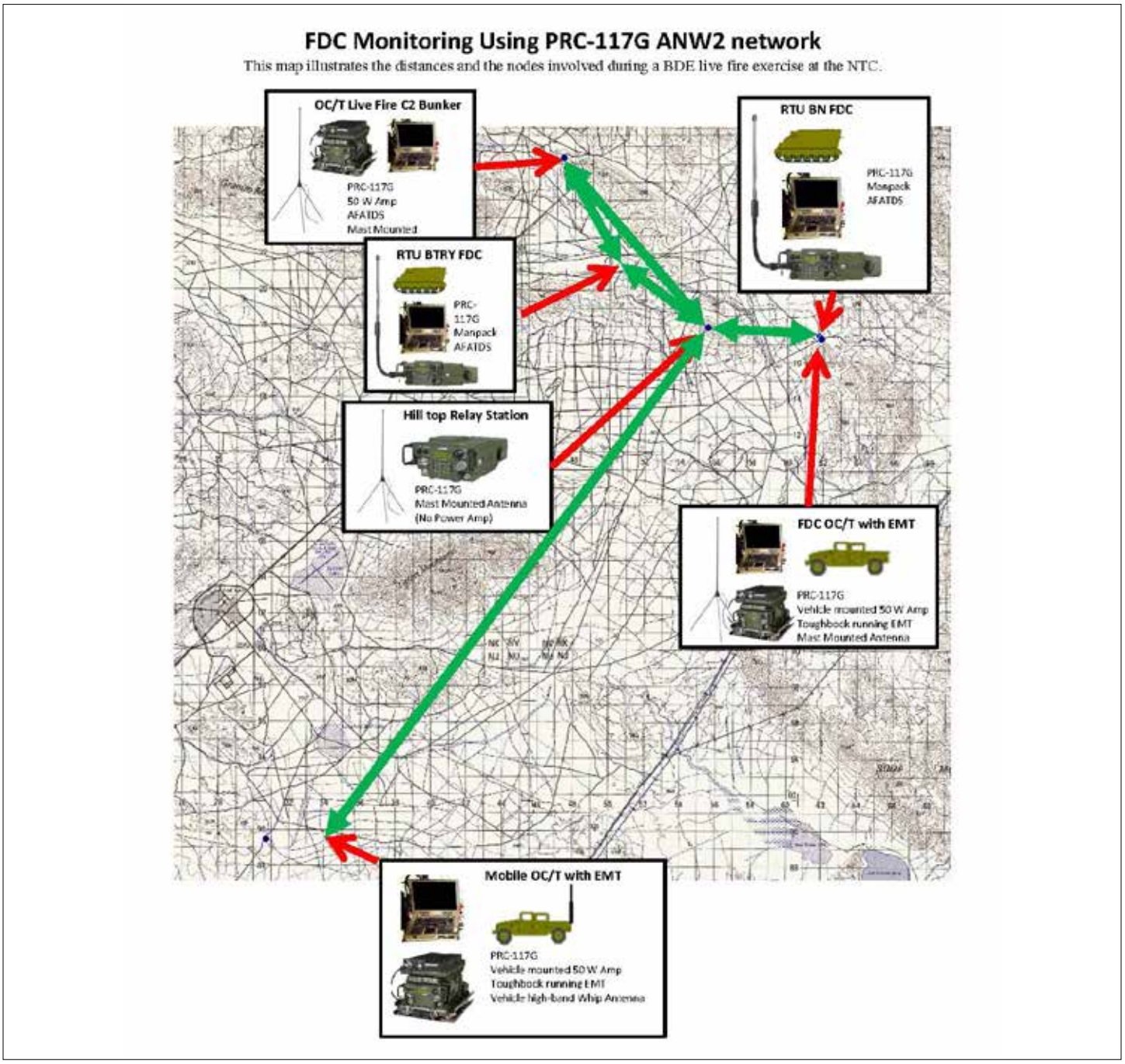
vide a solid fallback option, but it is time for Fires to move forward and increase its digital communications capabilities. The Harris PRC-117G and PRC-152a utilizing the ANW2 network, or something similar, will provide the Fires WfF with its own mid-tier network. Offering reliable tactical data communications independent of the S6 maintained upper TI and more reliable than traditional ASIP systems, greatly increasing the capabilities and responsiveness of fires throughout the force.



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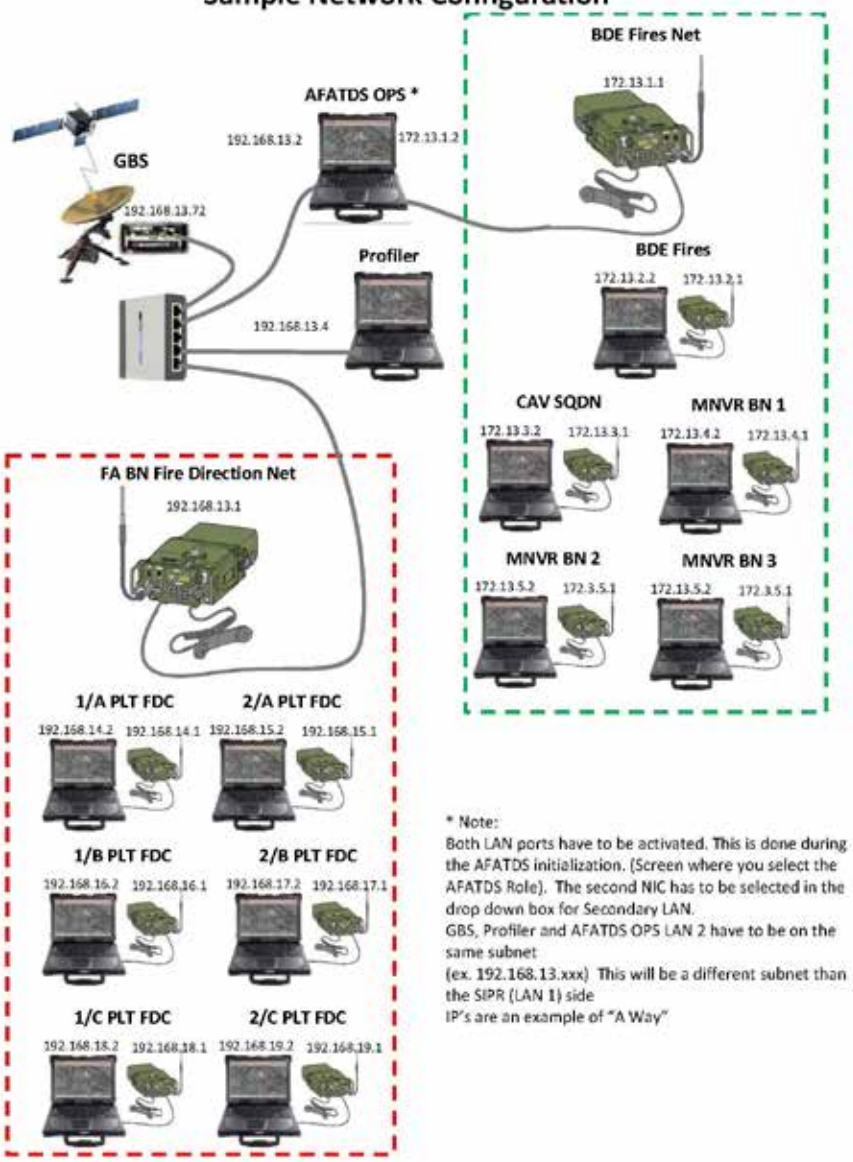
Sample Network Configuration



* Note:
Both LAN ports have to be activated. This is done during the AFATDS initialization. (Screen where you select the AFATDS Role). The second NIC has to be selected in the drop down box for Secondary LAN.
GBS, Profiler and AFATDS OPS LAN 2 have to be on the same subnet
(ex. 192.168.13.xxx) This will be a different subnet than the SIPR (LAN 1) side
IP's are an example of "A Way"

NATO: How to synchronize and integrate Multinational Fires?

By MAJ Michael Englis (USA-A), NRDC-SPAIN Targeting Officer

NATO at all echelons will operate in a Multinational environment. To provide Commanders the capability to make informed decisions, he/she will need to visualize the battlefield. At the tactical level, in order for the Maneuver Commander to shape the battlefield and support his/her forces with timely and accurate fires, Call For Fires will need to be in the digital arena. This can only be accomplish by having Multinational digital interoperability; providing a Common Operating Picture (COP) for all to see and Allied Nations' Field Artillery Command and Control (FA C2) systems that can share data.

Fires assets will be provided to NATO Response Forces (NRF) from multiple nations. Bottom Line is how will NATO forces shoot, move, and communicate using different Multinational FA C2 in order to provide timely and accurate Fires? Furthermore, how will the Fires section at a Headquarters build a Fires COP across the Area of Operations (AO), providing the Commander situational awareness? This will provide the Commander the capability to make informed decisions and visualize the battlefield, the "so what". Due to the majority of the 28 NATO members' FA C2 systems not being digitally interoperable with each other, how will NATO accomplish the above mentioned tasks?

A solution for Multinational FA C2 interoperability is the Artillery Systems Cooperation Activities (ASCA). ASCA provides a common interface between different FA C2 systems; allows interoperable between only ASCA members (there are only 5 full members at the current time). For this reason, ASCA would not be a workable solution for NATO's current Enhanced NRF Headquarters; NATO Rapid Deployable Corps-Spain (NRDC-SPAIN), there had to be another course of action.

The current solution is to provide Liaison Officer (LNO) packages with their nation's FA C2 system at HQs NRDC-SPAIN. However, LNO packages are manpower and communications equipment intensive. At the VJTF BDE level, the BDE HQs is Spanish with subordinate battalions from Spain, Portugal, UK, Poland, and Belgium with Spanish and British Artillery batteries. Due to no FA C2 interoperability between these forces, the VJTF BDE's Spanish Artillery Battalion provided three LNO/Battalion Fire Support Liaison Team (FSLT) packages (over 15 personnel dedicated to LNO mission) with communication packages. With this course of action, fire mission processing time and the probability of human error is increased, due to the information transfer from one nation's FA C2 system to another nation's FA C2 system.

During exercises Brilliant Jump and Valiant Falcon 2016, NRDC-SPAIN served as NATO's Land Component Command (LCC) with an attached High Mobility Artillery Rocket System (HIMARS) battalion from Fort Bragg, 3rd Battalion, 27th Field Artillery Regiment, and the VJTF BDE. In order to provide timely and accurate fires and a LCC-level Fires COP, NRDC-SPAIN and 3-27 FAR used the Fire Command Web (FCW) interface provided by the Fires Data Server (FDS) from the Advanced Field Artillery Tactical Data System (AFATDS), thus allowing the sharing of data from NRDC-SPAIN and 3-27 FAR. All data was "cut and paste", with no map overlay available on this web based server. The web based server allowed all units the ability to cut and paste data between NRDC-SPAIN, VJTF BDE, and 3-27 FAR; providing the digital capability to conduct digital fire missions, unit locations, Fire Support Coordination Measures across the LCC AO. The test environment with TALOS and AFATDS was conducted on an Unclassified closed network.

Without ASCA, the web based server is the optimal course of action in operating in a Multinational environment. The server provides the Fires section the capability to develop a digital lethal fire chain from LCC level to the executing unit, the ability to C2 Fires elements across the LCC AO, clear airspace in near-real time, and provide the LCC Commander a Fires COP. It is not the ideal solution, but is the start of providing NATO forces timely and accurate Fires.

Guardsman first female fire-support specialist Army-wide

By SFC Gina Vaile-Nelson,
133rd Mobile Public Affairs Detachment

FRANKFORT, Ky. — Tucked away in a supply office at Armory 1 in Frankfort, Staff Sgt. Billie Jacobs, a supply sergeant for Headquarters and Headquarters Company, 63rd Theater Aviation Brigade tries to stay under the radar.

She'll lend a hand to anyone who asks, but would rather not bring any attention to herself. That's probably why you didn't even know that recently, Jacobs graduated as the first female 13F fire-support specialist in the U.S. Army.

Staff Sgt. Billie Jacobs

"I never cared to be the first in anything, but being a grunt and leading troops has been where my heart was from the beginning," Jacobs said.

When she reported to the Oklahoma National Guard's 189th Regional Training Institute in Norman, Oklahoma, Jacobs said it was as routine as checking in to any duty station. Running through her mind was the "same thing" that has been there as the only female since I was 13.

"If you go in there and prove yourself as a Soldier, the actions will speak louder for yourself than words," she said.

In January 2016 implementation of Defense Secretary Ash Carter's plan that lifted all gender-based restrictions on military service. The decision opened more than 200,000 jobs across the military – roughly 10 percent of the force – to women. The 13F MOS was the only field artillery job that hadn't been opened to women.

Other support roles, such as 92Y supply sergeant allowed women to serve alongside infantry or other male- dominated fields. This is where Jacobs spent her first years in the Kentucky Guard. She also volunteered for Joint Support Operations, Kentucky's Counterdrug mission where she egressed from hollers and fields via static line attached to a UH-60.

The rigorous training schedule at 13F-school required hours of memorizing new military jargon used by field artillery and special operations. She had to become proficient at identifying weapons systems necessary to eliminate a threat and methods for remaining concealed. Students became experts in map reading and land navigation and understood that any mistake made on a map overlay could cause serious collateral damage. Ruck marches and field exercises would be enough for some to ring the bell and quit. Even the hardest of Soldiers.

But Jacobs said her mental capacity to never give up and not let down the people who believe in her is what kept her going then, through the 13F course and now.

"Mind over matter is real and having heart can push you through things your body swears it can't," she said.

Jacobs said she didn't do anything extra to prepare for 13F-school. As a body builder, wrestling coach and all around "PT-stud," Jacobs was already in prime shape.

"You should always be prepared for anything," she said. "Were there moments where I knew I would have to shatter ceilings? Every opportunity I tried

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to, because I didn't want to be looked at as weak or incapable.

"I tried to shatter ceilings in some aspect, everywhere I've been and with all the challenging things in life I've experienced," Jacobs said.

Those life lessons and motivations not only impact her subordinates and leaders, but also her community. As a coach for the Anderson County Youth Club wrestling team, Jacobs helped coach a team of 48 young boys and girls. The team placed 13th out of 60 teams in the State Wrestling Finals for 2016.

"Billie is the type of person who you want as a role model," said 1st Lt. Jonathan Strayer, training officer for the 751st Troop Command. Strayer asked Jacobs to assist with coaching the team this year.

"At work, if you task Billie with something, she does it without needing direction or guidance," he said. "On the mats with the kids, she brings that same dedication and determination but easily tailors her lessons to individual kids' abilities.

Even though Jacobs doesn't have any children, Strayer said her interactions with them was natural, proving that her leadership qualities and dedication to building a successful team come from within.

"Her sportsmanship and professional nature taught the team that a female can do anything," he said. "Just by doing something she loves (wrestling), she was able to teach these young men, and especially the young girls that women are equal and in many regards can even out wrestle us."

Now that she can hang a 13F diploma on her wall, Jacobs knows that being the first female to have the title is an honor, and she hopes other women will follow suit.

"Don't be afraid," she said to women who are considering joining combat roles. "Words can't kill you but they sure can help motivate you. Push through. You literally can do anything you put your mind to, beating yourself is the first step."

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Joint Multinational Training Group-Ukraine
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US Army Security Assistance Command
Field Artillery Squadron, 2nd Cavalry Regiment
6-8 Cavalry Squadron
FORMICA Team, 2nd BDE, 3rd ID

NCOs create smooth transition for women integrating into Field Artillery

By Meghan Portillo, NCO Journal

Since February, women have been proving that they have what it takes to be 13B cannon crewmembers, and their NCOs have been guaranteeing each an equal opportunity to rise to the challenge.

"When I first picked this military occupational specialty, I had sergeants telling me it was going to be very hard, that there are going to be males who don't want me in this job," said Pvt. Kiara Carbullido, who graduated in June from Advanced Individual Training at Fort Sill, Oklahoma. "But then they said there will be NCOs who are going to look out for your best interests and push you to be your best, and I think that is exactly what our sergeants have done for us. They are helping us out, making everything equal between the males and the females. Whatever they can do, we can do."

The move to open most field artillery MOSs, including 13Bs, to women came in the fall of 2015, months before the decision was made in January to open all combat arms positions to women. The first female cannon crewmember, Pvt. First Class Katherine Beatty, graduated from AIT at the top of her class in March.

Many AIT platoon sergeants at Fort Sill said they never expected to see women in field artillery positions during their careers. All of them, however, said the gender integration training is going well and expressed a positive hope for the future of women in their MOS.

"Before I retire in the next few years, I would love to see one of the females here today become an NCO, become a staff sergeant, become a section chief," said 1st Sgt. Marlow Parks, first sergeant of C battery, 1st battalion, 78th Field Artillery Regiment. "I can't wait to see that, to be honest with you. I'm proud that I have had some kind of part in it, making sure that Soldier initially got the foundation she needed in order to advance. To me, it's a very rewarding job for me and my cadre to train these females, to see the Army change to where we are today. It's good. When I am long gone and retired, I can see a female command sergeant major in field artillery. She may be here now; you never know. The sky is the limit for all of these Soldiers, male or female."

AIT for 13Bs

Throughout the first three weeks of AIT, 13Bs learn about the equipment they will be required to use in their jobs. The first week covers the basics of communication. They learn the ins and outs of the radios and how to record firing data. During the second week, they study the ammunition they will fire – 105mm or 155mm rounds – and how to calculate targets. In the third week, they are introduced to the three artillery pieces they may work with: the M777 howitzer, the M119A3 howitzer, and the M109 Paladin self-propelled howitzer.

In the remaining two weeks of AIT, the Soldiers must apply the knowledge they have gained in real-life scenarios and learn how to work as a team. During the fourth week, each platoon takes their specified howitzer into a field near the motor pool for dry-fire

Pvt. Natasha Madison holds up the four excess gunpowder bags that were not needed for the three-increment charge during live-fire training on the M119A3 howitzer in May at Fort Sill, Oklahoma. (Photo by Meghan Portillo / NCO Journal)

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training. The Soldiers run crew drills for the first time on the actual weapon. A live fire is conducted during the fifth and final week of training, and each crewmember must fire three shells to qualify on one of the howitzers.

No matter which howitzer a platoon works with, each crewmember must pass the High Physical Demand Test to graduate from AIT. The test levels the playing field, said Staff Sgt. Michael Prater, an AIT instructor for C battery, 1st battalion, 78th Field Artillery. It's difficult, and the requirements are the same. Both men and women are graded on the same scale.

"I have no problem with females being integrated into this MOS," Prater said. "They are just like any other individual. It depends on whether they can stand up to the physical demands of being a 13B. That's the reason they have to pass the Army Physical Fitness Test as soon as they get here, and then they go into the HPDT, where I have seen males fail just as much as females. It depends on the physical attributes of that person. Are they able to handle that stress? Able to handle those different MOS-related activities?"

Pvt. Nareisha George prepares an ammunition round for a fuse during live-fire training in May at Fort Sill, Oklahoma.
(Photo by Meghan Portillo / NCO Journal)

Among other strenuous tasks in the HPDT, Soldiers must demonstrate their ability to load and unload 15 ammunition shells in 15 minutes. Each 155mm shell weighs about 100 pounds, so Soldiers are effectively moving 3,000 pounds in 15 minutes – a difficult feat, regardless of gender.

"It feels amazing to be one of the first females here," said Pvt. Jennifer Moreira, who also graduated in June. "The men aren't used to it – they don't expect us to do much, and it feels good to prove them wrong. They tend to say, 'Oh, hey, let me get this.' No. We've got it. I like to prove them wrong. It's challenging, and these rounds are heavy, but our NCOs treat us all equally. They give us the opportunity to prove ourselves, and I think we all take advantage of that and prove we can pull our own weight. I am proud of all of us females. I am proud of what we can do."

Carbullido said she and the other women in her class would never use their femininity as a crutch or an excuse. They are more concerned with proving their worth. They chose this MOS because they know they have what it takes, she said. They don't want any handouts.

"In this job I feel like, finally, I can do something the same as guys – protecting my family and the United States of America," Carbullido said. "It's badass. I'm so honored to be a female in field artillery."

Sgt. Shannon Johnson, a platoon sergeant for C battery, 1st battalion, 78th Field Artillery, said he had heard NCOs express concerns that women would try to get away with doing less than their male battle buddies. However, the opposite has proven true.

"The physical demands testing has pretty much changed everybody's views of having females in artillery because – you would be surprised – most females are able to pass it, and some males are not," Johnson said. "There is always a technique. I have had big males that fail it. And smaller females come in here and just knock it out, first time go, with ease. I think most males think, 'I'm strong; I've got this. I don't need to prep for it.' But the females come in, and we have rounds laying around. You see them on the weekends practicing, because they feel like they have to go the extra mile to prove they are worthy of being 13B cannon crewmembers. In my opinion, they are way ahead of the game.

"For all of our Soldiers, their hard work is worth it when they actually shoot that first round and see the

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cannon go off," he said. "We had some females shoot for the first time last week. That look on their face – yeah. It is worth the hard work they put in to it. I always tell them the hardest part is prepping to go to the field. Once you are out there and are shooting and you see the camaraderie of the team coming together, you're like, 'Yeah, I'm part of something pretty awesome.'"

Pvt. Bethany May communicates with her crew on the radio while Pvt. Michael Richardson records firing data during live-fire training at the end of AIT in May at Fort Sill, Oklahoma. (Photo by Meghan Portillo / NCO Journal)

Adjustments for leadership

For Soldiers new to the Army, working alongside women is all they have known. But senior leadership will feel the minor adjustments, Johnson said.

Practical changes had to be made, including providing separate living quarters and separate outhouses in the field, and before the first woman attended AIT, leadership was required to complete a refresher course on Sexual Harassment/Assault Response and Prevention.

"I haven't had to make too many changes," Prater said. "Some things, like porta-potties, we have to label them to make sure the males don't go into the porta-potties that the females use. Sick call is a little different. If a female has a female problem she has to take care of or go see a doctor about, that's different, as opposed to a regular sprained foot or something to that nature. But training is no different. They wear the same ear plugs, eat the same MREs. So it's just minor adjustments we have had to make as instructors."

Staff Sgt. Allan Avendrano agreed the changes have felt minor, but said the overall experience has challenged him to be a better, more professional leader.

"Learning to lead females has definitely rounded me out as a leader, as an NCO. I never thought – not once – in my career, ever, that I was going to have female Soldiers to lead. I've been in the Army for 11 years, and this is my first time leading them, teaching them. And the No. 1 adjustment I had to make has got to be my language," he said with a laugh. "You can ask anybody on the gun line, and I'm fairly sure that is going to be the first thing they will say. They have to clean up their language a little bit more, but that comes with professionalism."

"'Stop crying like a little girl' is something you would never say with females in your platoon," Johnson said. "No belittling language. We see the females work just as hard, and our language should reflect respect."

Parks said he tells his NCOs to remain confident in their leadership skills. The Army has prepared them well for this. The NCO Creed states "All Soldiers are entitled to outstanding leadership; I will provide that leadership. … I will be fair and impartial when recommending both rewards and punishment." As long as they follow TRADOC Regulation 350-6 [Enlisted Initial Entry Training Policies and Administration,] he said, they will do well.

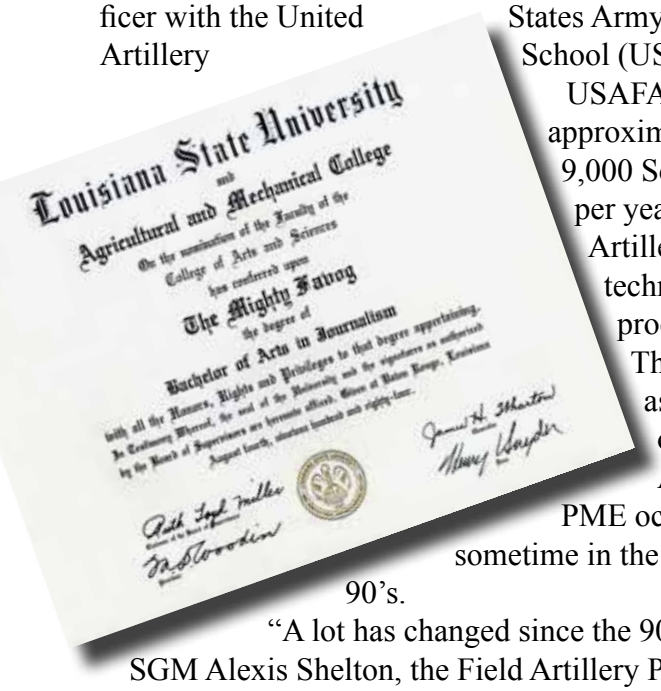
"If you've got one standard for the male, it should be the same for the female. That is what I tell all my instructors. If you are a hard NCO, continue to be as hard with the female Soldiers as you would with the male Soldiers. Go from the book. Go from the manual. You will be all right."

Redlegs get more college credit for Army education, training

By Sharon McBride, USAFAS Public Affairs Officer

In the past, Field Artillery Soldiers were not able to get much college credit for their military occupational specialty (MOS) specific professional military education (PME), but now that's all changed.

Recently, an American Council on Education (ACE) MOS evaluation team made the trip to Fort Sill to re-evaluate Field Artillery PME for possible college credit, said Matthew Youngkin, a project officer with the United States Army Field Artillery School (USAFAS).



USAFAS trains approximately 9,000 Soldiers per year on Field Artillery tactics, techniques and procedures. The first assessment of Field Artillery PME occurred sometime in the early 90's.

"A lot has changed since the 90s," said SGM Alexis Shelton, the Field Artillery Proponent Sergeant Major. "We were overdue for an evaluation."

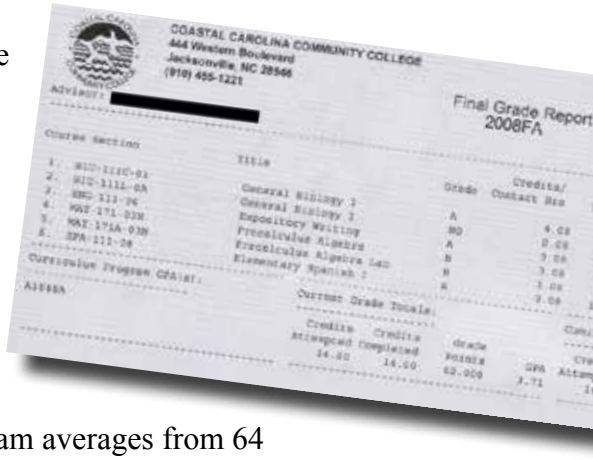
For several weeks, the team worked closely with Field Artillery representatives and civilian college faculty members from accredited institutions to carefully analyze the content, scope, and rigor of Field Artillery classes and programs, said Youngkin.

The re-assessment went well and now as of August 2016 Field Artillerists can get credit for their PME, said Shelton. Once a Soldier has reached a recommended rank and achieved the associated skill set, up to 21 credits can be applied towards a lower-division baccalaureate/associate degree or up to 18 credits can be applied towards an upper-division baccalaureate degree.

The following Field Artillery MOSs, at the Staff Sergeant (Skill Level 30) and Sergeant First Class (Skill Level 40), have been re-assessed and now potentially count for more college credit:

MOS-13B – *Cannon Crewmember,*
MOS-13D – *Field Artillery Automated Tactical Data Systems Specialist,*
MOS-13F – *Fire Support Specialist,*
MOS-13M – *Multiple Launch Rocket System (MLRS/HIMARS) Crewmember,*
MOS-13P – *Multiple Launch Rocket System Operations/Fire Direction Specialist,*
MOS-13R – *Field Artillery (FA) Firefinder Radar Operator,*
MOS-13T– *Field Artillery Surveyor/Meteorological Crewmember.*

Additionally, **MOS-13Z**- Field Artillery Sergeant Major (Skill Level 50) and Command Sergeant Major (Skill Level 60), and **MOS-131A**- Field Artillery Training Technician (Warrant Officer) have been updated.



Typically, one course in college is equal to three semester hours or three credits. The average number of college credits needed to complete an academic program averages from 64 credits for a two-year associate degree to 120 credits for a four-year bachelor's degree. Some programs or schools require more, some less.

"This is a great thing," said Shelton. "This enables our NCOs and Warrant Officers to either get a great start on a college degree or get additional credits to finish up getting a degree."

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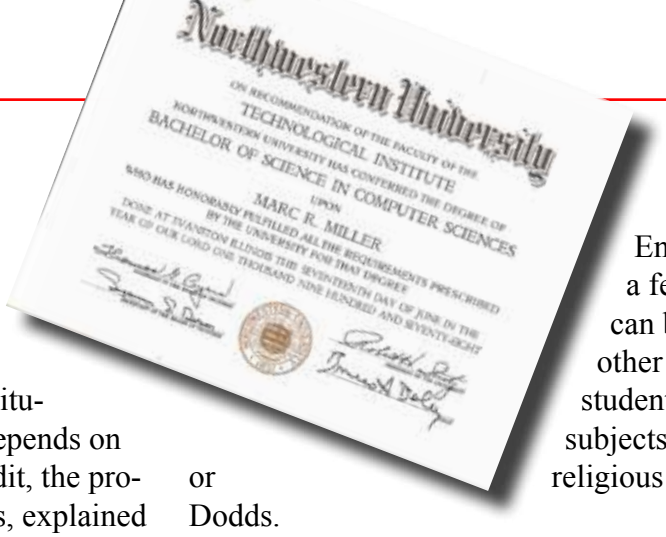

However, it is important to remember it is up to each institution to decide what ACE credit recommendations for college credit can be accepted, modified, or rejected. Whether an academic institution accepts the credit recommendations depends on its policies and procedures for transfer credit, the program of study, and the degree requirements, explained Michael Dodds, the Education Services Officer at the Fort Sill Education Services Division.

The first step for Soldiers seeking a degree should be requesting their Joint Services Transcript (JST) on the web @ *https://jst.doded.mil.* JST is an academically accepted document approved by the American Council on Education (ACE) to validate a service member's military occupational experience and training along with the corresponding ACE college credit recommendations.

The JST includes:

• *Personal service member data*

• *Military course completions—all courses that have been evaluated by the American Council on Education (ACE), with full descriptions and credit recommendations*

• *Military occupations—full descriptions, skill levels, and credit recommendations*

• *College level test scores—CLEP, DSST, NCPACE, ACT/PEP, and Excelsior*

If after requesting their JST, and if the new credits for FA courses aren't reflected, Soldiers must submit a trouble ticket on the JST website. Follow the prompts located on *https://jst.doded.mil* to submit "Joint ServicesTranscript Corrections." The JST website receives updates every week.

Each major will have what's called "core classes" to earn credit to graduate within a chosen major, explained Dodds. In addition to these core requirements, students are asked to take a set number of elective courses that can be exclusively tied to their major. However, sometimes the electives will be "free," meaning they are not connected to a major focus of study. For example, a student pursuing a degree in English might have a few classes that can be taken in any other field. This lets students take classes in subjects like art history or religious studies, said Dodds.

"This lets students pursue other interests they may have, giving them a more 'well-rounded' education," said Dodds. The more "free" the electives are, the greater the chances of receiving all the recommended ACE credits. For example, a 13B30 "Staff Sergeant" FA Cannon Crewmember may be able to receive three credits in "Supervision," three credits in "Communications," three credits in "Introduction to Mechanical Systems," three credits in "Computer Essentials," three credits in "Data Communication and Network Fundamentals," and three credits in "Electromechanical Troubleshooting and Maintenance" for a total of 18 semester hours or credits towards a lower-division baccalaureate/associate degree.

"All of these ACE recommended credit could possibly count as free electives," said Dodds.

According to Shelton that's a win/win for everyone. "That's 18 credits out of 60 knocked out for an associate's degree, or 18 credits knocked out of 120 for a lower baccalaureate degree," said Shelton. "ACE credits save Soldiers time and money by giving them a head start in pursuing a degree."

The JST and its associated ACE credits are accepted by more than 2,300 colleges and universities across the nation. Academic programs accepting ACE credits are available in a wide range of fields, including Business and Management, Cyber Security, Education and Teaching, Healthcare and Science, Information Technology and Computer Science, Liberal Arts and Communications, and Public Safety.

Dodds said it is beneficial to ask the admissions counselor about the school's policy for accepting ACE credit recommendations before committing to a major or specific degree program. Some schools, if asked, will provide an 'unofficial evaluation' prior to enrollment. An even better option is scheduling an appoint-

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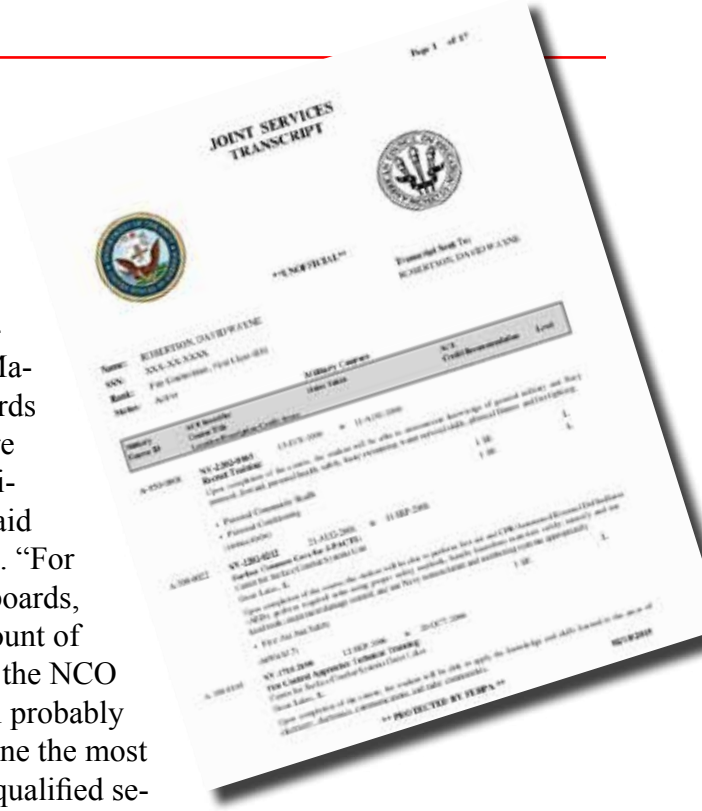
ment with guidance counselor at an U.S. Army Education Center.

"They will break it all down for you," said Dodds. In addition to getting assistance with requesting a JST, guidance counselors can provide advisement and assistance in developing Army careers, determining educational goals, requesting transcripts (High School, College, AARTS), applying for admission to on-post universities, enrolling in basic college courses, information on how to obtain tuition assistance, how to receive testing services, what pre-commissioning services are available, and information on what Veterans Education Benefits are available and how to apply.

Besides setting yourself up for a great career after the Army, getting a college degree can help with FA promotions, said Shelton. A completed degree can net the maximum civilian education points at a promotion board.

"I know the Sergeant Major Boards are more competitive," said Shelton. "For future boards, the amount of college the NCO has will probably determine the most highly qualified selected for promotion."



Here is the entire list of NEW recommendations for possible college credit for Field Artillery Military Occupational Specialties (MOSs) provided by the American Council on Education (ACE).

MOS-13B Cannon Crewmember

Recommendation, Skill Level 30 (Staff Sergeant)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision, 3 in communications,
3 in introduction to mechanical systems,
3 in computer essentials,
3 in data communication and network fundamentals,
3 in electromechanical troubleshooting and maintenance.

In the upper-division baccalaureate degree category:
3 semester hours in risk assessment.

Recommendation, Skill Level 40 (Sergeant First Class)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in public speaking,
3 in communications,
3 in introduction to mechanical systems,
3 in computer essentials,
3 in data communication and network fundamentals,
3 in electromechanical troubleshooting and maintenance.

In the upper-division baccalaureate degree category:
3 semester hours in leadership,
3 in management,
3 in project management,
3 in risk assessment.

MOS-13D Field Artillery Automated Tactical Data Systems Specialist

Recommendation, Skill Level 30 (Staff Sergeant)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in communications,
3 in data communications and network fundamentals,
3 in heavy equipment maintenance and repair,
3 in computer essentials,
3 in network fundamentals.

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In the upper-division baccalaureate degree category:
3 semester hours in risk assessment.

Recommendation, Skill Level 40 (Sergeant First Class)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in public speaking,
3 in communications,
3 in data communications and network fundamentals,
3 in heavy equipment maintenance and repair,
3 in computer essentials, and 3 in network fundamentals.

In the upper-division baccalaureate degree category:
3 semester hours in leadership,
3 in management,
3 in project management, and
3 in risk assessment.

MOS-13F Fire Support Specialist

Recommendation, Skill Level 30 (Staff Sergeant)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in communication,
3 in computer essentials,
3 in heavy equipment maintenance and repair,
3 in data communications and network fundamentals, and
3 in land navigation.

In the upper-division baccalaureate degree category:
3 semester hours in risk assessment.

Recommendation, Skill Level 40 (Sergeant First Class)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in public speaking,
3 in communication,
3 in computer essentials,
3 in heavy equipment maintenance and repair,
3 in data communications and network fundamentals,
3 in land navigation.

In the upper-division baccalaureate degree category:
3 semester hours in leadership,
3 in management,
3 in project management, and
3 in risk assessment.

MOS-13M Multiple Launch Rocket System (MLRS/HIMARS) Crewmember

Recommendation, Skill Level 30 (Staff Sergeant)
In the lower-division baccalaureate/associate degree category,
3 semester hours in supervision,
3 in communications,
3 in heavy equipment maintenance and repair,
3 in computer essentials,
3 in heavy equipment operations,
3 in electromechanical troubleshooting and maintenance.

In the upper-division baccalaureate degree category:
3 semester hours in risk assessment.

Recommendation, Skill Level 40 (Sergeant First Class)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in communications,
3 in public speaking,
3 in heavy equipment maintenance and repair,
3 in computer essentials,
3 in heavy equipment operations, and
3 in electromechanical troubleshooting and maintenance.

In the upper-division baccalaureate degree category:
3 semester hours in leadership,
3 in management,
3 in project management, and
3 in risk assessment.

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MOS-13P Multiple Launch Rocket Systems Operations/Fire Direction Specialist

Recommendation, Skill Level 30 (Staff Sergeant)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in communications,
3 in heavy equipment maintenance and repair,
3 in computer essentials,
3 in network fundamentals, and
3 in land navigation.

In the upper-division baccalaureate degree category:
3 semester hours in risk assessment.

Recommendation, Skill Level 40 (Sergeant First Class)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in public speaking,
3 in communications,
3 in heavy equipment maintenance and repair,
3 in computer essentials,
3 in network fundamentals, and
3 in land navigation.

In the upper-division baccalaureate degree category:
3 semester hours in leadership,
3 in management,
3 in project management, and
3 in risk assessment.

MOS-13R Field Artillery (FA) Firefinder Radar Operator

Recommendation, Skill Level 30 (Staff Sergeant)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in communications,
3 in radar systems,
3 in electromechanical troubleshooting and maintenance,
3 in data communications and network fundamentals,
3 in computer essentials.

In the upper-division baccalaureate degree category:
3 semester hours in risk assessment.

Recommendation, Skill Level 40 (Sergeant First Class)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in public speaking,
3 in communications,
3 in radar systems,
3 in electromechanical troubleshooting and maintenance,
3 in data communications and network fundamentals,
3 in computer essentials.

In the upper-division baccalaureate degree category:
3 semester hours in leadership,
3 in management,
3 in project management, and
3 in risk assessment.

MOS-13T Field Artillery Surveyor/Meteorological Crewmember

Recommendation, Skill Level 30 (Staff Sergeant)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in communications,
3 in heavy equipment maintenance and repair,
3 in computer essentials, and
3 in land navigation.

Recommendation, Skill Level 40 (Sergeant First Class)
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in communications,
3 in heavy equipment maintenance and repair,
3 in computer essentials,
3 in public speaking,
3 in land navigation.

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In the upper-division baccalaureate degree category,
3 semester hours in leadership,
3 in management, and
3 in project management.

MOS-13Z Field Artillery (Skill Level 50) Sergeant Major and (Skill Level 60) Command Sergeant Major

Recommendation, Skill Level 50
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in public speaking,
3 in communications.

In the upper-division baccalaureate degree category:
3 semester hours in leadership,
3 in management,
3 in project management,
3 in organizational behavior.

Recommendation, Skill Level 60
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in public speaking, and
3 in communications.

In the upper-division baccalaureate degree category:
3 semester hours in leadership,
3 in management,
3 in project management,
3 in organizational behavior.

MOS-131A Field Artillery Targeting Technician (Warrant Officer)

Recommendation
In the lower-division baccalaureate/associate degree category:
3 semester hours in supervision,
3 in public speaking,
3 in communications,
3 in radar operations,
3 in network fundamentals,
3 in land navigation.

In the upper-division baccalaureate degree category:
3 semester hours in leadership,
3 in management,
3 in project management,
3 in change management,
3 in organizational behavior,
3 in strategic management.

Find the CSM of the Field Artillery on FaceBook

Chief of Field Artillery/CSM of Field Artillery Reading List

Company Grade Officers/ Non-Commissioned Officers

1. John Keegan. ***The Face of Battle: A Study of Agincourt, Waterloo, and the Somme.*** New York: Penguin Books, 1983.

2. T.R. Fehrenbach. ***This Kind of War: The Classic Korean War History.*** Washington, D.C.: Potomac Books, 2001.

3. Jon T. Hoffman. ***Tip of the Spear: U.S. Army Small-Unit Action in Iraq, 2004–2007***. Washington, D.C.: U.S. Army Center of Military History, 2009.

4. Trent Angers. ***The Forgotten Hero of My Lai: The Hugh Thompson Story***. Lafayette, La.: Acadian House Publishing, 1999.

5. Charles B. MacDonald. ***Company Commander.*** Ithaca, NY: Reprint Burford Books, 2002.

6. Craig M. Mullaney. ***Unforgiving Minute: A Soldier's Education***. New York: Penguin Press, 2009

7. Mark E. Grotelueschen. T***he AEF Way of War: The American Army and Combat in World War I***. New York: Cambridge University Press, 2007.

8. Michael Shaara. ***The Killer Angels***. New York: Modern Library, 2004.

9. Harold G. Moore and Joseph L. Galloway. ***We Were Soldiers Once . . . and Young: Ia Drang - the Battle That Changed the War in Vietnam.*** New York: Harper Torch, 2002.

10. Christopher D. Kolenda. ***Leadership: The Warrior's Art***. Army War College Foundation Press, 2001.

11. Roy E. Appleman. ***East of Chosin: Entrapment and Breakout in Korea, 1950.*** Texas A&M University Press, 1990.

12. Dave Grossman. ***On Killing: The Psychological Costs of Learning to Kill in War and Society***. New York: Back Bay Books, 2009.

13. Captain Adolf Von Schell. ***Battle Leadership.*** Echo Print Books and Media, 2013.

14. Steven Pressfield. ***Gates of Fire: An Epic Novel of the Battle of Thermopylae.*** Bantam, 1998.

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1. Anton Myrer. ***Once an Eagle***. New York: HarperTorch, 2001.

2. David McCullough. ***1776.*** New York: Simon & Schuster, 2006.

3. ***Ulysses S. Grant. Personal Memoirs.*** New York: Charles L. Webster and Company, 1885-1886.

4. James Kitfield. ***Prodigal Soldiers: How the Generation of Officers Born of Vietnam Revolutionized the American Style of War.*** Washington, D.C.: Brassey's, 1997.

5. H.R. McMaster. ***Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies That Led to Vietnam.*** New York: Harper Perennial, 1998.

6. Ed Cray. ***General of the Army: George C. Marshall, Soldier and Statesman.*** New York: W. W. Norton & Company, 1990.

7. Boyd L. Dastrup. ***Modernizing the King of Battle: 1973-1991***, Washington, D.C.: US Army, Center of Military History, 2004.

*****This list is by no means all-inclusive. It is intended to offer leaders at different levels some of what we believe are exceptional professional readings.***