THE LINK

FALL 2013

Commander reviews FY13 achievements

CSM ADDRESSES THE ARMY PROFESSION | LRC CODUCTS FIELD SUPPORT PILOT | SIGNAL CORPS LEGEND, A TRIBUTE | STRENGTHENING THE ORGANIC INDUSTRIAL BASE | ARAT HELPS COMBAT CYBER THREATS | SMALL BUSINESS FY13 PERFORMANCE REPORT | WORKFORCE DEVELOPMENT

Official Publication of the U.S. Army Communications - Electronics Command

U.S. Army Communications-Electronics Command

CECOM PROVIDES 1ST CLASS C4ISR SUPPORT

"Many of the systems we work get more than their fair share of visibility, or command 'air time'; almost every system we support is required in the battle space and deserves our utmost attention. We work toward these command priorities, and strive to maintain realistic schedules according to our customers' requirements."

~Patrick Esposito, director, Production Management, Tobyhanna Army Depot

"I want to personally thank the (Software Engineering Center) Army Reprogramming Analysis Team organization for your continued support to the United States Army Aviation Center of Excellence. The subject matter expertise that your organization provides to the Fort Rucker team and to the Tactical Operations survivability community is unparalleled."

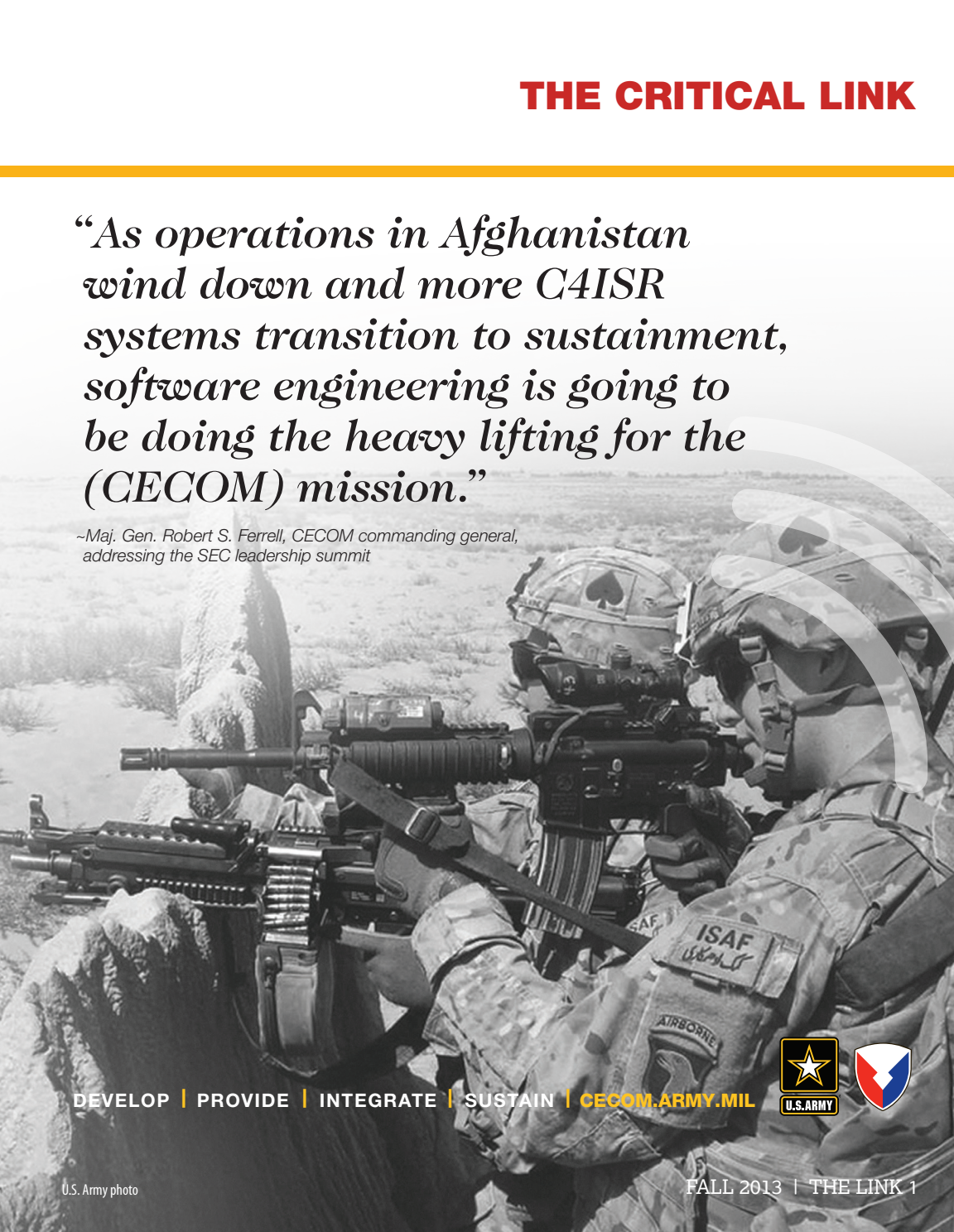
~Col. Shawn Prickett, Commander, 1st Aviation Brigade, Fort Rucker, Ala.

"I have had experience with several DoD depots and none compare to Tobyhanna Army Depot. The level of professionalism is unparalleled. When there are problems, personnel keep you abreast of the situation so there are no surprises. They have proven to be customer focused and do what is right for the customer."

~Mr. Donald Meckley, Fort Bliss, Texas regarding the AN/TSQ-179B

"As operations in Afghanistan wind down and more C4ISR systems transition to sustainment, software engineering is going to be doing the heavy lifting for the (CECOM) mission."

~Maj. Gen. Robert S. Ferrell, CECOM commanding general, addressing the SEC leadership summit



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U.S. Army photo

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On the Cover

U.S. Army Spc. Justin Waltho, with Headquarters and Headquarters Troop, Combined Task Force Dragoon, resets a launcher for an RQ7B Shadow Technical Unmanned Aircraft System at Forward Operating Base Pasab, in Kandahar Province, Afghanistan, Sept. 12, 2013. The aircraft was used for aerial reconnaissance and mission communications. CECOM services a variety of reconnaissance and mission communications systems to enable Soldier dominance on the battlefield. (U.S. Army Photo by Spc. Joshua Edwards/Released)

FY-13 – Challenges & Achievements

By Maj. Gen. Robert S. Ferrell, CECOM Commanding General

Unlike New Year's Eve at the close of the calendar year, the end of a 'Fiscal Year' is not usually a cause for celebration. However, as we have recently completed Fiscal Year -13, and so much of the news we read and our daily focus has centered on budgets and the fiscal environment, the end of this fiscal year in particular is a good opportunity to take a quick look back at the challenges and achievements of the last twelve months.

Point blank, FY-13 has proven to be the most complex and difficult budget year in nearly a generation. For example, our Army continued to implement the Budget Control Act of 2011, which among other effects will result in a planned reduction of approximately 80,000 Soldiers. In addition, sequestration, which took effect in March 2013, resulted in further funding reductions across our force and necessitated the furlough of more than 250,000 Army Civilian Professionals – including nearly all of the 8,000 who serve on our CECOM team. Couple these with the impact of operating under continuing resolutions, along with commensurate reductions in 'OCO' or 'Overseas Contingency Operations' funding, and you have an overall fiscal environment that could have potentially limited the Army – and CECOM's – ability to accomplish our mission.

Fortunately, all across our Force and at CECOM, we have undertaken steps to organize and optimize ourselves which are setting conditions for a very different - but still very exciting - future. During FY-13, CECOM began a number of key initiatives – from right-sizing our C4ISR Field Support mission, to re-organizing our CECOM Forward Elements, to optimizing 'like-functions' across our headquarters G8, G1 and G6 staffs, that will allow us to actively shape our command's future, rather than to be shaped by events outside of our control.

Moreover, in spite of the fiscal challenges of FY-13, CECOM can also be especially proud of the tremendous C4ISR support we have provided to the Army and Joint Force over the last twelve months. Wherever you look across our Command, you find significant and lasting achievements, along with sustained, superior performance.

For example, our Logistics and Readiness Center has been able to dispose of more than $1.42 billion dollars in excess C4ISR stocks in FY-13. LRC has accomplished this while also maintaining historic highs in the readiness of our fleets; record highs in stock availability and record lows in equipment backorders. Our CECOM personnel who are forward deployed to Afghanistan supporting the drawdown of forces and embedded at the Redistribution Property Accountability Team Yards and Retro-Sort Yards, have been able to identify more than 10,000 serviceable C4ISR equipment items with a total value of more than $70 million, and return them to the Army supply system.

At the Tobyhanna Army Depot, throughout FY-13, our team continued to excel in its role as DoD's C4ISR Logistics Support Center of Choice. In just the last year, TYAD received the Lean/Six

Sigma Program's Excellence Award, LEAP, for the Industrial Category; the Secretary of the Army Environmental Award for an Industrial Organization; and the Silver Shingo Award for Communications Security Operations at the Enterprise Level. Notably, these tremendous TYAD recognitions occurred at the same time the Depot was required to complete a phased, FY-13 workforce reduction of over 970 personnel.

CECOM's Information Systems Engineering Command also built on its already stellar record of performance in FY-13 by supporting the stand-up of new, state of the art, Army headquarters information technology facilities at locations such as Fort Bragg and at Special Operations Command-South. In addition, ISEC provided outstanding information technology infrastructure support to the Yongsan, Korea relocation; an effort that impacts more than 29,000 personnel. ISEC has also played a critical engineering role for the Host Based Security System, which detects and counters cyber-threats to DoD. Specifically, ISEC led the planning and execution of U.S. European Command's migration to the Army's 5th Signal Command NIPR, SIPR and HBSS enterprises – the first time that a Combatant Command had ever successfully migrated to an Army enterprise system of any kind.

At CECOM's Central Technical Support Facility, FY-13 was also a highly successful year, where CTSF personnel completed the Army Interoperability Certification of 42 critical systems that resulted in upgrades released to our warfighters. CTSF's participation in the Coalition Interoperability Assessment and Validation process resulted in innumerable real-world improvements to the Afghan Mission Network that supports OEF. CTSF also provided extensive expertise and assistance to the ASA/ALT staff and several C4ISR Program Executive Office's as part of their on-going effort to achieve operations and intelligence information fusion through implementation of Common Operating Environment 1.0.

The CECOM Software Engineering Center's FY-13 performance was similarly outstanding. SEC's Joint On-Demand Interoperability Team continued their critical support to the United States Forces Korea-Republic of Korea interoperability effort. SEC is providing solutions that address SINCGARS interoperability challenges on the peninsula, while testing commercial, off-the-shelf, communication bridging capabilities used by Special Operations Command in theater. During FY-13, SEC also supported the Distributed Common Ground System-Army effort, by partnering with TRADOC to enhance DCGS-A Field Software Engineering training for non-commissioned officers and entry-level Soldiers in the Military Intelligence Systems Maintainer/Integrator military occupational specialty, or MOS. SEC also successfully conducted the 2013 Joint User Interoperability Communications Exercise, which included more than 1,500 participants from the U.S. and our Allied and Coalition partners, and which focused on the cyber-defense of a deployed Joint Task Force.

As you can see, despite the challenging fiscal conditions our command confronted in FY-13, talented and dedicated CECOM professionals, operating at locations all across the globe, were able to accomplish our mission while also building the 'future CECOM' we'll need to sustain the Army and Joint Force of 2020 and beyond. Although, resources and budgets will remain limited, and tough choices will have to be made in FY-14/15, given all we have accomplished, we can be confident our command is on the right track and that we will have the capabilities we need to remain the 'Critical Link' in C4ISR sustainment.

Thank you for your hard work and efforts throughout FY-13 and for all you do each and every day for our Warfighters. **Army Strong!**

THE CRITICAL LINK

ARMY SOLDIER'S CREED

I am an American Soldier.

I am a Warrior and a member of a team. I serve the people of the United States and live the Army Values.

I will always place the mission first.

I will never accept defeat.

I will never quit.

I will never leave a fallen comrade.

I am disciplined, physically and mentally tough, trained and proficient in my warrior tasks and drills. I always maintain my arms, my equipment and myself.

I am an expert and I am a professional.

I stand ready to deploy, engage, and destroy the enemies of the United States of America in close combat.

I am a guardian of freedom and the American way of life.

I am an American Soldier.

ARMY CIVILIAN CORPS' CREED

I am an Army Civilian—a member of the Army team.

I am dedicated to our Army, our Soldiers and civilians.

I will always support the mission.

I provide stability and continuity during war and peace.

I support and defend the Constitution of the United States and consider it an honor to serve our nation and our Army.

I live the Army values of loyalty, duty, respect, selfless service, honor, integrity, and personal courage.

I am an Army Civilian.

CSM ViewPoint

The Army Profession… Strengthening The Critical Link to prevent, shape and win

By Command Sgt. Maj. Kennis J. Dent, CECOM CSM

This year is one that has surely been filled with challenges… but I must say, with PRIDE, that our CECOM Workforce has certainly performed above and beyond what anyone could expect during a time of such uncertainty.

Together, we've endured working in an environment of constrained resources, shrinking budgets, sequestration and furloughs.

But through it all, CECOM Team's has remained vigilant in meeting the needs of our nation's Army and doing what it takes to keep The Critical Link strong for our Soldiers worldwide.

As the Army continues to transition to sustainment, we have an opportunity to reshape, renovate and reinvigorate our workforce, our processes and our capabilities as we look to posture the Command to support the Army of 2020 and Beyond.

Now that we are no longer conducting contingency operations, we have an opportunity to re-evaluate the way we do business, and really focus on training initiatives to develop adaptive leaders who will execute the CECOM mission in the ever-changing and complex world in which we live.

Our workforce, a hybrid force comprised of Soldiers, Civilians and Contractors, must be ready, responsive and engaged in the execution of the Army's priorities to meet our Soldier's needs.

The Army Profession is one of valor, strength and dignity. We are focused here at headquarters on developing the intellectual capacities of the CECOM Team to ensure their understanding of the complex contemporary security environments in which we now operate. Long gone are the days of stove-piping, Army specific work environments. Our personnel interact daily with our Joint, Interagency and Multinationals partners, and that's why CECOM has named Workforce Development as a top priority.

We've evolved as an Army, and so must ensure our Team is provided professional development opportunities essential to being successful in the new Total Army environment. Our workforce will be smaller and multi-functional as we serve our Solders and Joint partners. We will be regionally aligned to give the most efficient, first-class service our Soldiers need and deserve. And we will be ready at a moment's notice, armed with the most highly-trained and professional workforce who will support our Combatant Commanders to prevent, shape, win and defend the Nation and its interests at home and abroad.

We will continue to weather through these times of uncertainty and remain appreciative and in awe of the hard work and dedication our workforce displays. With their expertise and esprit de corps, we will triumph over today's challenges and emerge re-shaped, better aligned and better trained.

The CECOM Team continues to be a talented and professional body of experts who are responsible for cultivating **The Critical Link** that enables our Soldier's dominance on the battlefield.

CECOM's workforce— **The Critical Link**

By James Hayes, SEC

In Korea, Soldiers are assigned for a one year tour, making an assignment there more like a deployment, which causes the Eighth U.S. Army to face a turnover of 600 to 700 Warfighters every month. These turnovers often cause a shortage of personnel in critical military occupational specialties and creates the need to train incoming personnel to ensure a balanced set of skills on the ground.

Refresher training is in constant demand for increasingly complex C4ISR systems. Additionally, unit personnel need sustainment training to prepare for two major theater level exercises, multiple battalion, brigade, and division level exercises every year. As a result of these challeges, the Korea Theater of Operations is in a never-ending training mode to ensure that Warfighters are ready "To Fight the Fight Tonight."

"You have really opened my eyes! I had no idea how many systems SEC is involved with – how much you do here. This is a capability we need in Korea."

~Brig. Gen. Shin, Chief of Computer Systems Division for the Republic of Korea Army Headquarters G6

To deal with these challenges, CECOM SEC's leading "face to the field" is the C4ISR Support Manager, Sok Kim. Kim has been a familiar welcoming face in support of both new arrivals and VIP visitors to Korea for many years, ensuring that our Soldiers' critical support needs are expeditiously met.

The U.S.Army Communications-Electronics Command Software Engineering Center's field software engineers in Korea work alongside logistics assistance representatives from the CECOM Logistics and Readiness Center to support the

Sok Kim, Software Engineering Center-Korea support manager, coordinates support.

Warfighter on the ground by providing refresher training and over-the-shoulder training on C4ISR systems.

Kim ensures SEC supported systems are ready to fight tonight by loading the latest software updates and security releases, configuring the baselines and loading maps and datasets, testing network connectivity and communications, and ensuring soldiers are aware of the latest capabilities and how those capabilities support their mission.

Given the high rate of turnover, one of the challenges facing new arrivals is learning about and taking advantage of the opportunities Team C4ISR makes available in theater. To address this challenge, Kim and his team work with the Armed Forces Network to produce news stories highlighting the SEC's Mission Command Training Center and the C4ISR Integrated Training Environment – Cel, CITE-C, Facility. These stories, along with a radio interview and TV blue board training schedule posting, maximize Soldier awareness of training opportunities.

The CITE-C is also on the leading edge addressing U.S. Forces Korea and the Republic of Korea interoperability. Kim and his team are working with the USFK science advisor and CERDEC engineers to assist in capturing the requirements for USFK/ROK interoperability, synchronizing efforts for procurement of commercial off the shelf equipment between 8th Army and CERDEC and laying the groundwork for a possible joint emerging operational needs statements.

With the continuous changes and challenges in the Korean area of operations, Kim's experience, knowledge and stability as CECOM's face to the field is a welcome sight for both newcomers and those returning to theater.

Kim is USFK's **Critical Link.**

LRC aides Syrian refugee crisis through the Jordan Border Security Program

By Andricka Thomas, CECOM HQ

According to the United Nations, more than 519,000 Syrian refugees have entered Jordan and that number may reach nearly 1.2 million by the end of this year. Many of these refugees have entered Jordan where the Logistics and Readiness Center managed border security system is in operation.

“The same system that helps prevent smugglers and militants from entering Jordan is also providing the Jordanian Armed Forces with the capability to identify and assist Syrian refugees who are fleeing the atrocities in Syria,” said Matt Oskam, program manager for the U.S. Army Communications-Electronics Command LRC’s Security Assistance Management Directorate.

He explained that by providing early identification of refugees the border security capability provided by the LRC allows Jordan to provide a humanitarian role by escorting refugees from the border into refugee camps where aid, relief and medical care are provided.

Since 2006, the Logistics and Readiness Center has managed a border security system capability on Jordan’s border with Syria through its foreign military sales program, a core function of the U.S. Army Communications-Electronics Command.

Caption: A Jordan armed forces soldier provides security for Syrian refugees at the Tal shehab Reception Center near Ash Shajarah in northern Jordan, April 2, 2013. Today alone, hundreds of men, women and children of all ages braved sniper fire in order to cross the border. Photographed here are just some of the 1.2 million refugees fleeing violence in their homeland.

Air National Guard Master Sgt. Cheresa D. Theiral

CECOM executes it foreign military sales activities under the direction and guidance of the U.S. Army Security Assistance Command, to promote compatibility and interoperability in equipment and training, all crucial to the National Defense Strategy. CECOM's LRC further develops the requirements for contractor services that come from USASAC to meet the needs of foreign military customers, participating in design reviews, testing events and accepting the system upon delivery, according to Matt Oskam.

The Jordan Border Security Program uses a "total package approach" that consists of a wide range of sensors, communications towers and command and control equipment to assist the Jordan Armed Forces in detecting and interdicting smugglers and militants, Oskam explained. The system allows the Jordanians to monitor their border continuously in order to identify and classify threats with sufficient time to dispatch personnel to interdict those threats.

"Although the equipment is still performing its original mission admirably, the Jordan Border Security Program is now performing a more crucial mission; helping save Syrian refugee lives," Oskam said.

CECOM is a major subordinate command of the Army Materiel Command.

Missile defense system readiness relies on FSR expertise

By Anthony Ricchiazzi, TYAD

Tobyhanna Army Depot technicians are supporting the deployment of a key missile defense system in the western Pacific.

Field Service Representatives, or FSRs, are providing technical expertise to maintain readiness of a Terminal High Altitude Area Defense system, THAAD, for the 11th Air Defense Artillery Brigade in Guam.

They are supporting the operations 24 hours a day, seven days a week, during the forward deployments of the unit under a public-private partnership agreement with Lockheed Martin.

THAAD is designed to destroy enemy theater-class ballistic missiles at high altitudes. The system includes five major components: launchers, interceptors, a radar system, THAAD Fire Control and Communications units, and THAAD-specific support equipment.

"Tobyhanna FSRs are supporting multiple components of the system, including support equipment such as DRASH (Deployable Rapid Assembly Shelter)," said Systems Branch Chief Alan Knotts, West Region, Fort Hood Forward Repair Activity, Texas. "The mission began in April."

Tobyhanna FSRs provide equipment support that includes troubleshooting/repair and system software and state-of-the-art electronics technical and maintenance support for numerous systems worldwide. FSRs also fabricate needed test fixtures, record test data and recommend system or circuit modifications in coordination with engineering personnel.

A Terminal High Altitude Area Defense interceptor is launched from Meck Island on its way to an intercept of a ballistic missile target during the Missile Defense Agency's historic flight test last year.

Department of Defense photo

They also mentor and assist military personnel in field-level troubleshooting and repair of components, and provide technical advice to commanders and maintenance officers on maintainability of the system.

"The FSRs have on-site authority for decisions such as performing depot maintenance, substituting equipment, repair parts and components, determining what equipment, replacements units or subassemblies should be evacuated to the depot for repair and if software program changes are required," noted Alex Meno, Command Post System and Integration Technical Support Branch manager.

Depot FSRs are also at Fort Bliss, Texas, providing similar support to two THAAD Air Defense Units.

Knott and Meno said the work is being performed with no problems to date. The challenges have been mainly logistics issues associated with the initial deployment of this magnitude.

"We have to react extremely fast in order to get these FSRs prepared to deploy because notification is not usually given until the last minute." Meno said. "To compensate for this, we are seeking to have FSRs get regular training, intelligence briefings and medical evaluations so they will be prepared to move quickly to whenever and wherever support is needed."

Knott said they anticipate the mission to be completed by October.


Photo By: Corey Nilsson

Logistics and Readiness Center collaborates with C4ISR partners, conducts field support pilot

By Andricka Thomas, CECOM HQ

After 12 years of combat operations in Afghanistan and Iraq, the Army is now facing a different conflict—budgetary restraints. The Army, not unlike the Army Materiel Command and CECOM, is working diligently to transition to sustainment while conserving resources. Streamlining CECOM's field support across the Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance domain is part of that effort.

CECOM's Logistics and Readiness Center logisticians are working hand-in-hand with their C4ISR partners as part of a C4ISR Field Support Right-Sizing Integrated Product Team to determine an optimum field support structure for C4ISR systems that will be effective, efficient and able to meet the requirements of the FY15 and beyond Army force structure and operational tempo, according to Gary Salomon, LRC associate director for programs.

"The Team is charged with analyzing, studying and observing the current field support structure to create new strategies to support the Army's Combatant Commander's needs in an Army of 2015 and beyond," said Lane Collie, LRC director.

As part of the team's research, logisticians traveled to Fort Drum, Fort Bragg, Fort Hood, Fort Polk and Fort Irwin to identify root cause issues affecting field support and to learn more about the perspectives and needs of the Army Sustainment Command's Army Field Support Brigades and Brigade Combat Team personnel.

"We found that home stations' mission command exercise events, leading to Combat Training Centers rotations, are a primary driver of C4ISR field support requirements," explained Jim Risely, LRC associate director for operations. He explained that, with being at war the last 12 years, mission requirements have driven Soldier training to be largely focused on combat skills.

As a result, "Soldiers performing C4ISR-related jobs have become increasingly dependent on external technical assistance, a significant portion of which is supplied by contractor personnel, to set up, troubleshoot and maintain their equipment," said Risely. "A high rate of personnel turnover in BCTs has further exacerbated the situation. This reduces the amount of mentoring junior Soldiers can obtain from their seniors." Based on these findings the IPT developed

a proposed tiered field support structure for combat training rotations.

"We're getting back to basics," said Collie. "The new strategy calls for Soldiers to be the primary field service components for the operation and maintenance of C4ISR equipment and systems at the unit level, just as they were before the conflicts started." As AMC continues to be globally engaged and regionally responsive to COCOMs in order to shape the Army's presence, the new field support strategy will aid in strategically positioning personnel and equipment to provide the leanest, most efficient and effective support.

Before this proposed support structure was introduced, there were 37 to 45 support personnel at each rotation that had 'free movement' throughout the entire exercise, Salomon explained. This number includes contractor and government support as well as personnel embedded with the unit.

"With the new tiered approach, there will be 12 multifunctional personnel in tier 1 with the remaining personnel identified as tier 2," said Salomon.

To test the proposal, the IPT, in conjunction with U.S. Army Forces Command, conducted pilot programs at the Joint Readiness

Tier 0

This is where Soldiers would be ultimately responsible for the troubleshooting, operating and maintaining C4ISR equipment at the field level, replacing civilians who were embedded with the units during the height of the conflicts to supplement the field support gaps Soldiers performed before the Iraq and Afghanistan conflicts. Soldiers will be trained to perform those duties, ultimately creating efficiencies. Collie reports that about 85 percent of field level issues can be solved at the operator/maintainer level in the units. Issues not resolved there will be elevated to Tier 1.

Tier 1

As part of the effort to regionalize field support, training efforts are underway to provide more multifunctional personnel who can provide assistance remotely through an Incident Reporting Module, or IRM, trouble ticket system, operating much like a 'call center' would, Salomon said. Support will be provided via phone, or in the field training environment or in the midst of a deployment as requested.

Tier 2

Here, technical experts are responsible for handling issues escalated through IRM, much like a regional help desk, allowing these personnel to return to the home station, saving on travel and overtime expenses, according to Salomon. Most of this support will be done over the phone or remotely, however, technicians can be dispatched to the field if necessary.

Tier 3

At tier 3, engineers and scientists who represent the original equipment manufacturer or the research and development components will handle the more complex issues above field level. Method of response will be telephonic or remote, as required.

To test the proposal, the IPT, in conjunction with U.S. Army Forces Command, conducted pilot programs at the Joint Readiness Training Center in May, and the National Training Center in June. The C4ISR team conducted pre-pilot training with the identified units and with field support personnel.


Photo By: Corey Nilsson

Training Center in May, and the National Training Center in June. The C4ISR team conducted pre-pilot training with the identified units and with field support personnel. All Tier 1 personnel were brought through the beginning of Reception, Staging, Onward Movement, and Integration, or RSO&I, phase. Once the RSO&I phase is complete, all further support will be provided by request using the IRM system to generate a trouble ticket to request support, with the exception of a small embedded team as required, explained Salomon.

Data collected from both pilots at JRTC and NTC were similar.

Did you know?

Tobyhanna has a robust engineering team with capabilities that include computer-aided engineering, design and development, technology insertion, rapid prototyping, test program set development and interactive electronic technical manuals. Tobyhanna personnel can take a concept through design and development, manufacturing and even perform the integration in the combat theater so Warfighters are equipped as quickly as possible.

"At the Tier 1 level, FSRs [Field Support Representatives] and LARS [Logistics Assistance Representatives] provided assistance to the units. Once RSO&I was completed, any remaining issues were elevated to the tiered support system," said Risely. "We found there were little tickets, if any at all, from the unit requesting assistance." Of those submitted, the majority of the trouble tickets were low priority and mainly due to lack of configuration knowledge/training rather than faulty or broken equipment, he explained.

Many LARs showed interest in expanding their current role by supporting the current software-reliant systems to become more multi-functional in the support they provide.

"The idea is to ensure Soldiers are trained to recognize, troubleshoot and resolve issues at the Tier 0 level," said Collie. LRC experts would provide over-the-shoulder training and mentoring to lend greater capability to the Soldier and subsequently decrease the field support footprint in the region, according to Collie.

LARs have the ability to move more freely between units and provide support, but contractual barriers prevent them from doing so on certain C4ISR systems, Risely explained. He goes on to say LARs provide support at a lower cost and would require very minimal training to sustain the programs they currently cannot support. Contract FSRs are not as flexible as LARs and do not focus on training, knowledge sharing or improving the Soldier skill sets, but rather simply fixing the problem for which they are called.

The Team's efforts are in line with the direction the Global Logistics community is headed—employing Global Logistics to support the military forces in 2020 and beyond.

"Our efforts to develop a strategy that ensures our global logistics capabilities are properly structured, aligned and positioned will help us plan to support Army 2020 and beyond and enable us to provide responsive support to the Army and the joint force of the future, said Collie.

THE CRITICAL LINK

U.S. Army Communications-Electronics Command

CENTRAL TECHNICAL SUPPORT FACILITY | LOGISTICS AND READINESS CENTER | SOFTWARE ENGINEERING CENTER | TOBYHANNA ARMY DEPOT | U.S. ARMY INFORMATION SYSTEMS ENGINEERING COMMAND

CECOM MISSION

Develop, provide, integrate, and sustain the logistics and readiness of C4ISR systems and mission command capabilities for the joint, interagency, and multi-national forces worldwide.

CECOM VISION

Life-cycle provider of choice for supporting joint warfighting superiority through world-class globally networked C4ISR systems.

CECOM CORE FUNCTIONS

Depot Level Manufacturing, Repair and Overhaul

Field Support

Foreign Military Assistance

Interoperability Certification

Logistics, Sustainment Planning and Execution

Software Sustainment

Supply Chain Management

IT Systems Engineering and Integration

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SEC engineer named 2013 Civilian Hero in STEM at national conference, community service in STEM

By Chuck Johnston, SEC-Lee

Maria D. Melendez, a network engineer with the CECOM Software Engineering Center-Lee Tactical Logistics Directorate, was named the 2013 Science, Technology, Engineering and Mathematics, STEM, Military and Civilian Hero at the Great Minds in STEM Hispanic Engineering National Achievement Awards Corporation, or HENAAC, conference during their annual awards ceremony Oct. 4 in New Orleans, La.

'Great Minds in STEM' is a non-profit organization that focuses on STEM educational awareness, honoring America's best and brightest engineers and scientists within the Hispanic Community. Melendez supports the development, testing, deployment and hosting of Army and Department of Defense Logistics and Business Information Systems, that supports Soldiers in every aspect of their daily lives.

"We are all so proud of Maria. She serves as an example to all Departments of Army Civilians and epitomizes the attributes of a truly dedicated and caring person," said Ricky Daniels, director SEC-Lee TLD. Daniels noted that Maria has dedicated her free time in supporting the local community. Her activities include years of work with the Office of Multicultural Affairs at the University of Richmond, judging submissions from the eCybermission Science, Math, and Technology program for junior students, serving on the review committee for the Hispanic Association of Colleges and Universities and helping with the Volunteer Income Tax Assistance Program as a bilingual greeter and tax preparer.

Melendez showed her appreciation for the recognition during the HENAAC conference where she accepted the honor.

"Thank you all for this prestigious recognition. It is such an honor and privilege to be recognized as a 2013 STEM Military and Civilian Hero. This moment marks a very important time for me in my professional career as a computer engineer," said Melendez.

"As a child, my parents and family instilled a sense of perseverance in me, where I learned that in order to achieve your dreams, you must always believe in yourself. Being away from my family taught me to always give my 100 percent in accomplishing tasks and to never forget the values I was raised with. It is through challenging times when I have been forced to dig deep and have my personal and professional values tested. Such experiences facilitate human growth, where adjustments to original plans have been made, but always staying focused on achieving success. I would like to thank the U.S. Army, U.S. Army Communications-Electronics Command, Software Engineering Center-Lee, Technical Operations Branch, coworkers, friends, family and God for this recognition. Please continue to support and embrace our Hispanic community. I leave you with the following quote by Walt Disney- 'All our dreams can come true, if we have the courage to pursue them.' Exito Siempre!"

CECOM Army Reprogramming Analysis Team helps to combat cyber threats

By Michael Crapanzano, CECOM SEC ARAT

Few doubt the threat of cyber attack, however the scope of this tool of warfare is rapidly developing, migrant and the damage could be insurmountable. A society build on computing and networking makes us even more vulnerable to the threat of a cyber attack, forcing us to consider cyberspace as the new battle space.

Perhaps the most insidious aspect is that the threat can be from our adversaries who have considerable cyber-war talent and resources, insider threats, or from a single hacker with malicious intent. Given the implications of cyber warfare, it makes reprogramming of electronic warfare systems the ideal bridge for Cyber Electromagnetic Activities, CEMA, to combat these threats.

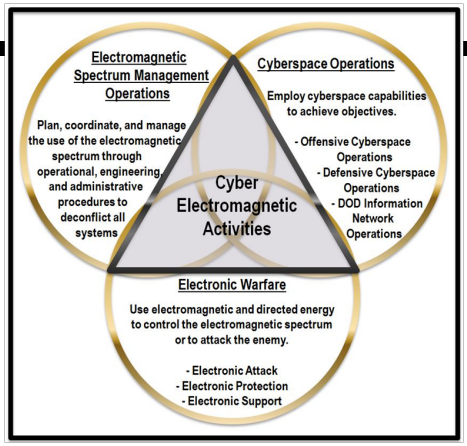
For more than twenty years, the Communications-Electronics Command Software Engineering Center Army Reprogramming Analysis Team – Program Office, ARAT-PO, has been active in the EW and EMSO parts of CEMA; as it is uniquely positioned in the cyber realm with its activities in the electronic warfare arena. This interrelationship shows the importance of Electronic Attack, Electronic Protect and Electronic Support critical capability in the cyber domain.

The Army's operational environment has changed dramatically from the largely kinetic and linear battlefields of past centuries. The convergence of wired, wireless, and optical technologies has led to the emerging of computer and telecommunication networks. Handheld computing devices continue to grow in number and capability. Next generation systems are beginning to emerge, forming a global, hybrid, and adaptive network that combines wired, wireless, optical, satellite communications, supervisory control, and data acquisition, or SCADA, and other systems. Soon networks will provide ubiquitous access to users and enable them to collaborate when needed in near real time."

In response to increasing global challenges, the Army introduced the concept of Cyber Electromagnetic Activities, CEMA, which according to Army Doctrinal Publication 3-0 Unified Land Operations, involves "activities leveraged to seize, retain and exploit an advantage over adversaries and enemies in both cyberspace and the electromagnetic spectrum, known as EMS, while simultaneously denying and degrading adversary and enemy use of the same and protecting the mission command system." CEMA is implemented via synchronization and integration of three lines of effort: cyberspace operations, electronic warfare, EW, and electromagnetic spectrum operations, EMSO. The effects of Cyber Network

Attack and Electronic Attack, in particular, require Cyber and EW to communicate particularly at the different tactical echelons Corps to Battalion. Although none of these mission areas are new, the ability for technology to bridge them increased dramatically around the globe, enabling cyber network attacks to be delivered via the EMS, and turning EMS dominance into a force multiplier.

Fighting within the EMS is not a new mission for the Army's CECOM. The CECOM ARAT-PO is chartered by the Commander, Army Materiel Command, to support the EW reprogramming mission. ARAT's mission statement reads: "The Army Reprogramming Analysis Team is a rapid reprogramming infrastructure that develops, delivers, and sustains software for Electronic Warfare systems and other Electromagnetic Spectrum capabilities to support Commanders across the full range of military operations."



Concept of Integration of EW, EMSO, and Cyber into CEMA in draft FM 3-39, CEMA

CECOM SEC's ARAT Program Office offers expertise in two of the three elements of CEMA: EW and EMSO, and is active with the Cyber community, providing recommendations for the closer integration of EW and Cyber. The ARAT-PO can sustain any Army ground or air EW system relevant through mission software reprogramming, and ARAT is the ideal bridge for CEMA versus EW effects. Current EW products supported include Counter-RCIED Electronic Warfare systems and aircraft survivability equipment.

While the Army fought in Iraq and Afghanistan, CECOM's SEC and the SEC's ARAT Program Office were busy ensuring Army Forces were protected from EMS-related threats, including Radio-Controlled Improvised Explosive Devices. The SEC's ARAT-PO operates highly sophisticated EW laboratories that allow ARAT to analyze thousands of EMS-related threats to ground and airborne forces annually and develop mission software threat loads for Combatant Commands, Electronic Warfare Officers and Aviation Mission Survivability Officers in the field via SIPRNET through the ARAT Warfighter Survivability Software Support Portal. This enables Army EW systems to recognize and react to these threats. The ability for the ARAT-PO to rapidly create mission software to defend against the current threat while maintaining an awareness of constant emerging threats saved the lives of thousands of Soldiers and ensured mission accomplishment among U.S. Forces around the globe.

Looking Ahead

SEC's ARAT-PO saw the importance of CEMA over a year ago and sent representatives to participate in the initial efforts to create a Cyber Capabilities Based Analysis under the Mission Command portfolio. ARAT reached out to the Cyber Community through participation in every aspect of the CBA to include the warfighting scenarios and the leader development, training, and education support studies. During the requirements process, ARAT-PO personnel were able to represent the needs for EW, and particularly Electronic Attack as it relates to Offensive Cyber Operations, beyond the specific needs for reprogramming programs of record. ARAT-PO supported discussion and debate during the entire process and performed as positive advocates of the EW reprogramming processes for both air and land EW systems with which the new Cyber warriors are unfamiliar. ARAT-PO emphasized the economies to be gained through the ability to reprogram software and adjust firmware in existing systems which allows rapid and inexpensive adaptation to new threats. The alternative is expensive throw-away hardware, proprietary software, and short life cycles. The ARAT-PO message is that in a world of uncertainties and restricted budgets, the Army will have to rely a lot more on organic innovation and adaptation.

Lessons Learned

SEC ARAT continues the effort to reach beyond the confines of "turf" and convention to embrace the cyber community through face-to-face coordination with key cyber staffs to support the CEMA combined arms team concept. ARAT-PO supports Electronic Attack, Electronic Support, and Electronic Protect mainly at the tactical levels brigade and below. Cyber Operations include Cyber Network Attack at the strategic, operational, and tactical levels, but Cyber is less capable at the tactical level where EW is a force multiplier which makes a clear rationale for cooperation to achieve mutual objectives within the EMS. This is an enduring message.

CECOM's SEC can be leveraged now to support our looming battles in Cyberspace. From highly-trained software engineers to multi-million dollar facilities and state of the art simulations technology and software/firmware engineering expertise, the SEC and in particular, the ARAT-PO, provides an existing rapid software development and reprogramming capability. It will be of tremendous value to ARCYBER's missions of planning, coordinating, integrating, synchronizing, directing, and conducting network attack and defense of all Army networks, and when directed, conducting CEMA operations in support of full spectrum operations.

As the Army embraces emerging CEMA doctrine, which will continue to be an imperative to wage war across Cyberspace, ARAT-PO's core competency in rapid software design, reach-out to industry, academia, intra-service partners, and providing cross-domain flexibility will ensure an enduring relevancy during a time of transitioning global conflict.

Posturing for the future: Experienced technical writer teaches workforce ***development class***

By Andricka Thomas, CECOM HQ

As the Army transitions to sustainment, one of the top priorities of the U.S. Army Communications-Electronics Command leadership is to develop the workforce to support CECOM's efforts in advancing its mission to support the Army of 2020 and Beyond.

"Everything we do is dependent on the talents and capabilities of our workforce," said Maj. Gen. Robert S. Ferrell, CECOM commanding general. "We must continue to acquire, develop, grow and retain a diverse workforce that is skilled, responsive, agile and resilient to an environment of change."

And the efforts of one senior technical writer at the CECOM Logistics and Readiness Center, enacts one of the command's key priorities—develop and retain an agile, highly-skilled workforce. Lyndell 'Stretch' Capitol, LRC senior technical writer, developed and teaches a technical writing class to interns, journeymen and senior-level personnel throughout the CECOM community at Aberdeen Proving Ground, Md., Fort Belvoir, Va., and Fort Huachuca, Ariz.

Capitol began teaching classes in 2011 focusing on the creation of technical manuals, understanding process flow and exploring the proactive roles and responsibilities of technical writers throughout the life cycle of weapons systems.

"I believe, with a comprehensive understanding of the Integrated Defense Acquisition, Technology and Logistics Life Cycle Management System, we can meet today's sustainment challenges and prepare for the future," said Capitol. "The aim was to provide the new workforce with additional skills to reach the newest sustainment needs of the Army."

Capitol has interfaced with more than 127 students since his effort began, and with the support of technical writers, editors, provisioners and other logistics experts throughout the command, presented information on specialized subjects in a form and at a level suitable for the intended audience, Capitol explained.

"Extended technical writer training was put in place to detail how life cycle management phases work together to perform materiel acquisition; research, develop and test technical publications to ensure system supportability," said Capitol. Students learn to work as part

of an integrated product team, responsible for designing a system for pre, post and sustainment support for the system and are expected to produce a final product that is sustained with the most recent and accurate information, technical data and publications.

"Teamwork is a vital part of the training initiative, because that's how the job is done in the real-world—as part of a team," he said. "By pointing out challenges with a system, program milestones, data development, delivery challenges and lessons learned, we hope to build synergy within the IPT to strengthen the teaming and interpersonal skills of the students."

During the class, students participate in hands—on exercises to simulate and detail logistic product development through the acquisition, technology, and logistics life cycle management system. It provides individuals the basis to establish logistics product milestones and review required to support the system development and program milestones, Capitol explained.

"Mr. Capitol used lively discussion, real world examples and hands-on training which challenged and empowered each of his students to 'think outside the box' concerning resolving programmatic issues," said Joan Beckett-Armstrong, logistics data specialist and provisioner with the LRC. She took two classes entitled, 'Extended Technical Writing' and 'Preparing Technical Manuals to Support System Tests.' She said Capitol always emphasized the importance of keeping acquisition-minded and program-focused in order to best assist the Warfighter.

Whether it is current system challenges, development of maintenance manuals and tasks, developing and interpreting task tracking maintenance allocation charts, the discussions are geared to provide real-world training in a classroom environment to encourage brainstorming, critical thinking and professional development before they return to their places of duty.

"He has an uncanny way of simplifying the information he teaches so that it is understandable and relevant for anyone who takes his courses," Beckett-Armstrong said.

Study material for the training originates from the Logistics Support Activity and is currently proposed for adoption as the official technical writer curriculum for the Department of the Army, said Capitol.

Did you know?

SEC provided software and system support, including on-site system support to PM DCGS-A in EUCOM, and collected operational and user acceptance data for the Joint Tactical Terminal - Common Integrated Broadcast Service-Modules. JTT CIBS-M is the Integrated Broadcast Service network backbone for producing and collecting Joint air/land/sea intelligence community early warning targeting data.

REGIONALLY
C4ISR READINE

APG, MD

JOINT BASE LEWIS
MCCHORD, WA

FT BRAGG, NC

FT HOOD, TX

ALIGNED TO DRIVE
SS WORLDWIDE

GERMANY

AFGHANISTAN

SOUTH KOREA

CECOM. THE CRITICAL LINK

U.S. ARMY COMMUNICATIONS-ELECTRONICS COMMAND

Michael Parrent, an environmental engineer, inspects the vegetative roof covering 61,000 square feet of the Tactical End Item Repair Facility's. This will bring the total green roof covering on Tobyhanna Army Depot to more than 110,000 square feet.

Tobyhanna Army Depot and the Organic Industrial Base

Tobyhanna Army Depot is the Defense Department's largest center for the repair, overhaul and fabrication of a wide variety of electronics systems and components, from tactical field radios to the ground terminals for the defense satellite communications network. Tobyhanna's missions support all branches of the Armed Forces. Tobyhanna has 60 years experience in communications and electronics, state-of-the-art facilities, a full-service engineering capability and a highly skilled workforce with an average of 13 years experience.

Tobyhanna also supports the following electronics systems: radars, counter improvised explosive devices, electro optics, night vision and anti-intrusion devices, airborne surveillance equipment, navigational instruments, and electronic warfare and guidance/control for tactical missiles.

Tobyhanna is the Army's Center of Industrial and Technical Excellence for C4ISR, electronics, avionics and missile guidance and control and is the Air Force's Technical Source of Repair for command, control, communications and intelligence systems.

Left: Mike Chapman, electronics measurement equipment mechanic, calibrates a dial indicator in the Test, Measurement and Diagnostic Equipment physical lab here. As a member of the Test, Measurement and Diagnostic Equipment Support Center (TSC), Chapman and 37 employees provide calibration, repair and metrology support services for customer-owned test, measurement, and diagnostic equipment.

Above Stephen Dombrosky, electronics worker, stacks intercom assemblies for future processing.


Photo By: Jacqueline Boucher

Brian Dooley, a metal photo processor at Tobyhanna Army Depot, begins manufacturing a silkscreen by stretching fabric across a wooden frame table. Depot technicians perform electroplating processes for all fabricated items produced here as well as items scheduled for overhaul.


Photo By: Tony Medici

Above right: Brian Decker, an environmental engineer, uses the installation's energy management and control system to monitor electrical systems.

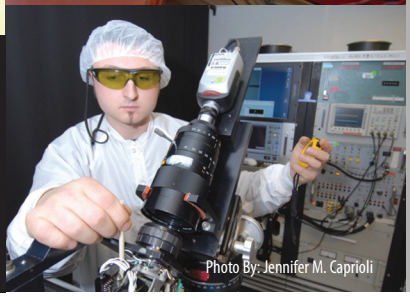


Photo By: Jennifer M. Caprioli

Right: George Takacs, electronics technician, aligns an AN/TVQ-2 Ground Vehicle Laser Locator Designator. The 12 technicians who work in the Image Optics/Laser Branch overhaul, repair, align and test-fire about 30 systems a year. The AN/TVQ-2 is a self-contained electro-optical system designed for close support operations in target identification and designation.

70% of the Army Materiel Command's Organic Industrial Base is more than 50 years old…Tobyhanna Army Depot celebrates 60 years of Electronics Excellence as CECOM's highly-skilled personnel work to keep the Army's electronics equipment modern through investing and retooling the nation's Soldier so they can maintain their critical edge. 1953-2013.

Tobyhanna provides worldwide C4ISR support to the Warfighter. Personnel perform sustainment maintenance, technical and fielding support, over-the-shoulder training, and Reset at CONUS and OCONUS locations. Personnel have accomplished missions in more than 30 countries in fiscal year 2013. On average, there are about 650 personnel working 'outside the depot gates' of Tobyhanna, providing onsite technical assistance, contingency support, Mobile Depot Maintenance, fieldings and installations at 67 forward repair activities worldwide. Tobyhanna supports C4ISR systems at military installations for all the services.

About 3,500 personnel are employed at Tobyhanna, which is located in the Pocono Mountains of northeastern Pennsylvania.


Photo By: Jacqueline Boucher

Frank Hill, electronics worker, removes dust particles from the objective lens of an AN/TVS-5a. The AN/TVS-5a is the standard night sight for select heavy machine guns.

Guardsmen improve SATCOM readiness, gets 'Back to Basics'

By Justin Eimers, TYAD

From left, Spc. Joshua Hower of the 198th Expeditionary Signal Battalion, Delaware National Guard, uses an onboard notebook computer to program the modems and Antenna Control Unit of the AN/TSC-156B Phoenix Satellite Communications System. Joseph Przywara, electronics integrated systems mechanic, and Spc. John Stevenson help verify operating parameters.

Four National Guardsmen learned troubleshooting and repair for a critical system to increase their readiness and improve their repair capabilities prior to deployment.

Soldiers from the 19th Special Forces Group, 198th Expeditionary Signal Battalion and 155th Signal Brigade spent three weeks at Tobyhanna receiving over-the-shoulder training on the AN/TSC-156B Phoenix Satellite Communications System, a four-band SATCOM system used by the Army and Marine Corps.

"Prior to coming to Tobyhanna, we only knew how to set up and power on the Phoenix," said Spc. John Stevenson, 198th Expeditionary Signal Battalion, Delaware National Guard. "Now, we can troubleshoot the systems, find and fix problems without having to wait for a repair."

"During our time here, we were surrounded by highly knowledgeable and experienced personnel who answered all of our questions," said Spc. Joshua Hower, also of the 198th Expeditionary Signal Battalion.

"We learned things we never would have gone over in a classroom-only training course."

Pfc. Gage Murphy, 2nd 19th Special Forces Battalion, Ohio National Guard and Pfc. Robert Doss, 155th Signal Brigade, Tennessee National Guard, also received training on the AN/TSC-156B.

The Organic Industrial base RESETs our Army's equipment, generating readiness in our formations.

The ability to fix the systems themselves saves precious time in critical situations and can potentially save lives, he added.

This is one example of how the U.S. Army Communications-Electronics Command plans to create efficiencies in its field support strategy, through getting 'Back to Basics.'

"We are training Soldiers to be the primary field service components for the operation and maintenance of C4ISR equipment and systems at the unit level, just as they were before the conflicts started," said Lane Collie, Logistics and Readiness Center director.

"This is, by far, is better than any training I've ever had," said Murphy. "Training is usually convoluted with information you don't ever use. Here we're learning so many things that we can use in the field."

The Soldiers spent time in a classroom learning the capabilities of the Phoenix as well as the test and validation procedures, then transitioned to hands-on learning.

Murphy said that the increased experience has encouraged him to learn more. "After seeing what Tobyhanna has to offer, I would love to come back and train on ground mobile forces satellite systems," he said.

New clean air stations increase mission flexibility

By Anthony Ricchiazzi, TYAD

Ten clean air work stations in the Airborne Communications Instruments Branch at Tobyhanna offer improved mission flexibility and electro static protection.

The stations, which replaced the aging Class 100K Clean Room in the branch, is used in the repair and testing of avionics components such as the ARU-12 Attitude Indicator (a horizontal position indicator), displacement gyroscope (indicate pitch and roll of an aircraft), directional gyroscope and gyro rotors.

"The components are used in helicopters such as the Black Hawk and Chinook," said Electronics Mechanic Rich Reese. "We repair them down to the circuit board level and test them in the new work stations. We repair gyro rotors in a room that is attached directly to the clean zone."

About nine technicians work at the stations, repairing and testing about 60 gyros and 10 ARUs per month. The branch is part of the Command, Control, Computer/Avionics Directorate's Avionics Division.

"The new stations have 3-stage filter systems at each of the 10 benches that filter air down to 100 particles per square inch; the systems can also blow particles away from where the work is being performed," said William Farrow, electronics mechanic leader. "Technicians now have access to air and nitrogen lines for cleaning and that can be adapted for component leak checks. Each bench is basically its own clean air room."

The stations are roomier than the old clean room and have updated electrical service, such as 400 hertz cycle and 210-volt outlets, which allow technicians to work with different types of components if necessary. The clear walls of the entire area can be moved to reconfigure the entire work area.

"We are able to expand the area, make it smaller, and add or remove walls to make it fit our needs," Reese said. "The ESD (electro static discharge) protection lessens the probability that we'll have a problem, although we did not have any problems with it before."

Farrow noted that the Class 100K Clean Room is in the process of being dismantled.

"Once the room is removed, we'll turn the area into extra work space," he said.

The organic industrial base provides facilities that are strategic enables for Combatant Commanders, encompassing more than 20 one-of-a-kind facilities that provide capabilities that in many cases, don't exist anywhere else but in the United States. CECOM's Tobyhanna Army Depot is a critical link to the Army's preservation of such a capability.

New clean air stations increase mission flexibility: Electronics Mechanic Robin White tests an ARU-12 Attitude Indicator at one of 10 new clean air stations at Tobyhanna Army Depot. The ARU-12 is a horizontal position indicator used in Army helicopters such as the Black Hawk and Chinook.

CECOM small business exceeds FY 13 goals, plans for the future

Story & photos by Andricka Thomas, CECOM HQ

In spite of an environment of fiscal uncertainty and continuing resolutions, the U.S. Army Communications-Electronics Command's Office of Small Business Programs has remained steadfast in committing to not only meeting their fiscal year 2013 small business goals, but exceeding them.

"We serviced more than $950 million in prime small business contracts in a declining environment," said Kenyata Wesley, CECOM OSBP director. The office is comprised of four small business advocates who handle more than 20,000 contracting actions a year, according to Wesley. In a year, CECOM's advocates, who service the CECOM and the C4SIR communities, are responsible for the monitoring, review, sub-contracting auditing and creation of effective policy for more than $7 billion in acquisitions.

In four of the five designated socio-economic categories, CECOM's small business office, performed well above what anyone could have expected given an environment plagued with sequestration.

Valerie Oliver, U.S. Communications-Electronics Command small business specialist, speaks with Marie Russell, a women-owned small business representative, during an informal monthly networking opportunity where business representatives can meet with CECOM small business staff and program managers to learn about upcoming business opportunities, desired capabilities, how to conduct business with CECOM and continue to build business relationships.

Wesley explained that Congress mandates the small business categories in which he should focus, including Small Business; Small Disadvantaged Business; HUBZone; Women-Owned Small Business; and Service Disabled Veteran-Owned Small Business.

The office exceeded the goals set for the year in every category except the overarching Small Business category, falling short approximately 3 percent. He explained that, when sequestration hit, many of the contracts required extensions to large businesses, leaving some smaller pieces of those existing contracts not eligible for competition.

"I didn't anticipate the entire impact of sequestration. But, in planning for this year, we know what to expect now that sequestration is here and we are making adjustments," said Wesley. "We're in the middle of negotiating better small business goals for the command, goals that are more realistic in today's fiscal environment. In the end, I believe we will come out of this better shaped and postured for the future."

But that is a small defeat compared to the overall performance of the Small Business Goal performance for FY13. With a goal of 2.56 percent, the CECOM OSBP achieved 6.25 percent totaling more than $450 million in small business contract primes for Small Disadvantaged Businesses.

CECOM's small business team nearly tripled the women-owned small business goals, exceeding the 0.6 percent goal by achieving 3.32 percent in prime contracts awarded to the category, representing approximately $245 million.

Service-Disabled Veteran Owned Businesses represented 3.01 percent in small business prime contracts, far exceeded the 1.0 percent goal, totaling more than $200 million. The Department of the Army's goal was 3.0 percent.

This year's challenge, aside from the Small Business category, was the HUBZone.

Kenyata Wesley, U.S. Army Communications-Electronics Command Office of Small Business Programs director, speaks to industry members during a information networking meeting about how to do business with CECOM and Aberdeen Proving Ground, Maryland.

"It's a category most agencies don't meet due to the zoning, driven by the Census reports,' Wesley explained. "HUBZones are re-established, often times because the contracts we've worked in the area have grown the area, thus disqualifying them from the category. So we are constantly looking for more business in this area. It's really proof that our processes and efforts to invigorate the industrial base are working."

Wesley explained that he and his team serve as advocates, not just for the small business, but also for the Program Managers they service.

"Our goal is to be fair, impartial and aggressive in servicing these contracts," said Wesley. "We're the critical link between our PMs and our industry partners to ensure the needs of the Army are met in the C4ISR arena." He and his team work to ensure PMs are paired with companies who are ready and capable of meeting their needs; and that small businesses get a fair opportunity to compete.

He credits the command's success to their strategy of involving the PMs, who have the requirements, in the strategic plan from the start.

"Our small business PMs have stake in our strategic planning and get a say in how their program's needs are met. By providing them a personal stake in the way we do business, they are really accountable to themselves. They are not just given a number to reach, but instead are part of the process that sets conditions of their contracts to ensure the get what they ultimately need from the prime."

He said technical PM's play a crucial role in the success of strategic partnering activities, crediting their technical expertise as being key to creating the proper market research surveys needed to identify more qualified small businesses who meet outlined requirements.

This strategy is similar to how CECOM OSBP engages with industry…building relationships.

Events like the Advanced Planning Briefing for Industry, where industry members can hear from the PMs, first-hand, about the upcoming acquisition forecasts so they can have ample time to plan to meet the needs of the C4ISR community, explained Wesley.

"If industry understands what our requirements are, they have more time to write better proposals, have time to get the best pricing from their vendors and then subsequently pass that savings along to the government," said Wesley.

Events like the APBI enable the CECOM Office of Small Business Programs, and other Small Business entities on the installation, an opportunity to educate a vast amount of businesses, particularly in the sub-contracting community, in one forum, on the forecasted needs of our PMs.

"In the past, we've focused on small businesses, but for this year's APBI event, we are taking a more balanced approach and incorporating large businesses as well," Wesley explained. "We're planning to offer a variety of classes our large and small business partners can take during the week-long event, covering topics such as sub-contracting, writing proposals, source selection and how to do business with APG and the Army."

This year's event will be held at APG Dec. 2 through 6. Learn more at CECOM's small business website, accessible through http://cecom.army.mil.

Sustaining the Old and new:
The sustainment of legacy Guardrail, and transition of EMARSS

By Jason Terruso and Carlton Shaw, LRC

CONTINUING EXCELLENT SUSTAINMENT OF THE OLD:

GUARDRAIL is an Airborne Signal Intercept and Emitter Location System designed to provide tactical commanders with critical battlefield information via a Joint Tactical Terminal, JTT, and other Department of Defense tactical and fixed communications paths including Secret Internet Protocol Router Network, Joint Worldwide Intelligence Communications System, and National Security Agency Network.

Designed to support field commanders, the Army's GUARDRAIL/Common Sensor System, known as GR/CS, has provided a highly flexible architecture to allow rapid deployment to support contingency operations for more than 40 years. GR/CS integrates Communications Intelligence, or COMINT; the Communications High Accuracy Airborne Location System, CHAALS/CHALS-C, for COMINT precision emitter locations; the Advanced QUICKLOOK, or AQL, for Electronics Intelligence, ELINT, precision emitter location; and the Guardian Eagle technical insertion payload into a single Signal Intelligence System.

The airborne elements are integrated into the Guardrail aircraft, while ground processing is conducted in the Distributed Common Ground Systems-Army, known as DCGS-A, Operational Ground Station, OGS, system.

Several versions of the Guardrail aircraft were fielded, RC-12D in1984, RC-12H in 1988, RC-12K in 1991, RC-12N in 1995, and RC-12X in 2011. Since 1985, the Logistics and Readiness Center has sustained the aircraft mission equipment and ground layer data-link equipment through partnerships with Tobyhanna Army Depot, the U.S. Army Communications-Electronics Command Field Sustainment Support Division, Defense Logistics Agency, Blackhawk Management Corporation, Northrop Grumman, and L-3 Communications West, spanning three decades.

GUARDRAIL key performance attributes include a real-time COMINT and ELINT collection and high accuracy target location capability in communications and radar frequencies. The Tactical Common Data Link, or TCDL, was updated to surface terminal equipment and connects airborne elements with the ground processing element. A satellite remote relay supports rapid deployment, minimum forward footprint, and remote signal processing capability. GR/CS Guardian Eagle payloads were provided to enhance GR/CS ability to process non-traditional signals, providing intercept of military communication emitters, and modern communication devices.

The Guardian Eagle program is software upgradeable and has an open architecture that leverages National/Services Military Intelligence Program investments for future GR/CS upgrades. This capability supports on-going deployments to Afghanistan and other overseas contingency operations.

GR/CS contributes directly to the success of Army modernization by serving as an operational platform for verification of new or improved technologies. The Guardrail Modernization program will standardize configurations across the fleet, upgrade COMINT sensors, provide new critical capabilities, and keep GR/CS relevant until the Enhanced Medium Altitude Reconnaissance and Surveillance System, EMARSS, is fielded, and beyond.

TRANSITIONING THE NEW:

EMARSS is a manned multi-intelligence aircraft intelligence, surveillance and reconnaissance platform that provides a persistent capability to detect, locate, classify/identify, and track surface targets in day/night, near-all-weather conditions with a high degree of timeliness and accuracy, in direct support of the tactical commander.

Intended to enhance brigade combat team effectiveness, EMARRS defines and assesses the environment to provide targeted support and surveillance. EMARSS aircraft is expected to be fielded fiscal year 14 and will be located within aerial exploitation battalions within the U.S. Army Intelligence and Security Command. INSCOM maintains a maximum forward-deployed EMARSS capability using the Capabilities-Based Rotation, CBR, concept that has been successful for Guardrail Common Sensor for the past five years. There will be an AEB Forward element supporting missions in the target area and an AEB Rear element, where much of the EMARSS PED will take place within the Core PED Enterprise.

When deployed, EMARSS assets are either in direct support of or attached to tactical ground maneuver forces, normally a Brigade Combat Team. The EMARSS system will consist of a manned aircraft equipped with an Electro-optic/Infrared full motion video sensor, a COMINT sensor, an aerial precision guidance sensor, line-of-sight and beyond line-of-sight communications suites, and a self protection suite.

EMARSS will operate as a single platform in support of tactical missions. Mission altitude and flight tracks are chosen to optimize sensor data collection on the target area of interest while avoiding known threats. The mission altitude and flight tracks may be selected to strike a balance among the capabilities of the multiple sensors, or to optimize collection from individual sensors based upon the specific mission collection tasking dictated by the tactical commanders Priority Intelligence Requirements, PIRs, and Commanders Critical Information Requirements.

EMARSS will provide rapid response to Combat Forces ISR tasking with centralized Processing, Exploitation and Dissemination of ISR data at the DCGS-A, while the onboard IMINT and aerial precision guidance operators are simultaneously collecting and analyzing selected information and transmitting critical FMV and intelligence reports to engaged tactical forces directly from the EMARSS aircraft. Within the last year, PdM Medium Attitude Reconnaissance Surveillance Systems recognized the need to proactively develop and employ a mitigation strategy that would allow engineers and logistics managers to actively engage hardware and software risk before it becomes an issue.

As a result, PdM MARSS stood up the Joint Test Integration Facility in order to provide an environment for joint integration and testing of EMARSS components prior to installation on the aircraft and interoperability to subsystems as well as target ground interface.

MAINTAINING A STANDARD OF EXCELLENCE:

CECOM LRC has taken the past two years collaborating with PM ARES, INSCOM, TYAD, and L-3 COMM and created several key efficiencies in sustainment support and cost savings. As EMARSS fields to AEBs, GR/CS systems will de-field on a one-to-one basis. Rather than devise several new sustainment strategies each with unique services and acquisition contracts, LRC, in conjunction with PM ARES, has affected GR/CS and EMARSS systems engineering in order to leverage existing logistics capabilities and support structures.

TYAD GR/CS field support representatives will be cross-trained to provide depot level forward support to EMARSS Primary Mission Equipment. This cross-training concept is just one of the ways CECOM is looking to create efficiencies in their support structure, by providing multi-functional field support representatives to provide tiered support to the BCTs.

Similarly, L-3COMM GR/CS CFSRs will be cross-trained to sustain EMARSS data-link equipment. The consolidation of organic and contractor FSR support across GR/CS and EMARSS will leverage existing experienced personnel and support infrastructure, reduce deployed footprint, create efficient communication and management processes, and significantly reduce costs. Those dedicated TYAD FSRs and L-3COMM CFSRs have positively affected operational tempo and maintained an average operational readiness of 98 percent across the aerial and ground layer.

Through foresight, communication, and cooperation, CECOM LRC IEWSD has combined proven business practices with forward thinking, efficient, and streamlined sustainment a strategy, which leverages existing capabilities and reduces GR/CS and EMARSS total life cycle sustainment costs. GR/CS and EMARSS will continue to be a representation of sustainment excellence with the Army and DoD.

U.S. Army Photo

The Guardrail system recently celebrated its 40th anniversary of providing intelligence support, beginning with the Cold War through current operations in Afghanistan and Iraq. Commanders on the ground have been afforded increased situational awareness due to the missions flown by Guardrail aircraFort

TEAMING TO SUPPORT MAINTENANCE MISSION IN KOREA

By Jim Bellomy and Ulanda Bush, LRC CSLA

LRC Photo

TYAD Electronics Mechanic Randy Nielson; Warrant Officer Hopp, QM PBO; Art Chavira Communications Security Logistics Activity the Logistics and Readiness Center; and Chief Warrant Officer Williams, G6 Network Operations Signal Systems Integration Section (Camps Casey and Red Cloud); finishing up a day at Camp Casey.

In response to an 8th Army Korea request, the Communications Security Logistics Activity and the Tobyhanna Army Depot Communications Security Division performed a Controlled Cryptographic Item, or CCI, assessment last spring to identify and evacuate broken and obsolete equipment, repair CCI and COMSEC equipment on-site and at the depot repair level as appropriate.

The assessment teams went on-site to Camp Casey, Camp Carroll, Camp Red Cloud, and Camp Humphreys in Korea, with each team consisting of a senior logistician from CSLA and two equipment technicians from TYAD.

TYAD personnel arrived with testing equipment and equipment to use for direct exchange. The teams evaluated over 2,000 pieces of COMSEC equipment during this mission and repaired 350 pieces onsite. More than 140 pieces were exchanged. This mission brought all of the evaluated equipment up to operational standards and the latest software versions were loaded for modern devices.

The teams received excellent support from 8th Army staffer Alfred Garrett, 403rd Army Field Support Brigade's Deno Burton, Communications-Electronics Command Korea Lead Steve Signoretti, CECOM Trail Bosses John Chizmar and Walt Flood, and the CSLA Information Security Representative (CIR) Charlie Smith.

"The amnesty program was an overwhelming success. The units here turned in more than 100 COMSEC [communications security] devices not recorded on property books, and I'm sure there are more out there to discover," said Signoretti, CECOM Korea lead. In addition to the amnesty items, more than 1,400 pieces of obsolete and excess equipment were turned in.

"Materiel Support Command-Korea John Chizmar and Scott Fowler and COMSEC Account Manager Sgt. First Class Timothy Copeland were great support at Camp Carroll," said Signoretti.

While technicians evaluated equipment, performed repairs, and updated software, CSLA logisticians trained staff and units on Information Systems Security Program, ISSP, procedures used to DX COMSEC equipment, order equipment, and identify future requirements.

LRC Photo

Tobyhanna Army Depot Electronics Mechanics, Randy Nielson and Art Tommaselli, with Sgt. Gilford, Bravo Company 1st Brigade Special Troop Battalion, 1st Armored Brigade Combat Team; performing a Field Tamper Recovery on a KG-175D at Camp Casey.

CSLA Korea CIR Charlie Smith and 2nd Infantry Division G6 personnel collaborated to draft a new Standard Operating Procedure to tailor local procedures incorporating the ISSP process and streamline support requests. This SOP will help Soldiers pass on the knowledge that is critical due to the fast turnover rate in Korea, according to Smith.

CSLA logisticians discovered that many unit Modified Tables of Organization and Equipment are outdated. Commanders are unwilling to turn in un-needed legacy equipment because it is listed on their MTOEs. For example, the KOI-18, a legacy key loader, is formally phased out but remains on MTOE documents.

Improving processes is part of CECOM's preparation to support the Army's transition to sustainment and create efficiencies wherever possible.

The on-going Theater-Level Communication Exercise Availability hampered Soldiers' ability to bring equipment to the assessment locations. Instead, the assessment teams turned that into a positive by providing immediate repairs in support of the exercise.

Additionally, the Assessment Team began an evaluation to determine the need for COMSEC sustainment support in theater. After the implementation of two-level maintenance, nearly all COMSEC repair capability in theater was lost and replacement devices are only available from TYAD. This evaluation will be presented to 8th Army with the goal of providing a permanent or recurring sustainment capability to ensure forces in theater are ready to "Fight Tonight."

The success of this mission may lead to follow-on missions. Korea personnel believe there are still many pieces of COMSEC not on property books and that the 100 turned in was only the tip of the iceberg.

From the 8th Army staff all the way down to the unit level, the assessment was declared a success. CSLA and TYAD look forward to providing additional support missions to Korea as requested before Theater sustainment capabilities are in place.

Tobyhanna Army Depot Electronics Mechanic, Randy Nielson, with 1st Lt. Monok and 1st Lt. Pace, Alpha Company 1st Brigade Special Troop. Battalion (BSTB-Camp Hovey); inducting proper direct exchange documentation for the unit's KG-175D and KG-250 at Camp Casey.

from the Archives

Lt. Gen. (Ret.) Emmett Paige: A Signal Corps

By Jeff Jurgensen, CECOM HQ

If you had been standing near the front gate at Fort Dix, New Jersey on a warm August day in 1947, you likely wouldn't have noticed the arrival of a young Army recruit by the name of Emmett Paige, Jr. After all, it was a time when thousands of new recruits attended basic training at Fort Dix and although smart, energetic and physically fit (he had already proven himself to be a skilled boxer), Emmett Paige was only 16 years old and had dropped out of high school just a few months earlier. The truth is he probably would have seemed very much like many of the other young men to his left and right who were also taking the first step on their journey to become U.S. Army Soldiers. Moreover, the Army of August 1947 was an institution in the midst of great transition. Emerging from America's victory in the Second World War, the Army was preparing itself for a very different future. It was also responding to the profound social and cultural changes occurring across the nation. In particular, the Army of 1947 was still officially segregated by race. In fact, it would be almost another year before President Harry Truman would issue Executive Order No. 9981, directing the integration of the Armed Forces. Young Private Emmett Paige, arriving at Fort Dix for his very first day as a Soldier, was African-American, and his life and future service would be shaped by his early experiences in an Army struggling to adapt to this new era.

LEGEND

AN ARMY AND A SIGNAL CORPS LEGEND

Although few may have noticed his arrival, over the course of the next 41 years, few would fail to notice the tremendous impact Emmett Paige would have across the U.S. Army. He may have started his service at Fort Dix without a high school diploma, but while there he achieved a perfect score on the Army's Morse code exam which led to his assignment as a Signal Corps Soldier. That test score and the assignment decision which followed would benefit the Army for decades to come. Within five years, Paige would be commissioned as a second lieutenant and would ultimately rise to become the first African-American Signal Corps Officer in Army history to be promoted to the rank of Brigadier General. He would later retire in 1988 as a Lieutenant General and the Commanding General, U.S. Army Information Systems Command.

Throughout his exceptional career, Lt. Gen. (Ret.) Paige would command troops at every level – from a Signal Platoon at Fort Bliss in 1952; to Company Command with Company B, 9th Signal BN at Fort Carson; to a combat tour as Battalion Commander with the 361st Signal Battalion in the Republic of Vietnam during 1968. In addition, as a reflection of his recognized ability as one of the Army's most capable senior leaders, Paige served over 12 years as a General Officer – every day of it in command of large organizations with global communications responsibilities to include the former U.S. Army Communications Systems Agency and the Communications Research and Development Command – both then located at Fort Monmouth, N.J.

Beyond his extraordinary leadership skills, Paige would also have a historic impact on the technical development of the Signal Corps during an era of rapid advancement in both communications and computer technology. As a Major back in 1965, Paige was assigned to a Colonel's billet as the Program Manager responsible for acquiring, developing, designing and engineering the Army's complete communications system for the entire Southeast Asian region. So successful were his efforts that the Army War College described his contribution as having "…laid the foundation of military communications throughout most of the world during the Vietnam War." The AWC's history of Paige's career goes on to credit him with managing and directing the development of communications and information systems in a way that would forever change the way the Army did business.

HONORING LT. GEN. (RET.) PAIGE'S CONTRIBUTIONS

Lt. Gen. (Ret.) Paige's legacy and unique contributions were most recently recognized at a dinner held in his honor in Washington, D.C. in June 2013. Attended by senior Signal Corps General Officers and Army leaders, the event was co-hosted by Gen. Dennis Via, Commanding General, U.S. Army Materiel Command and the first Signal Corps officer to achieve the rank of four-star general, along with his wife Linda.

"Lt. Gen. (Ret.) Paige is one of the true heroes of our Army and our Signal Corps," said Via. "He is a gifted leader, a Soldier's Soldier and an innovator whose service set conditions for the success of today's Army and the way we communicate. Our force owes Lt. Gen. (Ret.) Paige a tremendous debt of gratitude for his many achievements and our current warfighters are able to communicate better, faster and more effectively as a result of his legacy."

Despite the impact Paige has had on the Army's communications mission, he remains a humble leader who focuses on giving credit to those around him.

"I never tried to be a star," Paige once said in an interview with the American Forces Information Service. "I just gave it my best… my troops and co-workers always worked hard to make me a success. They always wanted to be recognized as the best."

In addition to Paige and his wife Gloria, other attendees at the dinner included Maj. Gen. Robert Ferrell, Commanding General, U.S. Army Communications-Electronics Command and his wife Monique, along with Maj. Gen. (Ret.) Bob and Valerie Nabors; Maj. Gen. (Ret.) Bill and Shirley Russ; Brig. Gen. (Ret.) Velma Richardson and Col. (Ret.) Joseph and Marolyn Simmons. All of whom were positively impacted by Paige.

"Everywhere I look in today's Army, I see evidence of Lt. Gen. Paige's service and incredible leadership," said Ferrell. "I see it in the way our units communicate, I see it in the skill, ability and professionalism of today's Signal Soldiers who benefit from his contributions – and most of all – I see it in a generation of Army leaders who were mentored and developed by Lt. Gen. Paige. He ranks as one of the most extraordinary leaders in the history of the Signal Regiment. He was always reaching out, always willing to do whatever he could to help another Soldier be better."

BREAKING BARRIERS

Because he served during the era when the Armed Forces were struggling with the challenges of racial integration, Paige was often the only African-American officer in a unit or organization. As a result, he both witnessed and experienced the injustices of discrimination, along with the way the culture of the Army changed over time. Early in his career, Paige was told by a commanding officer that in the Army racial "…integration was wrong, it wouldn't work..." Determined to change his commander's mind, Paige committed to becoming the best officer and leader in the unit.

"To be just as good would cause me to be considered below average," Paige once said. "So I worked harder. I studied harder. I tried to be sure that I knew my job and everybody else's job. I read everything I could get my hands on. I survived by being the best."

Paige not only changed his commander's mind, that same commander would become one of Paige's strongest supporters, even attending many of his subsequent promotions and change of command ceremonies. "When I retired from the Army, he was there," Paige told an Army historian. "He was proud. Nobody could have been prouder."

Despite having to overcome the challenges of discrimination, Paige always had strong praise for the attitude of the troops he was privileged to lead. "The color of my skin, my race was never a factor with my troops and the people on my team."

SUCCESS BEYOND THE ARMY

Following Lt. Gen. (Ret.) Paige's 41years in Army uniform he maintained his commitment both to public service and to supporting and developing today's generation of service members. He went on to serve as Assistant Secretary of Defense for Command, Control and Communications in the mid-1990s and has also served as a member of the University of Maryland University College's Leadership Circle. UMUC educates many military members and Paige has been actively involved in furthering the university's military scholarship program. As a tribute to his role in mentoring Army leaders, Paige was also named 'ROCK of Year' in 1992, by the ROCKS, Inc., an organization dedicated to developing and expanding opportunities for Army officers.

"Lt. Gen. Paige is one of the rare leaders who makes a lasting contribution no matter what organization he is a part of," concluded Ferrell. "Every Signal Corps Soldier, in fact every Soldier and service member is better and more capable because of Lt. Gen. Paige's impact. It was a very proud moment for me, and for all of us, just to have the opportunity to recognize him and express our deepest thanks to this great leader for all he has done on behalf of our Army and our nation."

Did you know?

Tobyhanna personnel overhaul 200-300 navigation system assets per month. Technicians have completed work for the Defense Advanced GPS Receiver, DAGR, and Joint Precision Airdrop System, JPADS, to Army, Navy, Air Force and Marine Corps navigation systems. Employees overhaul navigation receivers for rotary and fixed wing platforms. The workload includes the AN/ARN-89 Direction Finder and the AN/ASN-128 Doppler/Global Positioning System/Navigation System.

Photo By: Steve Grzezdzinski

Tobyhanna Army Depot employees have created a moving repair line to balance workload among each major step in the AN/TRC-190 High-Capacity Line-of-Sight Radio Terminal Reset process. These Lean improvements will stabilize and standardize repairs made to the Army radio system and become a model for all shelter system repair methods at the depot.

EFFICIENCIES

SEC PBUSE

In support of Army logisticians world-wide, the Software Engineering Center launched the Property Book Unit Supply Enhanced, on a new Scalable Processor Archietecture SuperCluster server, the first to do so in the Department of Defense, reducing the hardware footprint from six storatge racks to two,enabling a faster and more efficient performance than the former legacy production servers.

SEC transferred the database and switched the server over over a 72-hour period in July, requiring an Army-wide PBUSE shut-down. The switch provided a significant reduction in hosting, maintenance, and energy costs for power and cooling at each server site, while dramatically increasing PBUSE processing capability, performance, reliability and sustainability.

SEC's continuing support to the Army's Standard Army Management Information Systems ensures these systems continue to provide reliable, efficient and effective critical logistics support for our Warfighters deployed globally.

SEC reports more than $17 million in savings and cost avoidance since fiscal year 2009 through centralized software license acquisition and software asset management and consolidation of efforts.

SEC's Software Asset Management and Centralized Acquisition and License Management Division used a market research process to compare the highest quote received versus the actual awarded purchase price as well as looking for manufacturer bulk discounts realized through coordination of efforts. By using a streamlined procurement process, they were able to avoid manufacturer reinstatement fees, while accurate data gathering for products requested by the customer/program reduced wasted monies by ensuring that the requested items were an appropriate fit for actual customer needs.

Additional cost avoidance came through consolidation of requirements across programs for products product families into a single acquisition package and reducing the number of contracts needing processing through the APG Contract Acquisition Center. As a result, SEC provided cost savings for customers and programs, while reducing personnel requirements for processing.

SharePoint

The Logistics and Readiness Center reports 90 percent savings in time due to use of an organically built SharePoint template for capturing weekly activity reports and one liners in an effort to improve efficiency and productivity. Typically, according to LRC personnel, these reports would take operations personnel approximately five hours per week in preparation for the final product to be forwarded to the LRC Director, CECOM G3/5 and eventually the CECOM Commander.

Prior to this system, operations center personnel would comb through emails, looking for attached information, cut and past into a word format to include editing, formatting to comply with more than 12 difference agencies. Now, each submitting directorate can post their feedback directly to SharePoint, eliminating the need to copy and paste from multiple email messages and documents. The new process allows for a enforceable submission deadline to give ample time for operations chiefs to get the content approved, formatted and submitted to senior level leadership. The time for completions decreased from five hours to merely 20 minutes from start to finish.

Work force improves AN/ TRC-190 radio repairprocess

By Amanda Spock, TYAD

Lean improvements made to an Army radio system's repair process are becoming the model for all shelter system repair methods used at Tobyhanna Army Depot.

The Shelter Enterprise Value Stream's moving repair line was established to stabilize and standardize the AN/TRC-190 High Capacity Line of Sight Radio Terminal Reset process. The moving line is made up of a series of sites each shelter progresses through. The shelter moves to employees rather than employees moving to the shelter.

Various improvements were implemented to stabilize and standardize the AN/TRC-190 Reset processes, including standard work/key point sheets, standardized inspection checklists, a central kitting area and kit cages, point-of-use material, process tool boxes, visual management, and production control board.

By introducing point-of-use materials, excess inventory decreased and a cost avoidance of $205,225 was achieved. A new strategy led the repair team to deliver [or pull] shelters based on demand instead of scheduling production [day-to-day] to meet anticipated demand, then pushing them through the process.

Direct labor hours have decreased by more than 20 percent and travel distances were cut by 75 percent. In some cases, in-process queue times were reduced by as much as 10 days, which reduced work-in- progress.

CECOM WORKS TO CUT **COSTS** AND **OPTIMIZE** INVENTORY THROUGH STOCK REDUCTION EFFORTS

LRC Photo

Soldier turns in excess/obsolete KIV-7 equipment as part of the Controlled Cryptographic Item Harvest.

By Andricka Thomas, CECOM HQ

Government and military officials continue the debate over how best to cut costs without any degradation to the mission. Budgets are dwindling, so getting rid of excess and obsolete stock kept in storage facilities is among the top priorities of the U.S. Army Communications-Electronics Command.

"Although minimizing excess stock has always been a supply chain management priority, with the increased visibilities on the return of vast amounts of retrograde assets from theater, there are additional on-going reviews and efforts to identify and divest obsolete, dormant or excess Class II, Class VII and Class IX assets," said Bryant Anderson, CECOM Logistics and Readiness Center liaison to Tobyhanna Army Depot.

CECOM's Logistics and Readiness Center focuses on the supply chain management of all C4ISR and communications-electronics equipment sustainment and repair requirements, and has dedicated personnel to serve as liaisons with the Tobyhanna Army Depot. These liaisons coordinate with the analysts responsible for identifying pieces of equipment to be evaluated for disposal and divestiture.

"Once a system is determined to be excess, I set up the demilitarization and disposal plan with Tobyhanna Army Depot production Controller

Management Division to apply funding for execution," explained Anderson.

Once the funding and execution plan is in place, the materiel is moved from storage to a Tobyhanna maintenance facility for demilitarization or disposal depending on the qualities of the system, said Anderson.

"The goal is not to stock and pay for storage on any assets or systems that won't be used again," explained Anderson. "Eliminating unneeded stock from storage now avoids unnecessary storage costs in the future." Before systems make it to this stage in the life cycle process, there is an in-depth analysis done by Army officials to ensure nothing is disposed of that the Army, other U.S. military service branches or even Foreign Military Sales customers can use before it removed from Army Program of Record.

"It can take anywhere from 12 to 18 months from start to finish to complete the decision process for divesting systems," said Anderson. He said he doesn't see these efforts ending any time soon and believes they are likely to increase with the amount of systems still yet to be drawn down from Afghanistan.

"For example, one issue we're working on is how to maximize the effectiveness of decisions to dispose of assets in theater. By doing this, we can save time and travel costs incurred to return the equipment to the States," said Anderson.

Anderson's mission is on-going as budget allows, as divestiture is the desired end-state for all excess, obsolescence and out-of-cycle major end items in order to synchronize current and future operations, according to Evette Jones Hatton, Chief of Plans, Programs and Policy Branch within the LRC.

She serves on a Divestiture Working Group, established by the Army's G4, Supply Policy Directorate-Major End Items Division, the proponent for policy and operational guidance…essentially the decision makers as it relates to the disposal of excess major end items.

The group, comprised of activities such as the Army Sustainment Command, Logistics Support Activity, Life Cycle Management Commands and contract support, works together to validate and verify Army excess materiel and divestiture plans to formalize processes to identify ad capture key players and activities to efficiently divest Army excess property, Jones Hatton explained.

The LRC established an Obsolescence Removal Project team in Jones Hatton's branch to develop a focused approach to implement the end-to-end obsolescence process, taking a major end item from the active inventory, through retirement and eventually obsolescence.

"The process is a collaborative effort," said Jones Hatton, "and for the process to run efficiently, each stakeholder must perform its respective actions as prescribed, for example, asset divestiture and system data purging of all obsolescence candidates identified to have logistics and operational costs that exceed their depreciated values and potential benefit to the Army."

The LRC will continue to develop ways to better streamline these processes to continually improve the cradle to grave process of Army systems.

LOGISTICS AND READINESS CENTER RECORDS MILLIONS IN FOREIGN MILITARY SALES

By Roger Carey, LRC

Photo By: Staff Sgt. Ashley Hyatt

A TIF-25K tethered aerostat system sits atop the high speed vessel Swift (HSV-2) in Key West, Fla., April 22, 2013, before being tested at sea for future Operation Martillo missions. Martillo is a joint, interagency and multinational collaborative effort to deny transnational criminal organizations air and maritime access to the littoral regions of the Central American isthmus.

Under the direction of the U.S. Army Security Assistance Command, the Army's face to the world, the U.S. Army Communications Electronics Command Security Assistance Management Directorate, some say, could be considered its eyes and ears.

USASAC leads the Army Material Command Security Assistance Enterprise and is responsible for development and management of security assistance programs and Foreign Military Sales cases that are key to building partner capacity, supporting Combatant Commanders' engagement strategies and strengthening U.S. global partnerships, and CECOM plays an integral role in the ability to build those relationships through their life cycle support of FMS cases and applying the total package approach.

During the last few years there has been a steady increase in C4ISR requirements. In fiscal year 2012 alone, the CECOM Logistics and Readiness Center recorded new business totaling $1.3 billion. Within the total amount, FMS sales to Iraq for fiscal year 2012 totaled $154.2 million; Afghanistan sales totaled $167 million, and Pakistan sales totaled $83 million.

CECOM LRC SAMD is one of a few key organizations comprising the AMC Security Assistance Enterprise. Serving as respective commodity managers, it provides systems and services for Communications, Command and Control, Computers, Intelligence, Sensors and Reconnaissance in support of foreign customer requests. They are charged with the life cycle management of FMS cases applying the total package approach from the pre-letter of request and case development phases through case execution and case closure.

CECOM's execution of this mission promotes compatibility and interoperability in equipment and training, all crucial to the National Defense Strategy.

State-of-the-art 3D printers cut costs, turnaround time

By Justin Eimers, TYAD

Engineers and technicians at Tobyhanna use a highly innovative, cutting-edge fabrication process to significantly cut costs and reduce turnaround time.

The depot's additive manufacturing process uses two, three-dimensional, 3D, printers to produce parts out of plastic and other durable materials. Unlike traditional design methods where a part is made from a block of material and the excess is discarded, additive manufacturing uses only material necessary for the part, saving money and minimizing waste. Electronics Engineer Corey Sheakoski says the benefits and potential of this process are nearly unlimited.

"Tobyhanna has the ability to make any type of plastic part, as long as we have a 3D model for it and it fits within a certain set of dimensions," he said. Sheakoski works in the Production Engineering Directorate's (PED) Mission Software Branch.

Recently, a shortage of parts was delaying delivery of Harris radios. The radios required the installation of small dust caps prior to shipping to the customer. Finding and getting the part from a vendor could have taken weeks; so instead, Mechanical Engineer Eugene Haikes designed a 3D model of the part and the depot printed 600 dust caps in 16 hours. Mikael Mead, engineering tech in PED's Design and Development Branch, said the decision to make the part at the depot saved a substantial amount of money and precious time.

"If the depot wanted to produce the dust caps but didn't have a rubber mold for them, we could have expected to pay anywhere from $5,000 to $15,000 for the mold," said Mead. "Because Eugene was able to come up with the model, we were able to produce the caps for only a dollar apiece while trimming days, if not weeks, off of our anticipated delivery date."

Haikes, who works in PED's Manufacturing Engineering Branch, said the whole process provides added benefit to both the depot and the customer.

"Some parts can be made through 3D printing that just cannot be produced by conventional methods," he said. "Other advantages with this process are that machine time is not charged to the customer and it can run overnight and during the weekend."

Tobyhanna has been using additive manufacturing since the arrival of the first 3D printer in the fall of 2006. The process begins with a computerized 3D model that is programmed into one of two high-tech printers. The machine then builds a part, layer by layer, based on the model's design.

The depot's first 3D printer, a fused deposition modeling machine (FDM), is capable of making parts out of ABS plastic within a 10 x 10 x 12 in. area. The second machine, a polyjet printer, was purchased in April 2012 and can make parts out of hundreds of composite materials within an 8 x 16 x 19 in. area.

The FDM machine produces parts accurate to one one-hundreth of an inch of the computerized model, while the polyjet printer is accurate to .002 inch. This capability also allows depot engineers to print parts to use as prototypes and test pieces.

Sheakoski added that the future of additive manufacturing and 3D printing technology holds nothing but promise.

"When you look at some of the benefits of 3D printing – the cost savings, reduction in turnaround times, reliability – it's exciting to think where it can go from here," he said. "Additive manufacturing is helping the depot cut costs during tough times while continually supporting the Warfighter with high quality products."

Engineering Tech Mikael Mead of Tobyhanna Army Depot removes a small production run of finished lens covers from the printing tray of a polyjet 3D printer. Three-dimensional (3D) printers produce parts out of plastic and other durable materials.

ISEC provides support for *joint information environment mission*

By Marissa Anderson, CECOM HQ

The U.S. Army Information Systems Engineering Command is assisting in one of the largest restructurings of information technology management ever untaken in the history of the Department of Defense.

The Joint Information Environment, or JIE, as defined from the JIE Operations Concept of Operations is a secure joint information environment, comprised of shared information technology infrastructure, enterprise services, and single security architecture designed to achieve full spectrum superiority, improve mission effectiveness, increase security and realize IT efficiencies.

"The benefit of JIE for the Army is that it can offer enhanced cyber and warfighter command and control capabilities within a single security architecture, as opposed to multiple, non-collaborative firewalls and networks as had been the case in the past,"

-explained George Long, ISEC engineer at Transmissions Systems Directorate.

ISEC Director of Transmission Systems, Robert Lorentsen and engineers Craig Engel, David Premeaux, and Long, went to work with the United States Forces Korea to set up an organizational structure and kick off the JIE initiative in Korea.

The USFK and ISEC created the first JIE enabling Korean Theater working groups which included architecture, transport, resource management, network operations services, services and applications, tactical, and combined forces interoperability. The overarching working group that coordinates the JIE effort is the Governance working group, explained Long.

"JIE is designed to correct numerous issues that impact operational effectiveness, timeliness and security within the current IT infrastructure of the Army and DoD. Currently, the networks that are in place may hinder mission success in many domains from strategic to tactical," said Long. "These include uncoordinated security architectures, multiple firewalls, stove-piped networks, data and operation centers that lack a common operating picture. The current enterprise network service models require forward deployed forces to reach back to CONUS or DoD component architectures for services and maintenance."

The JIE will promote the use of common tactics, techniques, and procedures developed at the enterprise level with the goal of providing services, applications, and tools for use amongst DoD agencies and mission partners to allow for real time, global intelligence gathering and coordinated decision making concerning cyber operations on IT assets, explained Lorentsen. A more standardized, consolidated operating IT environment will allow a more seamless approach for integrating new evolving technologies and requirements. "The cost savings for the Army are significant as JIE's efficiencies of scale and standardized architectures are incorporated in the Army's IT infrastructure," Lorentsen said.

ISEC continues to provide engineering assistance to the Chief Information Officer/G6 led Army team supporting the JIE Technical Synchronization Office as needed as well as working with the Program Executive Office for Enterprise Information Systems to provide support to the USFK J6 JIE enabling activities.

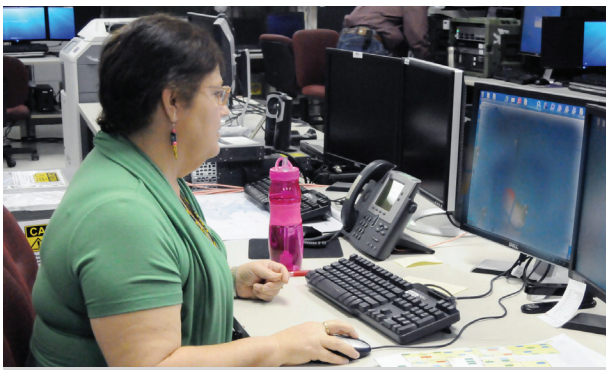
ISEC photo

From left to right- George Long, USA ISEC, Robert Lorentsen, USA ISEC TSD director, Lt. Col. Alan Kral, USFK J6, and Craig Engel, USA ISEC, collaborate during a meeting in the J65 conference room. Not pictured David Premeaux.

Integration facility works with NATO to tackle joint integration issues, improve Soldier situational awareness

Story & Photos By David G. Landmann, CTSF

CTSF CIAV Test Officer David Shrope and Ernesto Gutierrez work through a section of the analysis of NATO's ISAF Force Tracking System (IFTS). The new system is designed to support situational awareness and to reduce fratricide. The CTSF probed the system on a real-time basis with Coalition and NATO member countries including Canada, Sweden, The Netherlands, Germany Norway, Italy, France, and the United Kingdom.



CTSF CIAV Test Officer Pam Gamble works through a section of the analysis of NATO's ISAF Force Tracking System (IFTS). The new system is designed to support situational awareness and to reduce fratricide. The CTSF probed the system on a real-time basis with Coalition and NATO member countries including Canada, Sweden, The Netherlands, Germany Norway, Italy, France, and the United Kingdom.

CECOM's Central Technical Support Facility at Fort hood, Texas, played a key role in the development of a NATO software system that can cut through the "fog of war" on battlefields in Afghanistan and in Coalition actions around the globe.

The CTSF's Coalition Interoperability Assessment and Validation team recently completed a joint integration and analysis event with NATO and several NATO-member nations on an element of the Afghan Mission Network Ground Track Service. The International Security Assistance Force, ISAF, International Force Tracking System, IFTS, is designed to support situational awareness and to reduce fratricide.

IFTS disseminates U.S., ground tracks to Coalition command and control, and vehicle tracking systems providing Coalition ground platform position reports to U.S. elements.

"We were working with multiple sites, including the NCIA (NATO Communications and Information Agency) at The Hague, Italy, the United Kingdom Battle Lab, the German Battle Lab, and JITC (the Joint Interoperability Test Command) at Indian Head (Maryland)," the CTSF's CIAV Chief, Robert Boerjan, said.

IFTS, according to Boerjan, represents one of seven events CTSF CIAV has conducted for and with NATO and other CIAV members since mid-March.

Currently, CIAV is supporting the evaluation of NATO's Land Command and Control Information Services, or LC2IS. LC2IS, Boerjan said, is NATO's new, Multilateral Interoperability Programme, MIP, which is intended to bridge an existing communication gap in the dissemination of

battlespace objects from regional commands to the ISAF Joint Command.

Working with what Boerjan termed "multiple sites" is nothing new for the CTSF's CIAV team.

Because of its history in the field of interoperability in networks of tactical software systems, the CTSF was chosen in 2010 to support the then ISAF commander, Gen. Stanley McChrystal in the continuing development of the Coalition Afghan Mission Network.

"Our effort was aimed at alleviating operational problems and issues that were creating (battlefield) communication gaps between nations," Boerjan said.

Almost from the start of the AMN work, Boerjan's lab began using chat and Voice-Over Internet Protocol to work on a real-time basis with Coalition and NATO member counties including Canada, Sweden, The Netherlands, Germany, Denmark, Italy, France, and the United Kingdom.

CIAV grew out of those early efforts.

"The CTSF is now the Army's site for CIAV, and operates under the oversight of the Department of the Army's CIO (Chief Information Officer)/G-6," Boerjan said.

Currently the CTSF CIAV team works with NATO and Coalition elements to create and maintain interoperability in the AMN; to recommend tactics, techniques and procedures; and to assess software versions and new capabilities as the impact coalition mission threads.

The CTSF's unique contribution to the CIAV effort, according to Boerjan, lies in the fact that it provides access to representative U.S. Army tactical software systems to include the Joint Capability Release Network Operations Center.

"And," he added, "we can represent the U.S. Army's regional command tactical operation centers."

The CTSF CIAV lab takes up about an eighth of the facility's 40,000 square-foot test floor area, and is manned by a staff of 18 uniquely qualified test officers and operators.

CTSF CIAV Test Officer Frankie Torres works through a section of the analysis of NATO's ISAF Force Tracking System (IFTS). The new system is designed to support situational awareness and to reduce fratricide. The CTSF probed the system on a real-time basis with Coalition and NATO member countries including Canada, Sweden, The Netherlands, Germany Norway, Italy, France, and the United Kingdom.

CTSF CIAV team members Frankie Torres, right, and Rhonda Howard, left, conduct a lively discussion of evaluation procedures during a recent CIAV analysis of NATO's ISAF Force Tracking System (IFTS). The new system is designed to support situational awareness and to reduce fratricide. The CTSF probed the system on a real-time basis with Coalition and NATO member countries including Canada, Sweden, The Netherlands, Germany Norway, Italy, France, and the United Kingdom.

TEST OFFICERS WORK TO INTEGRATE TACTICAL SYSTEMS, DIGITAL BASELINE OF THE FUTURE

Story & photo by David G. Landmann, CTSF

Army's Assistant Secretary of the Army for Acquisition, Logistics and Technology's Mark Maher discusses a daily interoperability assessment schedule with a pit boss on the CTSF's 12 West test floor.

The Central Technical Support Facility Test Division is working on integrating and evaluating the tactical software systems that will comprise no less than the Army digital baseline of the future.

Since April, CTSF test officers and operators have been engaged in an Integration and Interoperability Evaluation, I2E, of the systems that are to be part of the Army's new Common Operating Environment, or COE.

Project lead Mark Maher, of the Army's Assistant Secretary of the Army for Acquisition, Logistics and Technology, explained some of the testing being conducted at the CTSF and goals the project is meant to accomplish.

Maher said the "[…] main objective, though, is to see that we have a mature baseline that we can send into (Army Interoperability) certification testing."

As the Army continues to work toward creating a common operating environment across the enterprise, the work at the CTSF will help create an environment fit for interoperability testing.

"COE is the new Army (software) baseline," Maher said. "In many cases with the systems that are part of COE, they don't have an opportunity to interface with all the other systems. This is the forum for finding integration."

The CTSF, he explained, is not just a forum in which the COE systems can learn to "talk" to each other—it is perhaps the perfect forum.

"The developers have architectures that are limited at their home stations," Maher said. "Here at the CTSF, we have 12 to 15 echelons in our (test) architecture. This is the only facility that has the scope and program support readily available for this kind of work."

He added that the CTSF has partnered with the West Fort Hood-based Operational Test Command to execute an operational assessment of systems prior to COE participation in the ongoing Army Network Integration Evaluation exercises.

Currently, Maher said, there are 37 COE systems that will undergo initial certification testing when the I2E is completed, but that an additional 66 systems could become part of the COE baseline in the near future.

"Because this is a new baseline with a new set of standards and new capabilities, we can't really put a timeline on when we have the systems on a maturity level," Maher said.

"Our hope is to turn over COE for certification testing before the first of the year," he added.

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