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ELECTROMAGNETIC

SPECTRUM

O P E R A T I O N S



Chief of Signal's Comments

Focused training, education needed for brigade S6

Regiment,

First, a note of thanks to all members of the Regiment for your continued service to our nation. You are making a difference and the nation is grateful. I would also like to say thanks to our Families - our spouses, children, parents and relatives who play such important roles in our lives and share the sacrifice of service. We who serve could not do so with out the genuine love and support our families provide - we will be forever grateful.

Now it's time for an update on Signal Center activities since the last edition. If you have not seen our vastly improved Signal Center web page - go see it. The internet connectivity to all is one of the most useful ways to keep the Regiment informed. Every aspect of Fort Gordon is captured on this web page - let us know if it meets your expectations. There is more information here on military occupational specialties, transformation, what we teach, who are the key folks you may need to engage, information on Fort Gordon and Augusta if you are headed this way, plus tons more. Also, I have included all of my "Chief of Signal Sends" emails that highlight news worthy of your review. You can see it all at (www.gordon.army.mil)

We are dedicating the next two editions of the *Communicator* to G6/S6 business and Warfighter Information Network-Tactical respectively. G6/S6 is tough business as we continue to field Information Technology systems to every echelon of our forces. We have so many battle-tested officers, noncommis-



BG Jeffrey W. Foley
Chief of Signal

sioned officers, and Soldiers who have conquered these new challenges that we want to share their success with the entire Regiment. We also recognize an increased need to get after more focused training and education for brigade S6 here at the school house, increased training expertise at the National Training Center and Joint Readiness Training Center, and pre-deployment assistance visits. We are soliciting articles written by the S6 community - help us get the word out by those of you who have conquered and have ideas on how we can help.

It is time we update you on our flagship program for the Army - Warfighter Information Network-Tactical.

It plays a huge role for FCS and the entire future force. Recent decisions by the Department of the Army and PEO C3T merit your attention, as well as informing you on how we plan to get more enabling capability to the field faster, how we plan to train, how we plan to maintain this great capability.

In the last edition I told you we were revising the *Signal Regimental Campaign Plan* and that the goals were: Provide world-class Soldiers and leaders, train, educate, and develop adaptive IT professionals, and plan, synchronize, and implement future network capabilities.

Currently we are working on an action plan to achieve results in the many areas which capture my priorities. I will highlight for you some details in our next edition.

Again, keep up the great work. I remain so proud to lead our Regiment and be a member of your team!

BG Jeff Foley
Army Strong!

ACRONYM QUICKSCAN

IT – Information Technology
FCS – Future Combat System
JRTC – Joint Readiness Center
MOS – military occupational specialties
NCO – noncommissioned officer
NTC – National Training Center
PEO C3T – Program Executive Office
Command, Control, Communications
Tactical
WIN-T – Warfighter Information Network-Tactical



We ... recognize an increased need to get after more focused training and education for brigade S6 here at the school house, increased training expertise at the National Training Center and Joint Readiness Training Center, and pre-deployment assistance visits.

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Army Communicator

Voice of the Signal Regiment

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Electromagnetic Spectrum Operations: The Path to Net-Centric Warfare

By COL (Ret) Ed Francis

As the Army prepared for Operation Iraqi Freedom, little did anyone realize the lasting impact this war would have on how the Army and the Signal Regiment manage the electromagnetic spectrum. During the days and months leading up to the United States and Coalition Forces' advance on Baghdad, spectrum managers worked untold hours to de-conflict the frequencies being used in the staging areas of Kuwait and those that would be used for the advance. As the movement into Iraq kicked off on March 20, 2003, spectrum managers and their S6/G6s were not aware that the amount and complexity of their work would increase dramatically in the months, and now years, that were ahead.

For many years, students have received training in the Battlefield Spectrum Management Course taught at Fort Gordon, Ga. Upon successful completion of the course, they were awarded the Additional Skill Identifier D9. Seldom however did a spectrum manager ever work consecutive assignments to become increasingly proficient in the D9 skill sets. Most often, the pressure to have leadership assignments to maintain competitiveness for promotion would lead D9s away from working in a spectrum management position. For this reason, few of the D9s assigned to the Army units in Kuwait had a significant amount of spectrum management experience. The S6/G6s generally had even less experience with spectrum management issues. However, the D9s, as the professional non-commissioned officers that they are, diligently worked many long hours to de-conflict the frequencies that were causing hundreds of radio frequency interference issues.

The frequency interference

issues in the staging area were exacerbated with the arrival of the 4th Infantry Division. The original battle plan had called for the division to enter Iraq from Turkey in the north. When that plan was modified to having 4th ID enter from the south, the division arrived in the staging area late and was not included in the overall frequency plan. The available frequency resources had been previously divided up among the units already deployed in the area. The normal process followed by D9 spectrum managers for assigning frequencies to units was much the same as slicing and serving an apple pie. They divided all the pie up based on the spectrum requests they received, and they therefore had no pieces, i.e. frequencies in reserve. Consequently, when the 4th ID arrived in Kuwait, all the slices of the pie had been given out and no frequency assignments were available for them. The division spectrum manager was forced to use an old frequency plan from home station. Needless to say, when the division's emitters were turned on, it took a monumental effort by many great D9 frequency managers to mitigate the frequency interference issues in the staging area and prepare a viable frequency plan for the kickoff of the war as they entered Iraq.

After the successful march to Baghdad, major combat operations came to quick end and stability operations began in May 2003. In July 2003, a new threat emerged that used the electromagnetic spectrum against United States and Coalition Forces. Iraqi insurgents began to inflict casualties with the use of remotely detonated Improvised Explosive Devices. IEDs were activated by a variety of means to include electronic devices that use different RF bands. Simple devices

like cell phones, garage door openers, remote telephones and even kids' toys were used to send the RF signal that detonated the IEDs. To counteract the remotely detonated IEDs, the Army began introducing Counter Radio-Controlled Improvised Explosive Device Electronic Warfare systems that effectively jam the RF signals. Unfortunately, the introduction of CREW exacerbated the frequency interference issues.

In an early 2006 Congressional Research Service Report, it is stated, "...much of the Radio Frequency spectrum in the Iraq combat theater is un-managed and can sometimes cause dangerous interference with radio communications on the ground. Sometimes, IED jammers lock onto other new electronic combat systems because of a lack of coordination for spectrum usage. Other times, when a jammer is on, a Soldier cannot use his radio. The Soldier must shut off the jammer to send and receive, thus opening a vulnerable window for insurgents to use. Also, Unmanned Aerial Vehicles can sometimes lose their RF control links due to interference once they are far away from their control base." Through this experience on the ground in Iraq and Afghanistan, Army leadership soon began to clearly understand that the EW systems, and particularly CREW, added to the complexity of an already oversaturated Electromagnetic Operational Environment. The Network-enabled Battle Command Capabilities-based Assessment Phase I Final Report, Aug. 30, 2006, validated that the inability to efficiently manage the spectrum is a major capability gap that must be addressed.

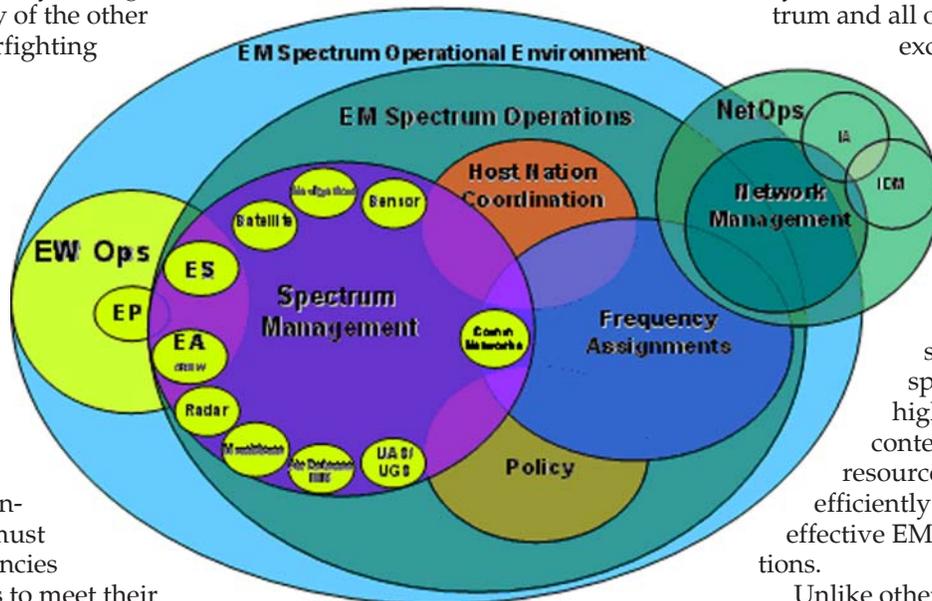
From the lessons learned from Iraq and Afghanistan, there is a realization within the Signal Regiment that the current way of manag-

ing spectrum must be changed. Focusing only on making individual frequency assignments to primarily communications emitters must be replaced with an operational approach that focuses on the entire Electromagnetic Spectrum Operational Environment. The spectrum must be managed to support the commanders' intent and scheme of maneuver. Spectrum use must be seen as a combat multiplier that is prioritized to meet mission requirements. The EM Spectrum resources must be as intensively managed as fuel, ammo or any of the other commander's warfighting resources. Stated another way, the electromagnetic spectrum is the fuel that enables Net Centric Warfare. The G6/S6 is the responsible staff member for ensuring that sufficient EM spectrum is available to the commander. Essentially the G6/S6 must de-conflict frequencies for all RF emitters to meet their operational capabilities. In order to accomplish this function the S6/G6 must be aware of all spectrum requirements, the EM environment, policy, laws, and regulations. Electromagnetic Spectrum Operations is the term now being used to describe this critical function.

In early 2007, BG Randy Strong, then the commanding general of the Signal Center, designated EMSO a Signal Regiment core competency. Under the purview of the S6/G6 from brigade to Army level, EMSO consists of planning, operating, and coordinating joint use of the electromagnetic spectrum through operational, planning, and administrative procedures. The objective of EMSO is to enable electronic systems to perform their functions in the intended environment without causing or suffering unacceptable frequency interference.

EMSO consists of four core functions; spectrum management, frequency assignment, host nation coordination, and policy. Through these core functions, the spectrum manager uses available tools and processes to provide the warfighter with the spectrum resources necessary to accomplish the mission during all phases of operations.

To refine and document this new EMSO concept, an EMSO Concept Capabilities Plan was developed by the Signal Center.



The EMSO CCP was given final approval by Training and Doctrine Command in January of this year. As a way to understand the new EMSO concept, the following diagram was developed and included in the CCP. It provides a visualization of a very complex EM Spectrum Operational environment.

The EM Spectrum Operational Environment is not the sole domain of the military. Spectrum is shared with a host of civilian users that run the gamut from pagers, cell phones, and garage door openers, to fire, police, and medical service. This, coupled with the multitude of military radios, sensor, radars, etc. that are employed throughout Department of Defense and our Coalition Forces, makes access to spectrum resources extremely competitive. Clearly, with this many

competitors for spectrum resources, the efficient use of the spectrum is essential to the success of information operations in a mobile environment.

Yet, there are many misconceptions about the military's use of the electromagnetic spectrum. Many people believe that the Army can use any frequency it needs. In reality, the Army must abide by regulatory provisions of international regulations and treaties as well as our own national policies and laws. The Army also does not own any spectrum and all of the DoD has

exclusive rights to only 1.4 percent of all frequencies in the 0-300 GHz range. In fact, the DoD shares over 93 percent of the frequencies with civilian users. Simply stated, the RF spectrum is a limited, highly congested and contested natural resource that must be efficiently managed through effective EM Spectrum Operations.

Unlike other natural resources, the use of spectrum is governed by international and national policy and each nation has sovereign rights to spectrum. The host nation coordination and policy are EMSO core functions that often restrict the options that are available to the spectrum manager. International policy is governed by the International Telecommunications Union. The ITU has treaty status under the United Nations and has over 190 member nations as signatures. All nations have equal status with the United States regardless of size and economic standing. One nation, one vote.

In the Continental U.S., the Communications Act of 1934 governs the national policy for the use of spectrum. The private sector is governed by the Federal Communications Commission and government users are under the National

Telecommunications and Information Administration within the Department of Commerce. The Army, along with the Navy, Air Force, Coast Guard, and 17 other government agencies, has one vote on how the government sector uses spectrum. However, in recent years the civilian sector has increasingly encroached on spectrum available to the government and DoD. Additionally, other government agencies such as Homeland Defense have adversely impacted the Army's use of available spectrum within CONUS.

In addition to National and International policy, spectrum managers must also adhere to DoD, Army, Combatant Command or any local policy established by the commander within his area of operations. However, these policies can not conflict with the sovereign rights each nation has in the control and use of their spectrum. It is critical that the spectrum manager conduct host nation coordination prior to activating any Army emitter within their territorial borders. This critical function must be performed prior to deployment. However, coordination for the use of a foreign nation's sovereign spectrum resources does not guarantee that the nation will approve their use. An excellent example is again the 4th ID and the initial plan for the division to enter Iraq through Turkey. The Turkish government denied the Army the use of the frequencies critical to the operation. The denial resulted with a major adjustment to the war plan and necessitated diverting the 4th ID south. The result was the previously discussed frequency interference chaos in the Kuwait staging area.

The next major function of EMSO is Spectrum Management. The number and diversity of emitters on the battlefield has increased exponentially. In addition to radios used for communications which had been the primary focus of D9 spectrum managers, there are numerous other claimants for spectrum resources. There are thousands of sensors, radars, munitions, navigation, air defense, and

satellite emitters for a wide variety of warfighting systems in a Brigade Combat Team. Many of these are now employed on Unmanned Aerial Ground Systems which exacerbate the frequency interference issues with a much larger "footprint" from direct line-of-sight spectrum coverage. Add this to the communications network spectrum requirements and the competition for spectrum resources becomes a major operational consideration for the warfighter.

With the Army's reinvigoration of Electronic Warfare, the complexity of Electromagnetic Operational Environment increased dramatically. EW Operations employs spectrum resources to conduct Electronic Attack, which in today's environment is primarily the use of CREW, Electronic Support for intelligence gathering, and Electronic Protect, which from the spectrum manager's perspective, is most closely associated with protecting the commander's use of the spectrum by preventing frequency fratricide. Preventing frequency fratricide is the most critical task the spectrum manager must perform. Through the efficient de-conflicting of frequencies, the S6/G6 can ensure that the commander's warfighting systems have access to the spectrum resources required to accomplish the mission. Only after the spectrum management function is efficiently performed and all frequency resources de-conflicted, will the spectrum manager perform the frequency assignments function that enables the network. Making de-conflicted frequency assignments is the culmination of the EMSO process and it results in fully enabling the commander's warfighting spectrum dependent systems.

Referring back to the EMSO concept diagram, it clearly shows the relationship of EMSO to EW Operations. The relationship to Network Operations may not be clear to some since this new concept requires a reorientation on how spectrum management, as a function of EMSO, is relevant to the NETOPS construct. In the past, it was widely assumed

that spectrum management was a part of Network Management. In reality, the use of spectrum goes far beyond the frequencies assigned to enable the network. As shown in the diagram, there are many systems that are not part of the network that require spectrum resources to operate. Emerging doctrine in FMI 6-02.70, now defines the frequency assignment function of EMSO as "... entails the requesting and issuance of authorization to use frequencies for specific equipment ..." and spectrum management "... consists of evaluating and mitigating electromagnetic environmental effects, managing frequency records and databases, de-conflicting frequencies, frequency interference resolution, allotting frequencies, and EW coordination to ensure electromagnetic dependent systems operate as intended." It is the frequency assignment function that clearly is an integral part of NM and it is EMSO that fully enables NETOPS.

The EMSO CCP laid the foundation for the concept and been the basis for the Signal Center to conduct a Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities assessment. The assessment has identified gaps in resources and capabilities. As mentioned early in this article, Doctrine is being revised and the final draft of FM 6-02.70, *Army Electromagnetic Spectrum Operations*, will be staffed in summer 2008. EW doctrine will also include the appropriate EMSO content to ensure that the EW and Signal communities have a common understanding on how the Army intends on using spectrum as a combat multiplier for both EW Operations and NETOPS.

Organization and Personnel are now being addressed. The D9 ASI is being replaced with Military Occupational Specialty 25E which provides a career field for spectrum managers starting at sergeant (promotable) and have promotion potential to the rank of SGM. The first 25E class will graduate in March 2008. There will be a 25E assigned to each BCT and a proposal by

TRADOC's EW Proponent Office to add a 25E to the EW Coordination Cell at each BCT is at Headquarters Department of the Army DA for approval. BG Jeff Foley, the current commanding general of the Signal Center, stated at the 2007 DoD Spectrum Summit, that it is conceivable that a 25E could be added to maneuver battalion in the not to distant future.

Training of spectrum related subject matter is undergoing significant revision at the Signal Center. The new 25E course, Electromagnetic Spectrum Manager, which was based initially on the D9 BSM Course, has been almost totally revised and includes instruction for coordinating EW and EMSO related tasks. Significant EMSO content is being added to many other courses as well. The S6 Course was recently revised to add additional EMSO content. The officer, warrant officer and NCO leadership courses will also receive an injection of spectrum training to provide our signal leadership with the knowledge to enable this critical warfighting capability.

Adding EMSO content to officer, warrant officer and NCO leadership courses will help cover one of the most critical parts of DOTMLPF, Leadership and Education. The EMSO Concept is also being briefed to every Pre-Command Course given at Fort Gordon and content is being added for the Directorate of Information Management course as well. However, there is now a concerted effort to reach beyond the "Regimental School House". Foley includes a discussion on the criticality of spectrum during his PCC briefing at the Combined Arms Center, Fort Leavenworth to reach the non-signal leaders. Foley has also spoken at numerous conferences and other fora to continue his quest to educate Army leaders on the importance of ensuring that spectrum dependent systems undergo a Spectrum Supportability Assessment. The SSA must be completed and each emitter certified for operation prior to expending

funds on its procurement.

The importance and significance of the SSA was underscored with the release of a VCSA ALARACT in January 2008. In part, it states that "Commanders, Program Managers, and other acquisition authorities will ensure no acquisition or fielding of equipment that makes use of the Radio Frequency spectrum occurs without first performing an SSA and obtaining a Spectrum Supportability Determination from the Army CIO/G-6." It further states that "Prior to the expenditure of funds for spectrum dependent equipment, the acquisition authority must submit to and receive approval of a Request for Frequency Allocation (DD Form 1494) by the Army Spectrum Manager." This is a clear message by Army leadership to the significance of having access to spectrum and the need to ensure we invest in future systems that can be used in an extremely complex and congested EM Spectrum Operational Environment.

Materiel is the one remaining DOTMLPF capability that will truly enable the Electromagnetic Spectrum Operations concept to support Net-Centric Warfare. There is a critical need for an EMSO tool that will provide S6/G6s with the ability to conduct spectrum operations mission planning. This tool, which could conceivably be a modular software suite, would enable spectrum operators to exchange information and plans in real time supporting current operations while allowing modeling and simulation capabilities to support whatever course of action the commander decides to pursue. The current set of tools are outdated and not designed for modular forces or net-centric warfare.

There are ongoing efforts such as the Coalition Joint Spectrum Management Planning Tool Joint Capabilities Technical Demonstration initiative that may provide some relief. The CJSMPT is a Joint IED Defeat Organization supported effort that is intended to de-conflict

and mitigate the effects of jammers on friendly emitters. It remains in development and may not provide an initial capability until early 2009. WIN-T will provide some limited EMSO capabilities by 2010. However, the Army must make the capital investment to develop the ability to conduct dynamic spectrum management in the EMSO construct. Programs of record such as WIN-T and Future Combat Systems may be the vehicle to ultimately provide an EMSO tool that will provide the tactical capability to the Global Electromagnetic Spectrum Information System. GEMSIS is the DoD program of record to provide a suite of capabilities to spectrum managers of all services.

Regardless of the route chosen, only through the development of an EMSO tool will the Army successfully employ wireless technology that enables true Net-Centric Warfare. Future Army warfighting systems will no longer be procured without a full SSA that determines the ability to access spectrum. However, without an EMSO tool to allow S6/G6s the positive control and management of the Electromagnetic Spectrum Operational Environment, all the capital investment in RF enabled warfighter systems will be for naught.

COL Francis (retired) is the Army Spectrum Management Office liaison to the Signal Center at Fort Gordon, Ga. He served on active duty in the Signal Regiment for more than 27 years. Among his many assignments during his career, he commanded the 124th Signal Battalion during fielding of mobile subscriber equipment and was director of the Signal Leadership Department at the Signal Center prior to retirement. In his current position, he represents the Army Spectrum Manager in all matters dealing with the Signal Center and TRADOC. The ASM serves as the principal advisor to the Army Staff CIO/G-6 in regard to radio frequency spectrum management activities, develops and implements spectrum management policy, and allocates frequency resources (frequency assignments) to support the Army.

ACRONYM QUICKSCAN

ALARACT – All Army Activities
ASI – Additional Skill Identifier
ASM – Army Spectrum Manager
BCT – Brigade Combat Team
BG – Brigadier General
BSM – Battlefield Spectrum Management
CAC – Combined Arms Center
CCP – Concept Capabilities Plan
CG – Commanding General
CJSMPT – Coalition Joint Spectrum Management Planning Tool
COCOM – Combatant Command
CONUS – Continental United States
CREW – Counter Radio-Controlled Improvised Explosive Device Electronic Warfare
DoD – Department of Defense
DOTMLPF – Doctrine, Organization, Training, Materiel, Leader Development, Personnel and Facilities
DOIM – Directorate of Information Management
E3 – Electromagnetic Environmental Effects
EA – Electronic Attack
EM – Electromagnetic
EMSO – Electromagnetic Spectrum Operations
EP – Electronic Protect
ES – Electronic Support
EW – Electronic Warfare
EWCC – EW Coordination Cell
FCC – Federal Communications Commission
FCS – Future Combat System
FM – Field Manual
GEMISIS – Global Electromagnetic Spectrum Information System
HQDA – Headquarters, Department of the Army
ID – Infantry Division
IED – Improvised Explosive Devices
ITU – International Telecommunications Union
JCTD – Joint Capabilities Technical Demonstration
JIEDDO – Joint IED Defeat Organization
MOS – Military Occupational Specialty
NCO – Noncommissioned Officer
NEBC – CBA – Network-enabled Battle Command Capabilities-based Assessment
NETOPS – Network Operations
NM – Network Management
NTIA – National Telecommunications and Information Administration
OIF – Operation Iraqi Freedom
PCC – Pre-Command Course
RCIED – Radio Controlled Improvised Explosive Devices
RF – Radio Frequency
SGM – Sergeant Major
SGT (P) – Sergeant Promotable
SSA – Spectrum Supportability Assessment
SSD – Spectrum Supportability Determination
TRADOC – Training and Doctrine Command
UAV – Unmanned Aerial Vehicle
UAS/UGA – Unmanned Aerial and Ground Systems
VCSA – Vice Chief of Staff of the Army
WIN-T – Warfighter Information Network – Tactical

Signal Center provides new spectrum training

By Charmain Z. Brackett

As technology plays an increasingly vital role on the battlefield, a new military occupational specialty has emerged.

The 25E electromagnetic spectrum manager is "responsible for assigning the electromagnetic spectrum across the battlefield," said Stanley Oliver, electromagnetic spectrum course chief.

The MOS has four classes associated with it; the first class at Fort Gordon, the electromagnetic spectrum manager, began on Jan. 8.

There are two additional spectrum manager courses - phase 1 and phase 2 for Advanced Non-commissioned Officer Course - and a joint spectrum manager class.

National sovereignty of air space and the multitude of items competing for limited bandwidth have caused issues on the battlefield. A system that would work on one frequency in the United States doesn't work on that same frequency in Iraq or Afghanistan. And some systems require more bandwidth than others creating a need to assign spaces on the bandwidth at select times.

Oliver said the idea for the new MOS began during a work group at the Signal Symposium in 2003. In February and March 2007, there was a mobile test training of the spec-

trum manager at Fort Hood, Texas.

There are 10 students in the first on-site class at Fort Gordon. The spectrum issue affects not only the Army, but all of the branches. Among the participants in the first class is Navy Chief Warrant Officer Al Pierce, who works in Washington with the Joint IED Defeat Organization.

"One of our top priorities is to ensure acquired spectrum-dependent systems will properly function in a diverse electromagnetic environment," he said. "The U.S. Army Spectrum Management Course will greatly assist JIEDO's spectrum management office as we continue to educate our program managers and system developers on the spectrum supportability process."

The class lasts 10 weeks and three days.

Mrs. Brackett is a correspondent for the Signal Newspaper with the Public Affairs Office at Fort Gordon, Ga.

ACRONYM QUICKSCAN

ANCOC – Advanced Non-commissioned Officer Course
IED – Improvised Explosive Device
MOS—military occupational specialty
JIEDO – Joint IED Office

Defending the digital battlefield

By Kristopher Joseph

In 1983, with the Cold War still going strong, a movie called "War Games" depicted an eccentric computer hacker named David Lightman, played by Matthew Broderick. With dogged determination to play the military-generated game, Global Thermo-Nuclear War, David managed to hack into the North American Aerospace Defense Command computer system and almost caused an actual nuclear war with the then Soviet Union.

"War Games" perfectly represented the tensions and anxieties of the ever-looming nuclear threat during the Cold War nuclear arms race. The Global War on Terrorism has replaced many threats of the Cold War. Many believe that in today's "information age" there are real David Lightmans who pose a cyber threat to military networks that could cause the loss of innocent lives unless something is done about them.

"We are taking a pro-active approach to stop these 'hacktivists' from attacking our systems," said Robert Hembrook, deputy chief of intelligence for United States Army, Europe's 5th Signal Command in Mannheim, Germany. For the first time in the European military theater, a cyber-threat intelligence cell has been created for the specific purpose of detecting, monitoring and combating malicious digital



Logging in to a U.S. government computer with a Department of Defense identification card.

infiltrations on military computer networks, according to Hembrook.

Cyber defense is implemented at the Department of Defense level and was already underway in the halls of the U.S. European Command in Stuttgart, Germany, but a fully developed and funded European theater component-level cyber cell came to full fruition within 5th Signal Command, said Hembrook.

The cell consists of three experienced intelligence and computer experts whose jobs are to

observe potentially harmful data passing from the internet into friendly networks, identify patterns of attacks, analyze data, and advise the operators of the network so that they can take preventive action to ensure the safety and security of all systems in the European footprint.

"The fact is that there are people currently trying to break into our systems in an effort to obtain data or plant viruses that put servicemembers and their missions at risk," said one of the cyber cell members. "We simply cannot be vulnerable in this area."

The military, along with most other organizations, relies more and more on the speed and capabilities of computer-based technology to give them an edge on the battlefield. This reliance also allows an extra avenue of attack for the enemy. "This cyber cell marks a

change of approach in the intel world," a team member said. "We are already experts on predicting physical attacks from the enemy, but we never had a dedicated staff to predict and prevent virtual attacks at a theater level."

Besides combating threats from the outside, the cell is also involved with helping its military users prevent "digital fratricide" from the inside. For work and morale purposes, DoD policy allows users filtered, monitored access to the

World Wide Web on government computers. According to a cell member, this is to obtain business-related information and to visit non-work related sites along as long as casual browsing does not affect getting missions accomplished.

"It's a delicate relationship of balancing functionality and security," said a cell member. "We know that many users can't do their job without computers and the internet, so we look for ways to help protect them."

"Users need to know that internet access is a privilege and not a right," said one cyber cell member.

The cell has taken another proactive step by leaving their offices and actively engaging and informing commanders and military communities of their findings as well as stressing the importance and relevance of the cyber battlefield. Another cell member said that their audience is the leadership in theater because they are the ones who can affect changes in how members of the DoD deal with and fight these cyber threats.

"We have had nothing but positive feedback from commanders," said one cell member. "They are taking our reports seriously and more and more they are seeing that if our data or systems get compromised or abused, threats to our systems can affect not only those sitting behind a desk, but also those on the front lines."

Since the 5th Signal Cyber Cell has shared its results to the intelligence community, other military



organizations are asking how they too can have a cyber cell to find their own digital landmines, said the cyber team.

"This (cyber cell) is unprecedented at this level," said a cell member. "I saw the need for this when I worked at the DoD level. Members of the cell believe that network defensive measures should be implemented at all levels in the military because a computer's role is becoming just as vital as an M-16 rifle in terms of winning today's wars.

"As much as the military trains its own on weapon safety, so we should be training them on computer and network safety," said a cell member. "That is where informing the leadership and giving them briefings becomes so vital."

In a 2006 interview for *Defense*

Systems Magazine, Tom Reardon, chief of the Intelligence Division for Network Enterprise Technology Command at Fort Huachuca, Ariz., had this to say about the level of importance computer networks play in military operations:

"Network-centric operations are how we prosecute war and sustain the warfighter. If an enemy can degrade or destroy that capability, the tide of the battle could easily be turned in their favor. Worse yet, if the enemy succeeds in denying our network-centric capability, our forces may not be able to deploy – we couldn't show up to seize or defend terrain or support an ally."

Today, the 5th Signal Cyber Threat Intelligence Cell team members are the USAREUR warfighters in the virtual trenches making sure the digital frontlines are defended.

"From an intel point of view, we've gone from 'patch the leaks' to 'build a better boat,'" Hembrook said.

Mr. Joseph is a public affairs specialist and editor of 5th Signal Command's biannual ECHO Magazine.

ACRONYM QUICKSCAN

DoD – Department of Defense
NETCOM – Network Enterprise Technology Command
NORAD – North American Aerospace Defense Command

35th Sig Bde's newly equipped ESB 63rd Sig Bn B Co supports 3rd ACR

This article captures the very first employment of a newly equipped ESB dedicated to a war fighting brigade, the 3rd ACR. (April – October 2007)

By MAJ John Batson

In May 2007, the 3rd Armored Cavalry Regiment, based at Fort Hood, Texas, conducted its first communications exercise to internally test and validate its newly fielded Army Battle Command Systems. The following July, the Regiment was deployed to the National Training Center at Fort Irwin, Calif., to hone warfighting skills in preparation for a November deployment to Operation Iraqi Freedom.

This all sounds like a relatively standard procedure for any unit preparing for deployment. What makes this instance unique is that the 3rd ACR, the Army's most lethal single-unit combat formation, does not have an organic signal company. Unlike modular Brigade Combat Teams, with their Modified Table of Organization and Equipment assigned signal companies, the Regiment relied entirely upon B Company, 63rd Expeditionary Signal Battalion, to provide the needed network connectivity to tie all automated command and control communications systems together. This is the first instance of a Joint Network Node equipped signal formation from an ESB providing support to a combat formation, and the relationship and support are phenomenal.

In the winter of 2006 and spring of 2007, B/63rd completed the exchange of its Tri-Tactical Service Signal Equipment for two JNNs and ten Command Post Nodes; then in late April, the company shipped its new equipment to Fort Hood in support of the 3rd ACR's COMMEMX. Upon arrival at Fort Hood, the company spent three

days conducting an internal COMMEMX to validate equipment functionality and upload configuration files. This process was critical to ensuring the Regiment conducted a successful COMMEMX and subsequent NTC rotation.

The COMMEMX took place over five days, with each ABC System added to the network in a phased, controlled manner beginning with Information System Control, Maneuver Control System, and All-Source Analysis System-Light, through the remainder of the traditional suite of systems, and ending with Command Post of the Future. The Central Technical Support Facility along with General Dynamics and Data Path provided the Regiment with the contract support required to assist troopers with configuring their systems and validating connectivity to the appropriate gateways and servers.

B/63rd provided a robust, capable network that allowed the Regiment to complete its COMMEMX. The troopers of B Company and the 3rd ACR established the foundations for enduring professional relationships, gained confidence in themselves and their equipment, and came away from the COMMEMX prepared to execute the Regimental Mission Rehearsal Exercise at the NTC.

In July, the Regiment deployed from Fort Hood to Fort Irwin and linked-up once again with B Company. After an abbreviated, but successful, reception and staging operations, including another small COMMEMX, in the "dustbowl;" the Regiment began a phased movement into the NTC's Forward and Coalition Operating Bases. From the dustbowl, the Regimental Tactical

Command Post maintained command and control of the Regiment during this movement through organic frequency modulation and terrestrial based Force XXI Battle Command, Brigade-and-Below communications. As the Regiment established its command posts across the NTC, the troopers of B Co quickly established connectivity to the theater training hub at Fort Gordon, providing non-secure Internet Protocol Router and Secure Internet Protocol Router services to the Regiment. The Regimental Tactical Operations Center went up quickly and within twelve hours from the time the TOC moved from the dustbowl into its FOB, the Regiment established connectivity to the Star Wars Building CPOF repository server.

Over the course of the next three days the Regiment added additional terminal devices to the backbone established by B Co.

These devices included the Regiment's entire suite of ABC systems, more than 100 Voice over Internet Protocol telephones, seventeen CPOF terminals, a multitude of Dynamic Host Configuration Protocol NIPR and SIPR terminals, a Regimental Common Ground Station, two Battlefield Video-Teleconferencing Center suites, and the full suite of Regimental Battle Command Servers. With both JNNs, all ten CPNs, plus the Star Wars building CPN and terminal devices all forming the largest single-mesh network tied into the Fort Gordon hub to date, bandwidth allocation and management became the Regiment's communications challenge.

The total number of terminal devices quickly devoured the Regiment's allocated bandwidth – a circumstance unforeseen during the COMMEMX. The RS6 section working through its attached network operation cells simultaneously

requested additional bandwidth through the Forces Command G6 and training hub at Fort Gordon while implementing quality control measures to ensure the Regiment could continue to use its digital systems to effect command and control. The implemented quality control measures restricted NIPR terminal device access and placed an order of precedence (by using IP address schemes) on SIPR terminals during critical commander and battle update briefings. These quality control measures proved effective and remained fully implemented until the Regiment received additional bandwidth.

The Regiment completed its NTC rotation with marked successes. One of these successes was the integration of B Company and its troopers into the Regiment of Mounted Riflemen – the 3rd Armored Cavalry Regiment. Professional relationships developed during the COMMEX were refined through the NTC rotation. CPN teams and Squadron S6 shops became fully integrated.

The signal company leadership and the Regimental S6 quickly developed their baseline expectations and understandings; and the command groups of both the 3rd ACR and the 35th Signal Bde entered into a partnership of warriors. Lead elements of the 3rd ACR along with B Company, 63rd Expeditionary Signal Battalion began deploying into the Central Command theater of operations in late October 2007.

Additional notes of interest:

❖ As part of its forthcoming Force Design Update, the 3rd ACR will be authorized a G-100 MTOE Signal Company. This company will receive training and readiness oversight from one of the Ground Cavalry Squadrons currently assigned to the Regiment. Technical

oversight of the company will be provided by the Regimental S6 and the company report directly to the Regimental Headquarters during deployments. This relationship is already successful in its application with the Regiment’s assigned military intelligence company.

❖ Neither B Company nor 3rd ACR currently have an MTOE authorized NETOPS cell designed to provide the network oversight and management required at the Regimental level. Many of the successes that B Company and the Regiment experienced together are a direct result of the technical expertise and dedication of WO1 Paul Crabill and SFC Lawrence Kidd; re-assigned to B Company from the signal brigade headquarters and subsequently attached to the Regimental S6 shop.

❖ The Program Manager NETOPS fielded NETOPS hardware and software to the Regiment during its NTC rotation. With this fielding came basic, “over-the-shoulder” training for NETOPS and CPN personnel. Following the rotation, personnel from both the Regimental S6 shop and B Company received follow-on, classroom training at Fort Gordon. The Regiment then successfully conducted a mini-COMMEX in September to validate the NETOPS hardware, software, and training.

MAJ Batson has served as platoon leader, C Company, 304th Signal Battalion, Korea; platoon leader and company executive officer, B Co, 57th Signal Battalion, Fort Hood; network control officer, 3rd Signal Brigade, Fort Hood; S4, 10th Signal Battalion, Fort Drum; company commander, B Co, 10th Signal Battalion, Fort Drum; observer/controller, CMTC, Germany; Operations Group S6, CMTC, Germany.

His current assignment is with Regimental S6, 3rd Armored Cavalry Regiment, Fort Hood, Texas.

ACRONYM QUICKSCAN

- ABC – Army Battle Command
- ACR – Armored Cavalry Regiment
- ASAS-L – All-Source Analysis System Light
- BCT – Brigade Combat Teams
- BVTC – Battlefield Video-Teleconferencing Center
- CENTCOM – Central Command
- COMMEX – Communications Exercise
- CPN – Command Post Nodes
- CPOF – Command Post of the Future
- ESB – Expeditionary Signal Battalion
- FBCB2 – Force XXI Battle Command, Brigade-and-Below
- ISYSCON – Information System Control
- JNN – Joint Network Nodes
- MCS – Maneuver Control System
- MTOE – Modified Table of Organization & Equipment
- NETOPS – network operations
- NIPR – Non-Secure Internet Protocol Router
- NTC – National Training Center
- PM – Program Manager
- SIPR – Secure Internet Protocol Router
- TOC – Tactical Operations Center

LandWarNet update

Training updates from the Directorate of Training, 15th Signal Brigade and Leader College of Information Technology, Fort Gordon, Ga.

By LandWarNet staff

Introduction

Technology is transforming the way we train, educate, and operate. Distributed Learning plays an important role in this transformation. The Signal Center is at the forefront of using dL to field and implement training for developing agile and adaptive professionals to become adept LandWarNet integrators. Soldier and Civilian readiness needs necessitates the availability of training on-demand. According to GEN William S. Wallace, commanding general, Training and Doctrine Command, "Distributed Learning gives us the best of the best, because it links virtual with live training, and provides an important means of taking training and education to Soldiers and units anywhere, anytime".

The Signal Center's Lifelong Learning Center is bringing together the many facets of dL via products, resources and services available through the LandWarNet eU and LandWarNet eU Signal web portals. The dL available via the web portals leverages Army and Signal specific

training materials to benefit and address the training needs of the entire Signal Corps. These resources also ensure members of the Regiment have the tools necessary to gain a basic understanding of the Army's dL Program and the location/availability of Army and Signal specific dL products. Additionally, the training products offered are designed to make the job's of unit training representatives less labor intensive by providing access to a "Unit University" Program and wide-variety of personal computer-based equipment simulators.

U.S. Army Signal Center & Fort Gordon Distributed Learning Plan makes its debut on LandWarNet eU-Signal

The USASC&FG dL Plan provides information detailing the Signal Center's methodology in executing distributed learning for the Signal community. A central part of the plan is an explanation of the responsibilities of local and major command level organizations participating in the dL development and implementation process. Additionally, the publication highlights and defines the available sources for Signal specific and Army dL products, and provides an explanation of the layout of the Signal Center's dL infrastructure to include points of contact for digital training facilities.

The USASC&FG dL Plan is the access "gateway" to distributed learning information and resources needed by every organization, Leader, Soldier, and Civilian. A general distribution of hardcopies of the dL Plan will be made to local organizations over the next few weeks and to any other organization outside the Signal Center upon request. You can also download a personal copy of the publication by accessing the Distributed Learning

Resources folder in the LandWarNet eUniversity-Signal web portal (Signal (<https://lwneusignal.army.mil>) Training Material Downloads area.

Contact Bennita Freeman at bennita.freeman@us.army.mil / 791-2303 or A.J. Mason at aj.mason@us.army.mil / 791-8674 at the Distance Education Branch to request hard copies of the USASC&FG dL Plan or for more information.

LWNeU Unit Universities offer customized training for your unit's specific training requirements

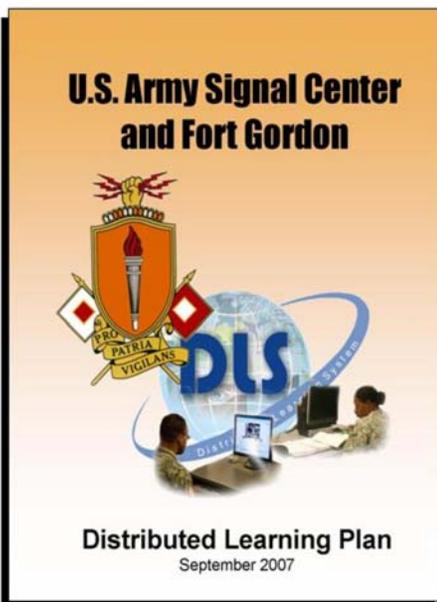
What is a Unit University?

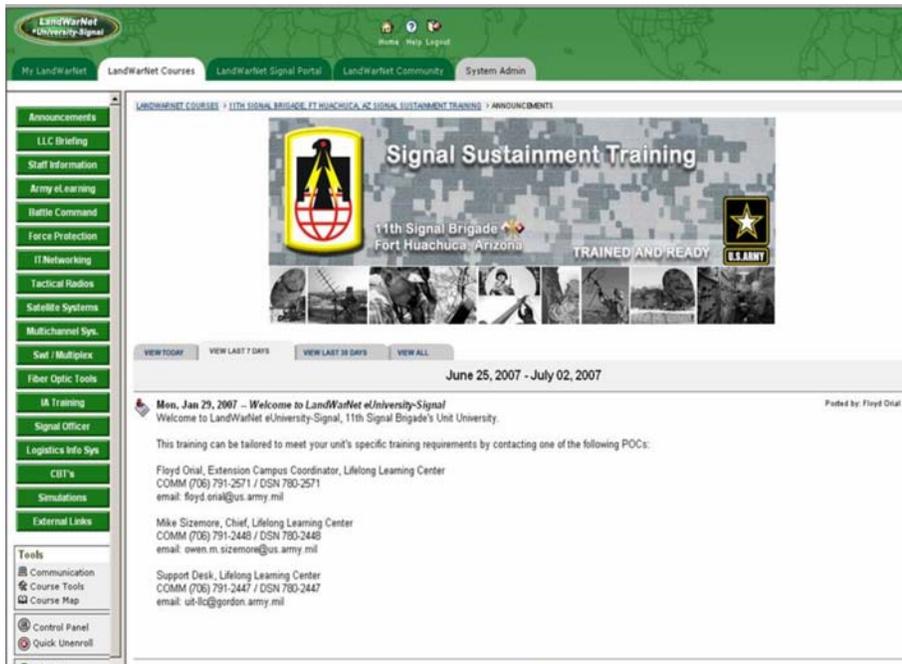
A Unit University is a customizable website used to provide commanders, training staffs and Soldiers with access to the most up-to-date training and training products for their unit missions. Unit Universities provide direct access to Training and Doctrine Command approved military occupational skill training, downloadable training products (Computer-Based Training, Simulators, Interactive Multimedia Instruction products), and current links to other available training sites.

11th Signal Brigade's Unit University website.

What kind of training is available?

Unit Universities provide training staff and Soldiers with direct access to the same course training materials, presentations and documents used in the Signal Center's resident school training environment. Also available to your Unit University is the LWNeU-Signal knowledge repository, which is a current collection of more than 600 downloadable products organized in 62 separate learning areas including 34 high-end simulators,





more than 100 CBT products, signal technical and professional documents, presentations and manuals. The LWN-eU-Signal knowledge repository also provides the Regiment with an upload capability for Soldiers to upload local and unit developed training content to share across the Regiment.

Examples of training content that can be immediately loaded onto a Unit University range from typical 25B tasks in Information Technology and networking to installing, operating and maintaining a Joint Network Node. All training content posted comes from resident course programs of instruction at Fort Gordon. In addition to the training content developed by Fort Gordon, the LLC staff can link your Unit University directly to the most current sources of training for Battle Command Systems such as ABCS, ASAS, BCS3 and CPOF as well as Logistics Information Systems that include MTS, PBUSE, SAAS-MOD, and SAMS-E.

Who's using the LandWarNet Portals and Unit Universities?

Currently there are more than fifty units with more than 3,693 registered Soldiers receiving Signal training via their own customized Unit University. Unit University

sizes range from brigades to squads. In total, around 7,500 Soldiers use the LandWarNet-e-University training portals each month for training. The LLC Extension Campus supports 63 Unit Universities (28-AC, 20-ARNG, 12-USAR, 3-DOIM) for 3043 Non-Resident students. Training being conducted is MOS sustainment training, 25B MOSQ, Officer, Functional Area and NCOES Courses. Training is being conducted CONUS, OCONUS, and in Theater.

2/348th CSS Soldiers in Puerto Rico use their Unit University to train on JNN.

Recent Unit University additions to the LWN-eU Extension Campus include: XVIII Airborne Corps, 11th Signal Brigade, 316th Sustainment Command (Exp), 4th ID, 295th Signal Network Support Com-

pany, 501st Sustainment Brigade(Korea), 3rd Infantry Division G-6 (Iraq), C Company 1st BCT 10th Mountain Division, and the 7th Signal Company RTO Academy, LSA Adder, Iraq. Unit Universities can deliver training that cannot be obtained locally to forces in Army Force Generation reset, sustainment, or deployed in Theaters of Operation. Individual Soldiers with a valid Army Knowledge Online account can access their Unit University anywhere they can connect to the Internet.

7th Signal Company RTO Academy, LSA Adder, Iraq – use their Unit University to teach critical tasks on radio and maneuver control and tracking systems to newly deployed Soldiers in Iraq.

Can you add locally created unit training to your Unit University?

Yes, many units also use their Unit Universities to host unit created training, information briefs and command briefs.

How long does it take to build a Unit University Page for my unit?

Your Unit University can be fully loaded with training and operational within three days.



2/348th CSS Soldiers in Puerto Rico use their Unit University to train on Joint Network Node.



Five reasons why your unit needs a Unit University:

1. **Availability:** The training is available to your unit and Soldiers regardless of their location. Soldiers can train at home station, in a theater of operations, at their residence, or anywhere there is access to the internet.

2. **Training Cost Reduction:** No need to spend manpower or funds to stand up and manage a separate Information Technology training system for your unit – there are no unit costs for LandWarNet eUniversity unit universities.

3. **Reduction in Training Planning Time:** Fort Gordon LLC staff locates, organizes, and loads your unit's requested training content. Unit Universities allow your training staff to focus on training the unit – not on how/where to get training material.

4. **Unit Training Status Monitoring:** Blackboard LCMS features provide commanders and training managers the tools and ability to monitor, track, and assess training at the unit or individual Soldier level.

5. **Relevant Training:** Unit universities give units and Soldiers a single location to access the most up to date training developed by the Signal Center and the Joint Signal community.

For more information on, or to request a Unit University, contact

Clark Solomon,
LWN-eU Signal
Extension Cam-
pus coordinator,
clksolm@usarmy.mil,
DSN 780-2571 or
commercial (706)
791-2571.

State of the Art Support for Army Force Generation

Interactive
multimedia
instruction greatly
enhances and
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throughout the Force when self development, sustainment, refresher and remedial training are conducted. The following Virtual/PC Based Simulators are available or will be made available via LandWarNet eU (<https://lwn.army.mil>) and LandWarNet eU Signal (<https://lwneusignal.army.mil>) web portals to facilitate communications equipment operations training:

FIELDDED SIMS

1. LAN/WAN

Fielded: APR 07

Target Audience: 25B, C, F, L, P, Q, S, U, W, 250N, 251A, 53A, 25A LT/CPT

2. Phoenix (Version A)

Fielded: APR 07

Target Audience: 25S

3. SATCOM Hub (S 5-7)

Fielded: MAR 07

Target Audience: 25S

4. Baseband Hub (S 2-4)

Fielded: FEB 06

Target Audience 25N

5. JNN (S 1)

Fielded: OCT 05

Target Audience:
25N

6. BN-CPN (S 1)

Fielded: OCT 05

Target Audience: 25B

7. KU (S 1)

Fielded: OCT 05

Target Audience: 25Q

8. DTOC

Fielded: OCT 05

Target Audience: 25B

9. TIMS (ISYSCON)

Fielded: OCT 05

Target Audience: 25B

10. HCLOS

Fielded: OCT 05

Target Audience: 25Q

11. GSC-52

Fielded: JAN 04

For more information on the status of Virtual/PC based Simulator training products, contact MAJ Chuck Dugle, Chief, Simulations Branch at DSN 780-8681 or commercial at (706) 791-8681.

ACRONYM QUICKSCAN

ABCS – Army Battle Command System
ARFORGEN – Army Force Generation
ASAS – All Source Analysis System
BCKS – Battle Command Knowledge System
BCS3 – Battle Command Support Sustainment System
CBT – Computer-based Training
CPOF – Command Post of the Future
dL – Distributed Learning
FBCB2 – Force XXI Battle Command, Brigade-and-Below
LLC – Lifelong Learning Center
LWN-eU – LandWarNet eUniversity
MTS – Movement Tracking System
TRADOC – Training and Doctrine Command
PBUSE – Property Book Unit Supply - Enhanced
SAMS-E – Standard Army Maintenance System- Enhanced
SAAS-MOD – Standard Army Ammunition System- Modernization
USASCFG&FG – U.S. Army Signal Center & Fort Gordon

Ask the Cyber-Insurgent: *Are Information Operations a decisive form of operational warfare?*

By MAJ Jan C. Norris

“Attention in the operations center, attention in the operations center, as of 0730 this morning, our steady theater Information Operation campaign has allowed multi-national forces to achieve information superiority, Victory is imminent.” These words have assuredly never been uttered in any United States led military operations center nor are they likely to be heard anytime soon in Iraq or elsewhere...at least not with a straight face.

United States Joint and Army Information Operations doctrine maintains that achieving information superiority is a critical factor for success in military operations. Yet for the past four years, U.S. forces have been unable to achieve true IS in connection with Operation Iraqi Freedom.

While possessing an overwhelming edge in information technology to dominate IS, U.S. forces have faltered in one critical area: denying the enemy the ability to collect, process, and disseminate an uninterrupted flow of information.

Through four years of OIF, the cyber-enabled insurgent has evolved and operated relatively uninhibited using the Internet and media as a means for controlling and sustaining



An Army cyber-surveillance team works to deny the cyber-insurgent Internet and media access mobility. This will edge us closer to achieving information superiority impacting operational success.

momentum and achieving both tactical success from within by recruiting and mobilizing personnel, and strategic success by influencing international perceptions.

If IO are to ever gain status as a decisive form of operational warfare for U.S. forces, a Joint Cyberspace Surveillance Targeting Cell must be established to increase focus and scope of cyber-surveillance and targeting for forces engaged in OIF. This would enable forces to deny cyber-insurgent cyberspace Internet and media access and mobility and while edging closer to achievement of a level of IS that directly impacts operational success.

U.S. Joint Publication 3-13, *Information Operations*, states that the “principal goal (of IO doctrine) is to

achieve and maintain information superiority” and “IO are used to deny adversaries access to their C2 (command and control) information and other supported automated infrastructures.”¹

Given these tenets of IO doctrine and the ability of U.S. forces to successfully dominate in a majority of the contributors to IS, there should logically be some degree of IS influence on military operational success. But does achieving IS really matter if there is not an effective way to deny or mitigate the enemy’s medium for information exchange? Is achieving IS a real concern for today’s commanders at the operational level of war?

In Iraq, several distinguished leaders during the past four years

developed innovative techniques and procedures for success in defeating local insurgents on the ground and engaging the Iraqi populace using IO.

COLs H.R. McMaster, Dave Putnam, and GEN Dave Petraeus are recognized for their exceptional ability to conduct successful tactical ground campaigns against the threat while also, and perhaps more critically, engaging the Iraqi leadership and population through sound IO efforts. Despite successful IO and recent positive trends with the "surge strategy", there appears to be little attention focused on achieving IS and a long period of time is still needed to achieve the desired end state of Iraqi autonomy where the insurgency is neutralized and host nation population confident of a stable, legitimate Iraqi government.

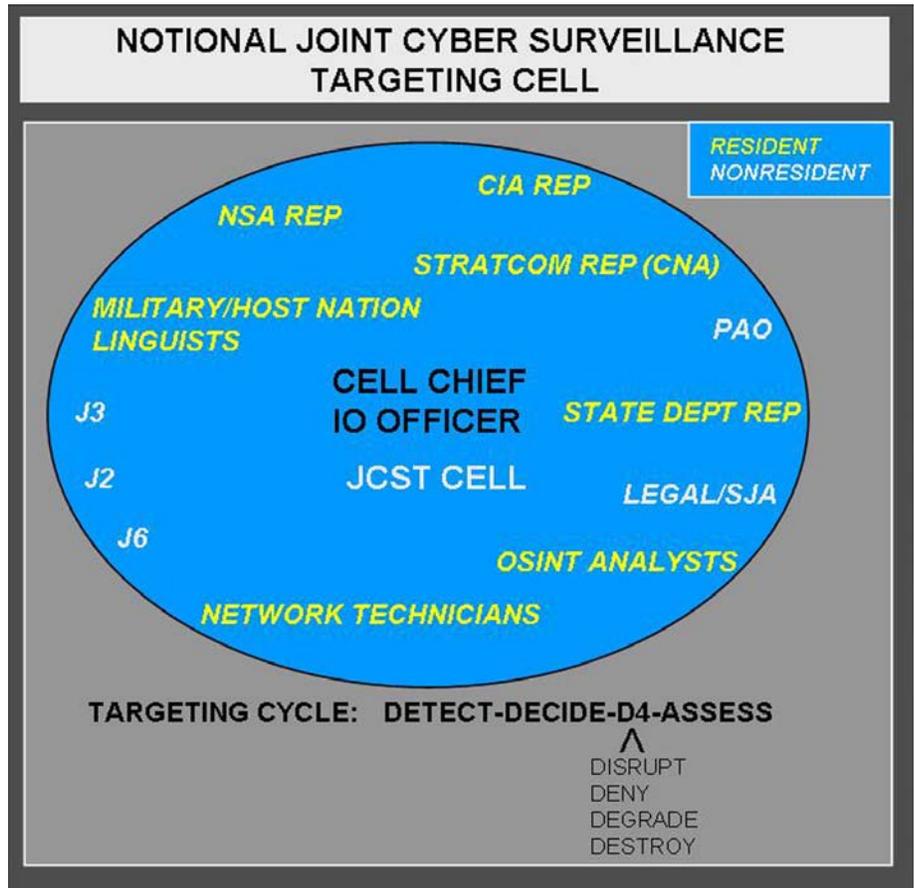
The OIF scenario leads back to similar questions; what difference does having IS and conducting IO matter for U.S. forces in Iraq? On the ground, it certainly helps to build trust and confidence among Iraqi local communities and U.S. military and Iraqi forces, while having the ability to collect intelligence via advanced systems and technology helps to detect patterns of activity to track and target the enemy.

But are IS and IO helping to mitigate the cyberspace activity sustaining and feeding the insurgency?

From a macro view of the information environment, do U.S. forces truly have IS?

In most cases the answer is no. Little is being done to decisively engage the enemy in cyberspace. 'An insurgent can possess information superiority and an information advantage because he can stay hidden, yet see U.S. forces and decide when to attack. IO efforts and achieving IS can be fleeting; its forces must recognize this and take action to reduce the enemy's IS and operational efficiency. IS in the new operational environment must include denying information helpful to the enemy.'²

"A recent posting to a Jihadi web



Shown above: Notional Joint Cyber Surveillance targeting cell chart.

site announced a competition to design a new Web Page for an Iraqi militant group. The incentive was the chance to fire missiles by remote control at a U.S. military base"³

Since 9/11, the growth of jihadi related web sites has grown significantly to more than 4,500.⁴ Many of these sites strongly advocate the ideology of Al-Qaeda and have evolved into virtual bases for recruiting, training, coordinating attacks, sharing information, fund raising (even using PayPal) and influencing through propaganda.⁵ The Internet allows for the 'cyber-mobilization' of a variety of ethnic populations around the globe with similar cultural and ideological causes.⁶

It allows many extremist groups to come together quickly in chat rooms and plan and coordinate activities. The Internet, in essence, is feeding the cyber-insurgent at a steadily growing pace.

Terrorist groups have applied

the same innovation and ingenuity on the Internet as they did in planning the intricate 9/11 attacks, especially in avoiding detection, disruption or destruction of web site data, and information.

Common cyberspace stealth methods include use of encryption, domain name changing, use of proxy servers to obscure locations and "dead dropping", where information is saved as draft messages in fake email accounts accessible to anyone having the password and thereby avoiding transmission and detection.⁷

Considering the hundreds of thousands of servers and Internet service providers worldwide and the billions of bytes being transferred every second, the insurgent/terrorist has a large playing field to roam on and many choices for data and site hosting. Not surprisingly, many of the significant Al-Qaeda and jihadi linked sites in recent years have been sourced to ISPs located in the United

States and their presence was largely unknown to the U.S. provider.⁸

In essence, the Internet is the ideal communications tool for insurgents, and it reflects the framework of their operations: decentralized, anonymous, and offering fast communication to a potentially large audience. It has created a “virtual ‘umma’—Arabic for the larger Muslim community as a whole—and like the actual umma, the cyber umma encompasses both moderate Muslims and Islamic fundamentalists.”⁹

Regulating cyberspace terrorism and insurgent activity for the U.S. is therefore quite challenging. Law enforcement agencies have, for example, become very efficient in tracking and convicting cyberspace violations of child pornographic laws, but face legal hurdles in the cyber-insurgent fight such as rights to free speech and getting international cooperation to take decisive action on cyberspace terrorist/insurgent web data and content requiring crossing of international borders to affect.

These legal restraints coupled with the fog of countless on-line insurgent activities and data flow have left the U.S. government far behind their adversaries in terms of Internet skills and achieving IS. A contributing cause is a lack of cultural and language understanding of the insurgent and not being able to properly get inside the insurgent’s cyberspace ‘circle of influence’.¹⁰ Some of the most important U.S. government agencies tasked with tracking and intercepting the members and activities of Al Qaeda in cyberspace have placed little importance on the technological and cultural aspects and associated skills and knowledge that are critical to the fight.¹¹

We must establish a method for better combating the cyber-insurgent where the Department of Defense is teamed up with Interagency organizations.

Current IO doctrine (JP 3-13) addresses as a subset of computer network operations the term computer network attack as “actions



All methods of available technology, including unmanned aerial vehicles, are used to fight cyber-insurgent activity to protect U.S. information superiority.

taken through the use of computer networks to disrupt, deny, degrade, or destroy information resident in computers and computer networks.”¹²

Little else is discussed on CNA as the details and processes are sensitive and classified. JP 3-13 does describe a notional joint IO cell but there is no specific emphasis placed on Cyberspace surveillance and targeting within this specific cell.

While combating the cyber-insurgent is a complex task akin to “a cat and mouse chase and finding a needle in a haystack”, there are deliberate measures than can have impact. Creation of a Joint Cyber-Surveillance Targeting Cell inside of the U.S. military at the operational level is a start. In the Central Command theater of operations, for example, a JCST cell could be embedded within the MNF-I staff in Baghdad where it is currently needed most. In other regional combatant commands where active combat operations are not on-going, the cell would function at the RCC headquarters.

As this mission clearly falls in the information environment, the fifteen to twenty member cell would be lead by an IO officer (O-5 or O-6) and include Interagency cyberspace

analyst representation from the CIA, NSA, STRATCOM, State Department as well as joint military intelligence open-source analysts and linguists, host nation linguists, and information technology specialists (both military and contractors) specializing in wide area network architecture and attack/infiltration. Manning the cell jointly would better educate and train military and government agencies for future joint cyberspace related operations. The JCST cell would conduct continuous scanning of the Internet for suspected insurgent/terrorist activity and employ developed technology that harnesses automation to search and capture web content. Acting much like a conventional joint targeting cell, a targeting model similar to the Decide-Detect-Deliver-Assess process could be used. With Joint Cyberspace Surveillance and Targeting, the process would change to Detect-Decide-D4-Assess, where D4 is disrupt, deny, degrade or destroy.

During JCST cell operations, suspected sites are detected and analyzed. If it is decided the site is a source contributing to insurgent or terrorists activities and can be targeted, then network technical specialists would move to take one

of four actions: disrupt, deny, degrade or destroy the site, or let it remain as is to exploit for further information and analysis.

Efforts could also be made to re-direct individuals browsing the web looking for insurgent web sites to U.S. constructed sites providing counter propaganda to potentially dissuade an insurgent recruit.

Decisions to execute any action against a site ultimately rest with the JCST cell chief unless suspected sites involve external countries where action may involve political sensitivity.

In cases where the source or host of a terrorist site is outside of the U.S. (or U.S. combat zone) and targeting the host and/or associated network or server would impact other important non-insurgent users or organizations (i.e. a banking network), a target nomination would be sent via the targeting cell state department representative through state department channels to the source country for targeting clearance.

This approval process would need to carefully avoid compromising U.S. intelligence gathering techniques. Once a site is targeted, follow on assessment efforts would be made to revisit ISPs with a history of known or unknown insurgent hosting to track any recurring patterns. Links would also be made when possible to collect and target individual webmasters who are building and creating such sites.

Though the scope of targeting such individuals goes beyond the capabilities of the JCST cell being proposed here, the information collected would be passed on to appropriate state department, law enforcement or military officials for action. International support is an essential factor for denying service and particularly in developing countries with known cyberspace terrorist activity and weak governments.

Government and military agency personnel may quickly refute the idea of JCST as double work from what the Joint Functional Component Command-Network

Warfare at NSA and other DoD CNO teams are already providing, however, few if any such cells exist that would have the necessary mix of military and Interagency expertise co-located.

Having the cell forward on the ground in a theater of combat operations may also seem pointless with current communications reach capability, yet is vital. With a forward point of presence in the combat theater, speed of decision is optimized for establishing linkages from cyber-insurgent planning, training, and recruiting activities to insurgent activities and attacks on the ground.

Forward presence also allows direct 'face-to-face' access to the theater commander (i.e. MNF-I commander) and joint/coalition staff.

Further, targeting cell personnel can gain a much better situational understanding of insurgent operations by being forward in the culture and language to get a better perspective on what is motivating the insurgent and having host nation personnel available to translate both cultural and linguistic aspects of content found on web sites. Additional JCST cells could be positioned in different countries in a given theater where languages and cultures vary and regionally specific cultural linguists/specialists staffing is appropriate.

With proven quantitative measures of effectiveness over time, 'cyberspace targeting' could even become tracked by the theater commander and staff as a line of operation contributing to defeat of the enemy center of gravity or protect coalition and missions.

The power of the Internet as a means for global information sharing, communication and creation of virtual communities is considered among the most important innovations of the past century.

Yet this same interconnected network of worldwide computers, switches and servers and the cyberspace contained within have equal potential as tools for enabling terrorism and death. As enemies of

the U.S. continue to overtly attack its military technological strengths through asymmetric and insurgent warfare, they will also continue to exploit the power of the Internet to extol their ideology and kill Americans.

Are information operations a decisive form of operational warfare?

If one were to ask the cyber-insurgent, the answer right now is yes. Their operational efforts in cyberspace are decisive for tactical success.

In his report to Congress on the situation in Iraq on Sept. 10, 2007, GEN Dave Petraeus noted "the need to contest the enemy's growing use of that medium (cyberspace) to spread extremism" and that "regional, global, and cyberspace initiatives are critical to success."¹³ Bridging the gap between the Interagency and military, the JCST cell is a proposed IO organization with potential to neutralize and defeat the cyber-insurgent by bringing together the right mix of personnel in a theater of operations to decisively combat cyberspace insurgent activity.

Positioned forward in the combat theater, the JCST cell would be immersed in the target culture to better establish linkages from operational insurgent activities in cyberspace to tactical actions on the ground.

Since OIF began, the relevance of IO, achieving IS and which side truly has the information advantage remains in question.

By enabling U.S. forces with a deliberate process for targeting and denying enemy information flow in cyberspace, the JCST cell could well prove IO a decisive form of operational warfare earning shouts of 'imminent victory' in the theater operations center...with a straight face.

MAJ Norris is currently assigned to the 311th Signal Command, Fort Shafter, Hawaii. He recently completed resident Command and General Staff College at Fort Leavenworth, Kan., in December 2007. Previous assignments

include commander, High Tech Regional Training Site, Sacramento, Calif., and I Corps G3 information management officer, Fort Lewis, Wash. Norris is a 1990 graduate of Virginia Commonwealth University with a degree in journalism and 1997 graduate of Old Dominion University with a master's degree in applied linguistics.

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ACRONYM QUICKSCAN

C2 – command and control
CENTCOM – Central Command
CNA – computer network attack
CNO – computer network operations
D4 – disrupt, deny, degrade, or destroy
DDDA – Decide-Detect-Deliver-Assess
DDD4A – Detect-Decide-{D4-Disrupt-Deny-Degrade-Destroy}-Assess
DoD – Department of Defense
IO – Information Operations
IS – information superiority
ISP – Internet service providers
JCST – Joint Cyber-Surveillance Targeting
JFCC-NW – Joint Functional Component Command-Network Warfare
CNO
MNF-I – Multi-National Forces-Iraq
NSA – National Security Agency
RCC – regional combatant commands
OIF – Operation Iraqi Freedom
U.S. – United States

StratComm

the NCO piece

By SGT Mary E. Ferguson

Reprinted from *The NCO Journal*

Right now, a noncommissioned officer is helping rebuild a village somewhere in Iraq or Afghanistan. Showered with cheers of appreciation, he's tucking away the obvious impact he's made and saving his emotion for the chapter he'll add to his blog when he returns to camp – a blog that NCOs back home are reading before their units head to readiness training centers in California, Louisiana or Germany, where they'll go through, among other pre-deployment exercises, media awareness training. At the same time, a wounded NCO at Walter Reed Army Medical Center in Washington, D.C., is telling a reporter, "I can't wait to get back to my troops," while somewhere else in America, a disabled veteran is joining the family members of a redeploying unit for a huge welcome home ceremony.

What do they all have in common?

Soldier. That is where Strategic Communications can be a critical enabler for an organization. Our Chief of Signal, BG Foley, is committed to listening to the field and to keeping you well-informed. Our Strategic Communications and outreach efforts here at the Signal Center are to keep you informed and to get us all working toward the same goals. We must provide you with empowering information you can use such as current themes and messages, and future initiatives so you know where we're headed. In this edition, I encourage you to read more about the value of Strategic Communications in this article entitled "Strategic Communications and the NCO Piece" originally printed in the Winter 2008 edition of the *NCO Journal*. I'd like to

thank them for graciously allowing us to reprint it so we can spread the word. BG Foley and I think it is so very important that we all embrace Strategic Communications and, as you read the article, think about what this kind of training and plan could do for your organization. Keep up the great work and continue providing us feedback!

Thomas J. Clark
USA Signal Center and
Fort Gordon Command
Sergeant Major



Whether they know it or not, all of these NCOs are communicating a message. And while their messages may not be consciously crafted or broadcast around the world, on today's information battlefield, they can be just as critical as a Pentagon press briefing. Their messages reach audiences that may not have access to, understand, or listen if they did, to that Pentagon press briefing, and the American public craves their first-person perspective. But imagine if these and the millions of other messages NCOs are delivering daily throughout the world mirrored the messages that press briefings, senior military leaders, veterans and family members are communicating. And then, once unified, what if those messages launched an all-angle attack against the mass of misinformation that's running rampant through the global information environment? Ideally, the unified message would defeat the enemy. That's strategic communication in action, and without 'the NCO piece,' it's an impossible endeavor.

"It's a term Army leaders have been kicking around for a while – they say, 'throw some stratcomm on that,' – but strategic communication is really a process through which diverse elements all work together to speak with one voice with the goal of communicating a unified message," said MG Anthony A. Cucolo III, Army Chief of Public Affairs.

According to the Office of the Chief of Public Affairs, the Army began to fully embrace and pursue that process in 2004, by establishing a strategic communication team. Strategic communication requires all public information agents to work together, and although Public Affairs is only one of those agents, the Army transferred all strategic communication planning and administrative responsibilities to OCPA in 2005. In the years since, the Army's idea and process of strategic communication has developed and spread to commands' senior-leaders, who are now implementing strategic communication throughout their units.

"It's an incredibly important process ... we're really operating on two battlefields with today's 24/7 global communications environ-

ment – we've got to think of the information domain as terrain, and realize that the enemy on that terrain isn't human, the enemy is the lies that are generated through misinformation," Cucolo said. "We've got to proactively combat that enemy, and counter the misinformation with timely truthful information – it's got to be unified to be strong."

To achieve this unified message and make the strategic communication process a success, every Soldier – regardless of rank, commission, military occupational specialty, or area of operation – and every veteran, Civilian employee and Family member must understand and exercise their roles as communicators, and they must realize that they are constantly presenting messages to different audiences via their actions and words, he explained.

As communicators, NCOs can and must add to the strategic communication process by being willing to engage the general public and the media, by making on-the-spot corrections to the record when they witness misinformation, by pushing stories about their Soldiers up the chain so leaders can get them out to the world, and by instilling a sense of responsibility in their Soldiers when it comes to being informed about the big picture of what the Army is doing, he said.

Once aware of their identity and roles as communicators, NCOs must also consider the 'when' factor of strategic communication.

"Pace is crucial," Cucolo said. "We're operating under constant scrutiny from the global media, and being attacked by a virtual caliphate of terrorism – with more than 4,000 active extremist Web sites using the Internet as a safe haven – the 'when' is 'always' – we've got to be proactive ... beat the misinformation, then prepare for more, because it's coming constantly."

The NCO piece in the strategic communication process doesn't stop when an NCO simply communicates. The 'what' he or she communicates is just as, if not more, important.

CSM Raymond V. Cordell, top senior enlisted leader at the Defense Information School, Fort George G. Meade, Md., used the following example of a young American service member's interview during a humanitarian operation, to illustrate how powerful it is for all warriors to not only communicate, but to also know and communicate the same message as their leaders. (DINFOS is responsible for training and maintaining Public Affairs and Visual Information personnel for the U.S. Department of Defense.)

In February 2006, the Philippines suffered heavy rains and subsequent mudslides that ripped through villages and engulfed people. As U.S. military elements provided humanitarian assistance, an international reporter asked a young American service member involved in the efforts, "Why are you here?" and the

<https://akocomm.us.army.mil/2007scg/CalltoDuty.htm>

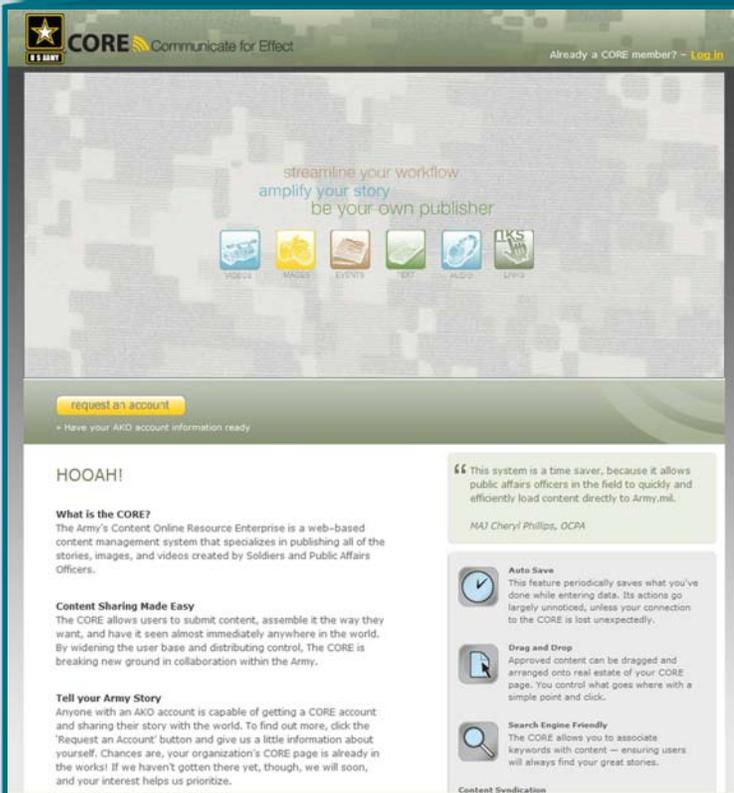
All Soldiers can access the Army's 2007 Strategic Communication Guide through their Army Knowledge Online accounts.

By employing the Guide NCOs arm themselves with the same unified messages as their leaders and the tools for delivering that messages.

<http://www.army.mil/standto>

Stand-To is one of the many tools Soldiers can use to stay informed.

They can visit the internal Web-based resource for daily Army news updates and links to Soldier blogs and other resources.



Content Online Resource Enterprise

The Web-based content management system specializes in publishing the stories, images and videos created by Soldiers and Public Affairs offices.

Anyone with an AKO account can also request a CORE account.

Through CORE, Soldiers' stories have an immediate channel to ARNEWS, and may be distributed to other internal and external media outlets.



young warrior explained, in detail, the capabilities of the helicopters aboard his ship. The President of the United States later answered a similar question – “The people of the Philippines needed help and America came to their aid.” While the young warrior’s earlier answer wasn’t necessarily wrong, imagine if he had been a trained and informed communicator, as well as a top notch helicopter crew chief. Perhaps he would have spoken from his heart, and both he and the President would have given the same answer, and sent the same message, Cordell explained.

“As [the young warrior] was seen around the world, he represented us all – the warrior on the battlefield has become the spokesperson for our nation’s military. It’s a huge responsibility,” Cordell said. “The American people’s primary understanding of what our Soldiers – their sons, daughters, husbands, and wives – are doing comes from the evening news ... and their belief in what their country is doing – right or wrong – and its outcome – success or failure, is strongly influenced through the American media.”

On a similar note, it’s those NCOs and troops directly interacting with local nationals in other countries, who strongly influence the global perception of who Americans are and what they stand for. In reality, a single NCO, like the one interviewed in the example, is constantly participating in the strategic communication process by communicating with actions and words through different mediums and to different audiences.

The Army doesn’t expect NCOs to magically predict the messages their leaders’ are communicating, or vice versa, Cucolo said, so it has created tools and resources to help NCOs and their Soldiers become the trained and informed communicators necessary for the strategic communication process to succeed.

All Soldiers can access the Army’s 2007 Strategic Communication Guide through their Army Knowledge Online accounts, at <https://akocomm.us.army.mil/2007scg/CalltoDuty.htm>.

The Guide explains today’s strategic environment, dissects and discusses the Army’s broad strategic communication theme – America’s Army: The Strength of the Nation — and provides other Army imperatives and Army messages. It also offers guidance on how to effectively communicate those messages. According to OCPA, by employing the Guide, NCOs are arming themselves with the same unified message and tools for delivering that message as their leaders.

“It’s also all leaders’, including NCOs’, responsibility to stay informed – they should make reading both internal and external news a part of their own and their Soldiers’ battle rhythms,” Cucolo said. “All Soldiers should be prepared and confident to talk to anyone about what’s going on in the Army, and the world.”

Stand-To is one of the many tools Soldiers can use to stay informed. They can visit the internal Web-based resource for daily Army news updates and links to Soldier blogs and other resources. Soldiers can subscribe to Stand-To at <http://www.army.mil/standto>.

Although strategic communication involves all public information agents, communicators can and should also use their Public Affairs Soldiers as resources because they are trained subject-matter experts in communicating, Cucolo said.

“Public Affairs NCOs around the Army are putting out great products and are the key to getting our message out – they can also give guidance on how to engage the media,” he explained. “The one-on-one communicating is critical, but the more people we can reach and inform about the great things we’re doing, the better.”

The Army also created the Content Online Resource Enterprise to facilitate this widened distribution. According to its Web site, CORE is a Web-based content management system that specializes in publishing all of the stories, images, and videos created by Soldiers and Public Affairs offices. Anyone with an AKO account can also request a CORE account at <http://army.mil/core>, and then use the system as another way to participate in the strategic communication process.

There is no end to this complex and constant war on information terrorism that’s unfolding all around us. And though its urgent pace, boundless terrain and invisible, ever-changing enemy are constantly attempting to slow our forces down, OCPA is confident that the Army’s strategic communication process, fueled by a unified message, can combat misinformation and take control of today’s information battlefield.

“As in any other Army operation, to win this battle, we need NCOs – they’re the backbone of the Army,” Cucolo said. He charged NCOs to, “Feel empowered, engage, and tell [your] stories” because like the NCO helping rebuild the village in Iraq or Afghanistan and the wounded warrior selflessly announcing his loyalty to his troops, whether NCOs know it or not, they’re already in the fight.

SGT Ferguson is a photojournalist for The NCO Journal magazine based out of the U.S. Army Sergeants Major Academy, Fort Bliss, Texas. She can be reached at mary.ferguson1@conus.army.mil

ACRONYM QUICKSCAN

CORE – Content Online Resource Enterprise
DINFOS – Defense Information School
NCO – Noncommissioned officer
OCPA – Office of the Chief of Public Affairs
U.S. – United States

Migration

It's not just for the birds

“Currently, every installation has its own entry point. The new system will increase security by decreasing entry points because the more entry points, the more chance of penetration.”

-- Scott Hary, chief, Directorate of Information Management, USAG-RI

By Margaret Browne

ROCK ISLAND ARSENAL, Ill.—When you think of migration, what comes to mind? Birds flying south for the winter? Computers changing from one network to another?

As strange as it may sound, at Joint Munitions Command, as well as all of the Rock Island Arsenal, it is the latter.

Migration is the name given to the overall process of transformation of an Army computer network to another; to go from enclave, or individual, installation-centric network, to the larger Army “enterprise” or LandWarNet.

LandWarNet is the Army’s contribution to the Department of Defense’s Global Information Grid. Other components are the Navy’s FORCEnet and the Air Force’s C2 Constellation.

Here at the first continental United States installation to undergo this transformation, the effort is spearheaded by the Network Enterprise Technology Command, a direct reporting unit of the Army Chief Information Office (CIO/G6). It is executed through the Directorate of Information Management, U.S.

Army Garrison, Rock Island and for the JMC, the JMC Information Management Directorate.

“The way it is set up now, with each installation having its own local network, communication is difficult,” said Tony Crossen, chief, Integration and Business Solutions, Information Management Directorate. “The Army area processing centers and Army intranet will provide seamless integration of information on demand to any user, anytime, anywhere and in a secure environment.”

The APCs will reduce the number of Army points from more than 250 to about six across the CONUS. About 150 of these entry points belong to the Installation Management Command of which USAG-RI is a subordinate.

“Currently, every installation has its own entry point,” said Scott Hary, chief, Directorate of Information Management, USAG-RI. “The new system will increase security by decreasing entry points because the more entry points, the more chance of penetration.”

At end-state, there will be about six APCs within CONUS, according to Sally Cecil, chief, NETCOM, Northwest Region.

“Right now there are two APCs, one in Oklahoma City and the other in Columbus, Ohio. The Rock Island Arsenal and its tenants, including JMC, are serviced by the Oklahoma City location,” said Cecil.

“As a tenant on the RIA, we have to comply with all the guidelines set by the DOIM and the APC,” said Cheryl Rayburn, JMC information management specialist.

The capabilities of the APCs include perimeter security, secure servers, secure desktops, automated patching or updates, and secure remote access.

“The process started in 2001 when the Army began consolidating servers,” said Doug Bengtson, information management specialist, team leader, Enterprise Technology, Information Management Directorate.

“We are the first CONUS installation to do this, so there is a learning curve,” said Cecil. “Trying to get it right has been a challenge, but being the first gives us the opportunity to influence the process.”

The process used is one designed by information technology engineers.

Bengtson said, “The RIA is the test case; therefore, we are the guinea pigs.”

“Fort Riley, the second installation, will repeat the process used here, taking advantage of the lessons learned,” said Cecil.

The migration to APCs is very precise. “In order for migration to happen, things must be done in a certain order,” said Rayburn.

The migration process starts with system reimaging, or a

reconfiguration of the existing hard drive on each individual computer, to assure a system free of viruses, vulnerabilities, and other operating problems. Next, the system is migrated, "flipped", from the current network to the Army enterprise. Then the email is migrated from the local or installation server to the APC server, according to Rayburn.

Bengtson said, referring to the temporary inconvenience employees have experienced while the migration is in process, "We are trying to make it as easy on the user as possible."

The entire process at RIA is expected to be finished in mid-2008. The schedule for the rest of the Army installations will be determined.

Ms. Browne is a public affairs specialist with the Joint Munitions Command located on Redstone Arsenal, Ill. She has been with JMC since June 2006 and with the Army more than 22 years.

ACRONYM QUICKSCAN

APC – area processing centers
 C2 – command and control
 CIO – Chief Information Office
 CONUS – Continental United States
 JMC – Joint Munitions Command
 NETCOM – Network Enterprise Technology Command
 RIA – Rock Island Arsenal
 USAG-RIA – U.S. Army Garrison-Rock Island

TOP GOAL Tactical Battle Command links

By Charmain Z. Brackett

Meeting the technological needs of the warfighter is a top goal for Tactical Battle Command.

Recently, LTC Kenneth Rodgers, product manager for TBC at Fort Monmouth, N.J. visited the Signal Center to find out what signal Soldiers are requesting on the battlefield.

"We are trying to find out if we are doing the right thing by signal Soldiers," he said.

"This is a great opportunity to see how we support the school house."

He also met with Joe Capps, United States Army Signal Center and Fort Gordon deputy to the commanding general.

During the past few months, TBC has worked with the Signal Center in many ways including providing subject matter experts and training on new technology such as Battle Command Object Synchronization, VMWare and SharePoint/MOSS 2007.

Rodgers visited several SharePoint classes during his visit.

The command also provided training materials for various systems such as CPOF and BCCS.

Also, TBC has provided equipment and software to help make a System of Systems lab.

Rodgers said as technology continues to develop rapidly it's up to him and his staff to make sure the warfighter has the necessary new pieces.

"They understand what the tools can do, and they want to use them," he said. "We've got to support the warfighter."

Sometimes that means buying several licenses for commercially produced technology rather than spending manpower and dollars developing something new. Rodgers said he plans to stay as close to the technological advances as possible despite its quickly changing nature.

Mrs. Brackett is a correspondent for the Fort Gordon, Public Affairs Office, Fort Gordon, Ga.

ACRONYM QUICKSCAN

BCCS – Battle Command and Control Systems
 CPOF – command post of the future
 MOSS – Microsoft Office Sharepoint Service
 TBC – Tactical Battle Command
 VMWare – Virtual Machine Ware

LTC Kenneth Rodgers, product manager for Tactical Battle Command at Fort Monmouth, N.J. during a SharePoint class in Cobb Hall at Fort Gordon, Feb. 6, interacts with signal Soldiers to uncover the needs of communicators on the battlefield and to help make signal training more relevant.



Circuit check

News and trends of interest to the Signal Regiment

HONORING FALLEN SIGNALEERS

By *CPT Adam Pappas*

Signal Soldiers, Airmen, Sailors, and Marines who made the ultimate sacrifice for freedom during Operations Enduring and Iraqi Freedom are honored with a memorial in the 25th Signal Battalion headquarters building at Camp As Sayliyah, Qatar.

In June 2005, CPT Brenda Grusing (formerly 1LT Davies), CSM Donald Manley and 1SGT Marguerite Stubbs designed and constructed the memorial as a way to recognize and memorialize fallen communicators across the United States military.

Immediately upon entering the battalion's building, visitors see four frames listing the names of communicators in signal units. Under the frames is a binder that contains the photo, rank, name, age, and hometown of each service member. A display case with a memorial bronze sculpture inscribed with "Honoring All Who Sacrificed for Our Freedom" sits next to a remembrance book where more than 300 visitors have paid their respects.

The list of fallen signaleers range from privates to field grade officers; and include active Army, National Guard, Army Reserve, Marine Corps, Navy, and Air Force. These fallen comrades died fighting alongside tactical units on land and sea. They served in signal battalions and communications squadrons and provided command, control, communications, and computer support for the entire Area of Responsibility.

The 34 names listed on the memorial are only a small fraction of the casualties from Iraq and Afghanistan, their causes of death include: improvised explosive devices, helicopter crashes, mortar and rocket fire, as well as non-hostile causes.

Military communicators throughout Southwest Asia and as far away as Defense Information Systems Agency Headquarters, attended the presentation of the memorial, which was sponsored by the local Signal Corps Regimental Association Chapter, the Voice of the Sands and "Stans."

Currently the 25th Signal Battalion provides operating base communications for all locations in Afghanistan, supports the forward headquarters for Central Command and Special Operations Command Central, and delivers DISN reach back to nearly a dozen sites in Iraq. They are one of four battalions under the operational control of the 160th Signal Brigade that provides world-class voice and data communication support to tens of thousands of customers engaged in Operations Iraqi and Enduring Freedom at locations throughout Kuwait, Iraq, Qatar and Afghanistan.

For a complete listing of the fallen signaleers, individuals with additional names or corrections are encouraged to contact signal.memorial@qatar.army.mil.

CPT Pappas served as the Network Officer for the 25th Signal Battalion at Bagram Airfield, Afghanistan and Camp As Sayliyah, Qatar, from November 2006 to October 2007. Prior to his current assignment, he served as the training officer for the 41st Signal Battalion and a platoon leader for the 552nd Signal Company, 41st Signal Battalion in the Republic of Korea.

44TH ESB DEPARTS FOR OIF

By *SGT Michael J. Taylor*

MANNHEIM, Germany – 5th Signal Command's 44th Expeditionary Signal Battalion's road to war reached the end as they held a final

formation at the Sullivan Gym Oct. 7 before shipping out to Southwest Asia for up to 15 months in support of Operation Iraqi Freedom.

Hundreds of Soldiers, friends and Family members were in attendance to show their support to the "Outstanding" battalion as they loaded up on buses to deploy.

The torch and advance parties are already downrange preparing for the arrival of the main body, which consists of more than 400 Soldiers.

"You are going to battle for the second time in four years in support of the Global War on Terror and in support of freedom around the world," said BG Susan S. Lawrence, the commander of 5th Signal Command.

"Whether from the home front or the foxhole, every person here today should be proud to serve this organization, proud of their sacrifice, and proud of their dedication to duty," added Lawrence.

The 44th ESB will be deploying as a newly reorganized Expeditionary Signal Battalion supporting theater elements operating in both corps and division areas.

Since returning from Afghanistan in 2005 the 44th has been training for this deployment. In stride with the constant change of today's military, the battalion was required to transition from their previously deployed Intra-Theater Signal Battalion to the new ESB.

The change required a reorganization of personnel, logistics, training, fielding, and certifying new equipment, while balancing the amount of time needed to train Soldiers on the required Warrior Task Training list.

Along with changing to the ESB, 44th also conducted a convoy live-fire exercise, completed mission rehearsal exercises and fielded Joint Network Node technology.



The commander of 5th Signal Command, BG Susan S. Lawrence (left) speaks to Soldiers and loved ones of the 44th Expeditionary Signal Battalion at the Sullivan Gym in Mannheim, Germany, prior to them departing to Southwest Asia in support of Operation Iraqi Freedom.



SPC Tyler V. Tevid, a cable installer from 5th Signal Command's 44th Expeditionary Signal Battalion, feeds his infant son, Tyler J., for the final time at the Sullivan Gym before he and approximately 400 Soldiers from the 44th got on busses to deploy to Southwest Asia for up to 15 months in support of Operation Iraqi Freedom.

"Many of you have combat experience and have seen first-hand that the digital battlefield is changing rapidly," said Lawrence. "You must build on this experience and complete the mission and come home safe."

In support of the home front, the 44th ESB established a rear detachment, made Family member battle books and established lines through which Soldiers can communicate easier with Family members.

"Every husband, wife, son, and daughter plays a critical role in ensuring we as one team meet mission success," said Lawrence. "Let me put it to you this way; you Family members have the most critical mission in the eyes of our Soldiers."

"Though there will be many challenges over the next 15 months, none will be insurmountable because you are prepared, dedicated and an outstanding signal force," Lawrence said.

SGT Taylor is a photojournalist assigned to the 5th Signal Command

Public Affairs Office in Mannheim, Germany. He is a native of Killeen, Texas, and has served five years in the Army as a photojournalist. Taylor has deployed with the 69th Air Defense Artillery Brigade to Israel and with the 10th Mountain Division to Afghanistan.

KOREA'S TOP GENERAL GIVES UPDATE ON FUTURE OF US FORCES IN KOREA

NETCOM News Release

FORT HUACHUCA, Ariz. (NETCOM/9th SC(A)) – The Commander, United States Forces Korea and Commander-in-Chief, United Nations Command/Combined Forces Command, Korea, gave an update on U.S. forces in Korea in the Greely Hall auditorium to Fort Huachuca military and civilian senior leaders during a one-day visit to the post Dec. 7, 2007.

GEN Burrell B. Bell III provided an extensive update concerning the future of the U.S. military in Korea. In the audience were the Army's Chief Information Officer/G-6, LTG Jeffrey Sorenson; MG John Custer, commanding general, U.S. Army Intelligence Center and Fort Huachuca; and MG Carroll Pollett, commanding general, U.S. Army Network Enterprise Technology Command/9th Signal Command (Army). In addition, the auditorium was filled with other senior leaders from the post.

Bell's briefing explained the future of U.S. forces in Korea was one where the Republic of Korea military will take ownership of their military in defense of their country. Within the next five years the general said control of Republic of Korea forces will be with the Koreans and not commanded by a U.S. four-star general.

The general also said the goal is eliminate the 12-month unaccompanied short tour and stabilize the tours and make them more like other overseas tours for our military forces. The plan is establish three-year tours and allow families to accompany their sponsor during the tour.

The support facilities have been

and continue to be upgraded making life better for those stationed in Korea now and in the future. These better facilities are part of the consolidation of U.S. forces in the peninsula.

After the brief, Bell attended and participated in a promotion ceremony for Pollett. Pollett was promoted to major general in November but elected to wait until Bell was available to pin his new rank on him.

SIGNAL'S SHIRAISHI WINS CAREER COUNSELOR AWARD

By Bill McPherson

FORT SHAFTER, Hawaii — A Hawaii-based Soldier has won the 2007 Career Counselor of the Year award for the worldwide U.S. Army Network Enterprise Technology Command.

SSG Sam Shiraishi, the career counselor for the 307th Integrated Theater Signal Battalion, received the award Nov. 1 in competition with five other NETCOM finalists representing 27 active duty retention noncommissioned officers assigned to Signal Corps units throughout the globe.

The award was announced by NETCOM's CSM Donna Harboldt at an awards banquet during the Army's Worldwide Career Counselor Symposium held Oct. 29-Nov. 2 in St. Louis, Mo.

As a major command winner, Shiraishi will next compete in Washington, D.C. with other MACOM winners for the Department of the Army's Career Counselor of the Year award in January.

Leaders in Shiraishi's chain of command were quick to applaud his award and explain why he deserved to win.

"Given the enormous task at hand, this is definitely a great day for the home team," said COL Bruce T. Crawford, commander, 516th Signal Brigade. "SSG Shiraishi's outstanding contributions to the 516th's and NETCOM's retention goals in fiscal year 2007 were



SSG Sam Shiraishi (right) receives the Network Enterprise Technology Command's 2007 Career Counselor of the Year award from CSM Donna Harboldt at the Army's Worldwide Career Counselor Symposium Nov. 1 in St. Louis, Mo.

unsurpassed. He's truly earned this prestigious award."

The 516th Sig. Bde.'s senior career counselor, MSG Sheila Sango, praised Shiraishi for his proactive support of the brigade's theater-wide retention program.

"SSG Shiraishi loves helping fellow Soldiers," Sango observed. "Without his hands-on leadership, phenomenal commitment to the Army retention program, and his proactive support for three of our five battalions, the 516th wouldn't have met its mission objective this year."

Sango said Shiraishi has taken on not only the 307th ITSB retention mission, but also that of a sister battalion in Hawaii, the 30th Sig. Bn., plus this past August, he traveled to another sister battalion, the 58th Sig. Bn. in Okinawa, and made up the deficit of the 58th's retention mission.

Shiraishi's battalion commander emphasized his professionalism and commitment to Soldiers.

"When I joined the 307th ITSB, SSG Shiraishi was described to me with words like 'a true professional,' 'thoroughly knowledgeable,' and more importantly,

'outstanding performer,'" said LTC Maria Barrett, 307th ITSB commander. "After watching him for four months, I can tell you now from personal experience, that those words are well earned, if not an understatement.

"The designation as the NETCOM career counselor of the year doesn't surprise me," Barrett added. "They know now what every Soldier he's ever interacted with, and every commander he's ever provided retention guidance to, already knows. I don't know if I've ever met a career counselor as knowledgeable or committed as he is to Soldiers."

The 58th Sig. Bn. commander, LTC Stephen Elle, echoed Sango's and Barrett's assessment of Shiraishi's impact upon the brigade-wide retention mission.

"When the 58th's retention NCO was attending the Advanced NCO Course, SSG Shiraishi came to Okinawa and provided an invaluable service to Team 58, reenlisting five Soldiers over a two-week period, resulting in the 58th's meeting our 2007 reenlistment objectives," Elle explained.

"He is an extremely knowledgeable and approachable NCO,

who understands getting the mission accomplished," Elle added. "We couldn't have done it without him."

From there on, I knew this was the job for me," he recalled. "I worked my way up to becoming a battalion reenlistment NCO and was then nominated for the Active Army Career Counselor Course, graduating in December 2002. So I've held the 79S military occupational specialty (career counselor) the past five years.

"The best part of my job is getting to take care of Soldiers each and every day of the year," Shiraishi said. "The NETCOM retention team has been a big help in achieving this award – good leaders retaining great Soldiers."

"Taking care of Soldiers and being a role model for them is the most important aspect of my job as a career counselor," Shiraishi added. "I hope that Soldiers throughout NETCOM see my achievement not as an individual accomplishment, but as a team effort on all of our parts. Without the Soldiers to motivate me throughout the day, I could not have accomplished this feat alone."

Asked what challenges Shiraishi foresees for the Army retention program in the years ahead, he replied, "The Army continues to grow with our continued war on terrorism. Our goal for this fiscal year is an additional 56,000 Soldiers. With that said, reenlistment assignments and incentives will be spread thin to ensure all Soldiers reap the benefits offered to them by the Army Retention Program."

Shiraishi's NETCOM award included an impact Army Commendation Medal, plaque containing the Career Counselor Creed, a bronze Soldier statute, and \$500 certificates to the Army-Air Force Exchange System.

Mr. McPherson is a public affairs officer with 516th Signal Brigade Public Affairs, Fort Shafter, Hawaii.



MG Dennis Via (front row, center), commander of the Communications-Electronics Life Cycle Management Center and Fort Monmouth applauds the Iraq Team of the Product Manager, Defense Wide Transmission Systems who were honored as the Team C4ISR Quality Team of the Year in a ceremony at Fort Monmouth, N.J. on Jan. 23, 2008. Shown here are (left to right): CSM Ray Lane, CE-LCMC; MAJ Jake Crawford, Assistant PM DWTS-Forward; Linda Bartosik, PM DWTS, team leader; SFC Arthur Lee, PM DWTS, project leader; Robert Peterson (hidden behind MG Via), PM DWTS logistician; LTC Clyde Richards, PM DWTS; Janice Starek, PM DWTS, project support; Cory Hanes, ISEC, telecommunications specialist; and MSG Ronald Reese, 335th Theater Signal Command, G4 Transportation. Team members not pictured here are: Alan Wentrcek, Information Systems Engineering Command, engineering group leader; and David Short, ISEC, telecommunications specialist.

DWTS IRAQ TEAM IS C4ISR QUALITY TEAM OF YEAR

By Stephen Larsen

FORT MONMOUTH, N.J. – The Iraq Team of the Product Manager, Defense Wide Transmission Systems – part of the Army's Program Executive Office, Enterprise Information Systems' Project Manager, Defense Communications and Army Transmission Systems – was honored as the Team C4ISR (Command, Control Communications, Computers, Intelligence, Surveillance and Reconnaissance) Quality Team of the Year in a ceremony here on Jan. 23, 2008.

The PM DWTS Iraq Team, which had previously been honored as Team C4ISR's Quality Team of the Quarter on March 30, 2007, was cited for leading a multi-organization government and industry team in

providing a strategic shelterized technical control facility for the Army at Contingency Operating Base Speicher, Iraq and achieving initial operational capability in less than six months.

The Team members included LTC Clyde Richards, PM DWTS; Linda Bartosik, PM DWTS, team leader; MAJ Jake Crawford, Assistant PM DWTS-Forward; SFC Arthur Lee, PM DWTS, project leader; Robert Peterson, PM DWTS logistician; Janice Starek, PM DWTS, project support; Alan Wentrcek, Information Systems Engineering Command, engineering group leader; Cory Hanes, ISEC, telecommunications specialist; David Short, ISEC, telecommunications specialist; and MSG Ronald Reese, 335th Theater Signal Command, G4 Transportation.

During the ceremony, MG



LTC Clyde Richards (left), Product Manager, Defense Wide Transmission Systems, gets a lay-down of the progress at the technical control facility at Contingency Operating Base Speicher, Iraq from Robert Griffiths, project leader with General Dynamics C4 Systems.

Dennis Via, commander of the Communications-Electronics Life Cycle Management Center and Fort Monmouth, presented the Army Commendation Medal to military members of the Team and the Department of the Army Commander's Award for Civilian Service to civilian members of the Team.

"All of these award recipients are outstanding members of our community who rose above and beyond," said Via. "They set the bar high."

LTC Clyde Richards, PM DWTS, added his "heartfelt congratulations" to the team. "They have set the standard for how to do this business under battlefield conditions," he said, explaining that the acquisition model was designed for developing weapon systems in a safe, industrial environment, but was not designed to work as effectively in a battlefield environment.

"The team took that model – used expertise and knowledge of the acquisition business process, contracting methods and laws, how the bureaucracy works, how to get through red tape and a little ingenuity – applied it to the battlefield environment, and developed a modified process that worked," said Richards. "Now we're on schedule to accomplish the FOC (final operational capability) in the same manner, and I commend the team for that effort as well."

Richards said that the strategic shelterized technical control facility that his team provided significantly increases the C4 (command, control, communications, and computers) capability for warfighters at COB Speicher, relieves the use of tactical units from performing signal functions and is an "innovative solution" in that it is transportable and reusable at other locations – the first time an Army project manager has provided a shelterized strategic tech control facility.

Mr. Larsen is a public affairs writer for Program Manager, Defense Communications & Army Transmission Systems at Fort Monmouth, N.J.

CRAWFORD BECOMES ASSISTANT PROJECT MANAGER FOR VEHICULAR INTERCOM SYSTEMS

By Stephen Larsen

FORT MONMOUTH, N.J. – MAJ Jake Crawford III received the charter for his new assignment as the Assistant Project Manager, Vehicular Intercom Systems in a ceremony on Nov. 16. As APM VIS, Crawford will provide vehicle intercom systems and tactical headsets that save Soldiers' lives by allowing them to communicate in the high-noise environments of combat vehicles and protect them from hearing damage or loss from high-decibel

vehicle noise and explosion blasts. To date, APM VIS has provided more than \$1.2 billion of VIS materiel for Army, Marine Corps, Air Force and Navy units.

Crawford replaced MAJ Ron Claiborne as APM VIS. Claiborne retires Feb. 29, 2008, after 20 years in the Army to become a consultant to the VIS program.

Crawford previously served as the Assistant Product Manager, Defense Wide Transmission Systems for Southwest Asia Operations and deployed to Iraq, from September 2006 to August 2007. Prior to that, he served as Assistant Product Manager, Software Integration, for the Project Manager, Future Combat Systems at Fort Monmouth, N.J. from July 2004 to July 2006; as Assistant Training and Doctrine Command System Manager for the All Source Analysis System with the U.S. Army Intelligence Center at Fort Huachuca, Ariz. from 2003 to 2004; as Chief of the Military Intelligence Transformation Cell, Futures Directorate and Integration Command with USAIC at Fort Huachuca, Ariz. from 2002 to 2003; and in various other command and staff positions in CONUS and Germany.

Crawford graduated from the U.S. Military Academy at West Point in 1993 with a bachelors degree in management. He also earned a Masters of Business Management from the University of South Carolina at Columbia in 2001. His awards and decorations include the Bronze Star Medal, the Meritorious Service Medal (two oak leaf clusters), the Army Commendation Medal, (two oak leaf clusters), the Joint Service Achievement Medal, the Army Achievement Medal, the Iraqi Campaign Medal and the Parachutist and Air Assault Badges.

Crawford and his wife have three sons.

APM VIS is part of the Project Manager, Defense Communications and Army Transmission Systems, which reports to the Program Executive Office, Enterprise Information Systems.

Mr. Larsen is a writer for Project



COL Gale Harrington (left), the Project Manager, Defense Communications and Army Transmission Systems, makes remarks before presenting the charter to MAJ Jake Crawford III (right) for his new assignment as Assistant Project Manager, Vehicular Intercom Systems in a ceremony at Fort Monmouth, N.J., Nov. 16.

Manager, Defense Communications and Army Transmission Systems, Fort Monmouth, N.J.

NETCOM TAKES TOP ARMY RE-UP HONORS

A NETCOM News Release

FORT HUACHUCA, Ariz. (NETCOM/9th SC(A)) – The U.S. Army Network Enterprise Technology Command/9th Signal Command (Army) Retention Sergeant Major presented two top level Army awards to the commanding general Nov. 14 for the command’s fiscal year 2007 retention accomplishments.

The command was recognized with the Headquarters Department of the Army’s FY07 Excellence in Retention Award, and the Army’s Defender of Freedom Award. Representatives of NETCOM’s Retention Team accepted the two awards from LTG Michael D. Rochelle, deputy chief of Staff G-1, Oct. 29, in St. Louis, Mo., during the Army’s Worldwide Retention Training Seminar.

NETCOM was the only Army command to accomplish all of its assigned retention objectives in both the Active Component and Reserve

Components categories. “NETCOM reenlisted over 1,700 Soldiers to remain on active duty and transitioned over 160 Soldiers into the Reserve Components,” said SGM James Jaranowski, retention sergeant

major. “NETCOM accomplished over 128 percent of its Active Component retention mission, and over 135 percent of its Reserve Component mission, which no other major Army command could meet or exceed resulting in NETCOM being announced as the Army’s ‘top dog.’”

Jaranowski directly attributes NETCOM’s retention success to a combination of aggressive and personal involvement by commanders, command sergeants major, first sergeants, and leaders at all levels, a tremendous amount of support from those at home, and a highly trained and motivated force of career counselors throughout the globally dispersed command – all the way to the commanding general.

“Retention is a direct indicator of the leadership within a command and in all my years of doing retention I’ve never had a commander, let alone a general officer, so personally involved in retention,” Jaranowski said. “Retention is one of BG (Carroll F.) Pollett’s highest priorities. He’s a Soldier’s Soldier. Soldiers don’t care



SGM James Jaranowski, NETCOM/9th SC(A) retention sergeant major, presents the Army’s Defender of Freedom award to BG Carroll F. Pollett.

what you know until they know that you care, and our Soldiers genuinely know that BG Pollett and our leaders care about them."

Much of the success NETCOM has enjoyed can be directly attributed to the command's focus on the Soldiers' Family, and not just on the Soldiers themselves, Jaranowski adds. The Army enlists Soldiers but reenlists Families, and this has led to a NETCOM campaign which can include a Soldiers' mother, father, spouse, Family members, and even significant others in the process. With the active involvement of family members in the process it makes for a more informed and quality decision to stay with the team which has made the very tough job of retaining Soldiers just a little easier.

Retention is a challenge in every unit, however, "when you have commands like NETCOM, INSCOM (Intelligence and Security Command), MEDCOM (Medical Command), etc., with Soldiers in specialized and critical skills that the civilian sector is also in high demand for, it makes it even more challenging to retain them," Jaranowski said. "Every command has its positive to offer and every command has its challenges. We (NETCOM) didn't just happen to have a lot of positive things happen which resulted in our success; our leadership has continually worked hard to ensure we had them."

PM DWTS CONNECTS ARMY LOGISTICIANS WITH 1,000TH CSS VSAT

By Stephen Larsen

SPRINGFIELD, Va. – The program to "Connect Army Logisticians" with their own, dedicated communications system reached a significant milestone when the 1,000th Combat Service Support Very Small Aperture Terminal rolled off the assembly line at the plant of L-3 Global Communications Solutions, Inc. in Victor, N.Y., on Jan. 9, 2008.

The program, managed by the Product Manager, Defense Wide

Transmission Systems – part of the Army's Program Executive Office, Enterprise Information Systems' Project Manager, Defense Communications and Army Transmission Systems – started in May, 2004, as the solution to the Army G-4's (Deputy Chief of Staff Logistics) number-one priority after Operation Iraqi Freedom-I to connect logisticians with their own communications system to pass requisitions, and at the same time eliminate the need for Soldiers to go in harm's way in convoys to hand-carry requisitions.

Some 90 Army leaders and their industry partners met at a PM DWTS facility on Jan. 31, 2008 to mark the milestone. Among the Army leaders were Thomas Edwards, assistant deputy chief of staff, Army G-4; Gary Winkler, Program Executive Officer, Enterprise Information Systems; COL Gale Harrington, PM DCATS; and LTC Clyde Richards, PM DWTS; and Carl Beem, CSS VSAT combat develop, Combined Arms Support Command. The industry partners included Frank York, GCS president; Michael Wheeler, Segovia president; John Ratigan, I-Direct president, and Ken Karhuse, Eyak Technologies program manager.

Borrowing an analogy he heard from former Army Chief of Staff GEN Peter Schoomaker, Edwards, during his remarks, compared the early process of trying to connect Army logisticians to "slogging through a swamp," and said that for the G-4, the CSS VSAT solution was like "jumping out of a swamp and onto a rocket ship."

"The number one logistics issue out of the war (OIF) was to connect the logistician," said Edwards. "You can't run a distribution system if you don't know what the user wants. If you (the CSS VSAT government and industry team) hadn't been able to step up and make that happen, we'd still be on the sidelines. You have my personal and enduring thanks for that."

Winkler, who became the PEO EIS in Oct. 2007 after serving as Principal Director for Governance,

Acquisition, and Chief Knowledge Office for the Army CIO/G-6, said that he watched the CSS VSAT program start to connect Army logisticians under former PEO EIS Kevin Carroll. "I saw it (the CSS VSAT program) from CIO/G-6," said Winkler. "It's a great program meeting a critical need for warfighters. I congratulate you on its success and look forward to its future success."

MAJ Jeff Etienne, the assistant product manager, DWTS-Belvoir, told the group the history of the CSS VSAT program, from the first generation of 18 prototype units in March, 2004 that utilized a .96 meter dish, to the current fourth generation 1.2 meter Hawkeye II-Enhanced units that were fielded starting with the 901st unit in Nov. 2007. He said Soldiers' demand for CSS VSATs continues to increase because it allows users to share documents, pass requisitions, collaborate and conduct meetings online and make voice-over-internet-protocol telephone calls – all without moving from their location, thus eliminating "sneaker net," the often-dangerous need to get in a convoy to hand-carry re-supply or spare parts orders on floppy disks.

"Wherever Soldiers are located around the world, they can connect to a satellite through one of our four teleports (in Maryland, California, the Netherlands and Australia)," said Etienne, adding, "I feel great every day I put on this uniform. Every day I feel like we're making a direct, positive impact on the warfighter."

Connects medical, biometrics and homeland security users, too

Richards thanked a number of people who had worked in the CSS VSAT program, including MAJ Mike Devine, the first APM-DWTS-Belvoir; George Knizewski, an engineer who helped prove the concept that small satellite terminals could connect logisticians; Charlie Moore, the program's chief for systems integration; John Andrews, the program's readiness manager; and Vincent Miragliotta, network



“The number one logistics issue out of the war (Operation Iraqi Freedom) was to connect the logistician,” said Thomas Edwards (left), assistant deputy chief of staff, Army G-4, to Army leaders and their industry partners in Springfield, Va. on Jan 31 to mark the milestone of the production of the 1,000th Combat Service Support Very Small Aperture Terminal. **“You can’t run a distribution system if you don’t know what the user wants. If you (the CSS VSAT government and industry team) hadn’t been able to step up and make that happen, we’d still be on the sidelines. You have my personal and enduring thanks for that.”** Looking on are MAJ Jeff Etienne (standing), assistant product manager, Defense Wide Transmission Systems-Belvoir and Gary Winkler (seated), Program Executive Office, Enterprise Information Systems.

engineer.

Richards said that the factory-to-foxhole internet capability enabled by CSS VSATs provides information dominance for CSS warfighting units and noted that, in addition to connecting logisticians, CSS VSATs now also save Soldiers lives by digitally transporting medical supply and casualty care transactions and support force protection by digitally transporting biometrics and homeland security transactions. *“We’ve also provided VSATs to support disaster relief efforts, such as we did after Hurricane Katrina,”* said Richards.

Emphasizing that his objective as a PM was to provide a faster, better and cheaper system, Richards said that he was proud that the PM DWTS and industry team had worked together to reduce the cost of individual CSS VSATs by 35 percent and made process improvements – such as doing quality inspections at the vendor’s plant and shipping them directly from there to users. *“I also want to tell you that,*

operationally, we have not lost one single VSAT out of 1,000,” said Richards.

Richards said that the original requirement from the G-4 was for 775 CSS VSATs, that there were 1,000 more “in the pipeline” and that the figure could ultimately grow to 3,000 CSS VSATs before they were done.

Edwards said it could be even more.

“I saw a chart the other day with the figure of 3,145 VSATs,” said Edwards. *“And that figure could grow. Keep making it better and cheaper and the whole Army will come.”*

Mr. Larsen is a public affairs writer with Project Manager, Defense Communications & Army Transmission Systems, Fort Monmouth, N.J.

SIGNAL SOLDIERS SHARPEN COMMUNICATION SKILLS

By 2LT Selina A. Tolonen

Signal Soldiers Army-wide are

receiving up to three months of mission-essential new equipment training relating to the Joint Network Node communications system.

This training, taught by a variety of corporations ranging from DataPath International to Engineering Solutions and Products Incorporated, is specifically designed to train Soldiers on how to sustain the operation and maintenance of a JNN in a tactical environment.

Waylon Sanders works for General Dynamics at Fort Gordon, Ga., and is the training supervisor for Fort Riley’s current JNN course rotation. He is also a retired warrant officer.

“The most challenging aspect of my job is setting the training schedule and ensuring Soldiers attend the class that best pertains to his or her military occupational specialty,” he says.

There are 11 different classes taught in one JNN course rotation, and are held at military installations in Germany, Texas, Washington, and several other locations all around the world, in addition to Fort Riley, Kan.

Sanders says he thinks one of the main reasons for this training is probably due to the Army’s new equipment training requirements.

“The JNN is on its way in, and mobile subscriber equipment is on its way out,” he says.

SPC Joey Shinskey and SGT Rachel Cargill, 3BCT 1AD Special Troops Battalion, Bravo company, are students in the JNN operator and maintainer course. They say the course has definitely made them more proficient at their job as 25Fs, network switching systems operators/maintainers.

“The more training a Soldier can get on different types of communications equipment, the more prepared a Soldier will be for any communications mission” Shinskey says.

“This will change my MOS completely,” Cargill says. She has enjoyed the hands-on training and *“on-the-spot troubleshooting.”*

Throughout the course, Soldiers have the opportunity to work



JNN training: 25Q, PFC Logan Davis, tests his knowledge on a Ku satellite transportable trailer.

inside a JNN shelter, configure a router, set up Cisco Call Manager Express, operate a Ku-band satellite, and other types of one-on-one equipment training.

JNN instructor and Army National Guard Soldier, Bill Ringler, loves nothing more than helping his fellow troops get needed training.

“Knowing that what I teach Soldiers goes with them downrange or on whatever mission they’re tasked with gives me a sense of pride I couldn’t get anywhere else,” he says. Because Ringler has 19 years of military service behind him, he knows and understands the mindset of a Soldier and what is important to

mission accomplishment.

His fellow instructors, mostly all prior-service or retired military, agree.

“I feel like I’m doing my part to fight against terrorism, but I wish I could also see the knowledge that the Soldiers acquire use during their deployment,” JNN network management instructor, Darryl McNeil says.

SSG Nicholas Yost, 2nd Brigade Combat Team 4th Infantry Division Special Troops Battalion, Bravo Company is a student in the JNN network management class. The class is designed for Soldiers working in S-6 or any communications section, and JNN platoon leaders.

He says deployments are the “final exam” in seeing whether or not a unit is prepared, and that these courses provide “a wealth of signal knowledge and training designed to give Soldiers the tools necessary to be ready.”

By mid-December, Fort Riley’s JNN course certified approximately 60 Soldiers, thus giving them the knowledge and skills necessary to plan, manage, and sustain a JNN. For more information on the Signal Corps visit www.gordon.army.mil.

2LT Tolonen is stationed at Fort Riley Kan., STB 3HBCT 1AR Division.

ACRONYM QUICKSCAN

AC – Active Component
 AD – Armored Division
 APM VIS – Assistant Project Manager, Vehicular Intercom Systems
 BCT – Brigade Combat Team
 C4 – Command, Control, Communications and Computers
 C4ISR – Command, Control Communications, Computers, Intelligence, Surveillance and Reconnaissance
 CASCOM – Combined Arms Support Command
 CE-LCMC – Communications-Electronics Life Cycle Management Center
 CENTCOM – Central Command
 COB – Contingency Operating Base
 CONUS – Continental United States
 CSS VSAT – Combat Service Support Very Small Aperture Terminal
 DISA – Defense Information Sys-

tems Agency
 DISN – Defense Information System Network
 EBS – Expeditionary Signal Battalion
 FOC – final operational capability
 FY – fiscal year
 GCS – Global Communications Solutions
 ID – Infantry Division
 INSCOM – Intelligence and Security Command
 ITSB – Integrated Theater Signal Battalion
 IOC – initial operational capability
 ISEC – Information Systems Engineering Command
 JNN – Joint Network Node
 MEDCOM – Medical Command
 MOS – military occupational specialty
 NCO – noncommissioned officer
 NETCOM – Network Enterprise

Technology Command
 OEF – Operation Enduring Freedom
 OIF – Operation Iraqi Freedom
 OIF-I – Operation Iraqi Freedom-I
 PEO EIS – Program Executive Office, Enterprise Information Systems
 PM DCATS – Project Manager, Defense Communications and Army Transmission Systems
 PM DWTS – Product Manager, Defense Wide Transmission Systems
 SOCCENT – Special Operations Command Central
 STB – Special Troops Battalion
 SWA – Southwest Asia
 TRADOC – Training and Doctrine Command
 USAIC – U.S. Army Intelligence Center
 VOIP – voice-over-internet-protocol
 VSAT – Very Small Aperture Terminal

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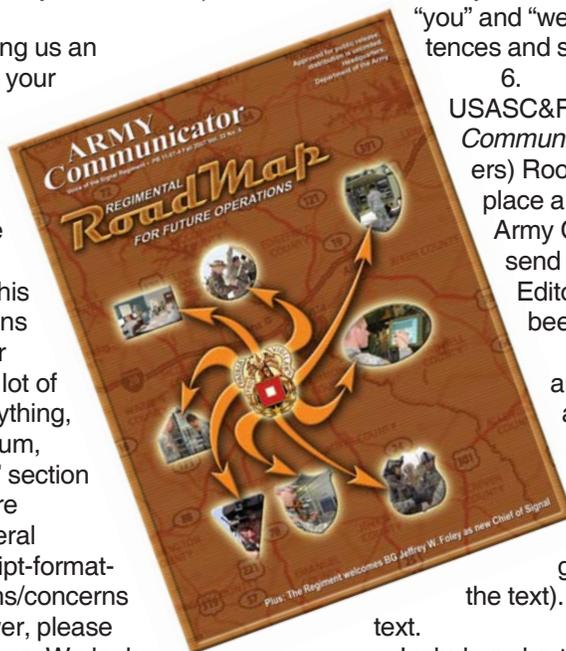
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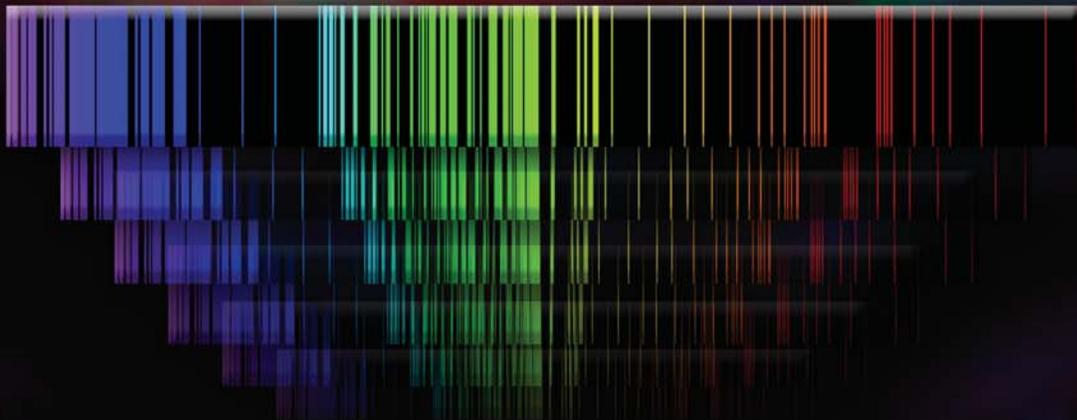
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