ARMY COMMUNICATOR

U.S. ARMY SIGNAL CORPS

165TH ANNIVERSARY

SIGNAL PROUD—SIGNAL STRONG ◆ PRO PATRIA VIGILANS

Welcome
26TH RCSM

'CHANGE IS OUR **BUSINESS**'

Stewarding
the Profession

Summer 2025

In This Edition:

U.S. Army Signal Regiment Leadership

43rd Chief of Signal and U.S. Army Signal School Commandant,

Col. Julia M. Donley

26th Regimental Command Sergeant Major,
Command Sgt. Maj. Lisa M. Gandy

Regimental Chief Warrant Officer,
Chief Warrant Officer 5 Chris R. Westbrook

Army Communicator

Editor-in-Chief,
Laura Levering

Change Isn't Just Inevitable; It is Our Business!

Stewarding our profession is critical to the success of our mission. It means honoring the people who got us here, sharing lessons from those on the ground right now, and setting the stage for the future.

During this season of transition, I've spent a lot of time reflecting on the achievements of great stewards of this Regiment of ours, like Chief Warrant Officer 5 Chris Westbrook and Retired Command Sgt. Maj. Linwood Barrett. For the last few years, Westbrook has worked tirelessly behind the scenes to update warrant officer professional military education, but more crucially, has spent every spare moment he has in the classroom mentoring young leaders. To me, building up those behind us – and preparing them to take our place – is a true hallmark of what it means to be a steward of the profession.

At the same time, we are setting the stage for the future by welcoming two new stewards of the Regiment to the Signal School. Command Sgt. Maj. Lisa Gandy just assumed responsibility as the Regimental Command Sergeant Major. Her leadership couldn't come at a more important time. She is stepping in as we push to prepare the Regiment for the challenges Transformation in Contact (TiC) 2.0 and Next Generation Command and Control (NGC2) will bring.

Gandy brings deep operational experience, a no-nonsense perspective, and the kind of energy that moves organizations forward. Her focus on readiness, technical excellence, and the backbone of our force – our NCOs – will be essential as we shape the next chapter of command and control in the Army.

In August 2025, Chief Warrant Officer 5 Willie Newkirk will step into the role of Regimental Chief Warrant Officer, taking the reigns from Westbrook. Newkirk is absolutely the right leader at the right time. I look forward to his driving change in support of new technology as we usher in the next generation of technical leaders.

Because change is our business … In early June, the Division Signal Battalion (DSB) Force Design Update (FDU) was approved for 10 Army divisions. This is a huge step for the Regiment. Units like the 101st Airborne and 25th Infantry Divisions helped shape the formation over the past year, and their lessons learned are already informing the upcoming stand-up of DSBs at the 82nd and 4th Infantry Divisions. The future is here – and we are helping build it.

Finally, I want to thank each of the authors who contributed to this issue. Sharing your stories and lessons learned is the way you can help steward the profession. Whether you are in the fight today or laying the groundwork for tomorrow, ask yourself: How are you preparing your team to *pivot to what's next*? What are you doing to make sure we leave the Regiment better than we found it? I would ask all of you to reflect on those ideas as you read through the great lessons from authors in this issue.

Pro Patria Vigilans!
Watchful for the Country!

Col. Julia M. Donley,
43rd Chief of Signal and U.S. Army Signal School Commandant

Humbled to be Part of Distinguished Lineage, Eager to Lead through Change

Team Signal,

It is an honor to be joining such a long and distinguished line of Signal leaders of this team as your 26th Regimental Command Sergeant Major. Thank you for the amazing welcome. What an exciting time it is for our Regiment and for our Army!

Over the past month, we have celebrated the 250th birthday of *the* United States Army, and of course, celebrated the 165th birthday of the United States Army Signal Corps. Thank you to all who made our 165th Anniversary Ball a huge success! In our tradition of honoring our past, we also inducted seven new Distinguished Members of the Regiment for their lifetime contributions to the Signal Corps. With the first member being Retired Col. David Kyle in 1986, it is vital that we keep this prestigious tradition going and recognize our trailblazers!

Our rich history dates back to 1860, when then-Maj. Albert J. Myer convinced the Army to adopt his Wig Wag system for visual communications, utilizing flags in the daylight and torches at night. Like our Signal Corps March, we have come a long way from flag and torch, now relying heavily on signal satellites afar. Throughout our history, we have continuously transformed ourselves to adapt to the current battlefield. Whether that is adopting new technology, converting how our formations look, or revolutionizing our training, we stand ready to meet the ever-changing needs of the warfighter in the digital age.

As we are living in a time where our Army is transforming at a rapid pace, so too will we. I challenge each of you to embrace the transformation. As we continue to adapt, one of the changes you will see in the upcoming fiscal year is the implementation of the capper military occupational specialty 25Z (senior signal sergeant) at master sergeant for our 25B, 25H, 25S, and 25Us, as well as the execution of the consolidated Senior Signal Sergeant Senior Leader Course. The course is designed to prepare those senior NCOs in their role of senior Signaleer as an advisor and planner in their formations – regardless of their background.

One of our biggest wins in recent history is that we received approval to bring back the division signal battalions! This move consolidates our Signaleers and provides us an opportunity to put a renewed focus on the technical and tactical proficiency of our Signaleers that have been spread throughout the divisions.

We will continue to push the envelope in how we not only transform and update our institutional training in our courses like Data Literacy and the Digital Master Gunners Course, but also how we bring training to you in the formation through programs like Signal-Mobile Advanced Readiness Training (S-MART).

Again, this is truly an exciting time for our Regiment, and I am humbled to be a part of it.

Thank you for all that you do to ensure we "Get the Message Through!"

Signal Proud! Signal Strong!

Command Sgt. Maj. Lisa M. Gandy,
26th Regimental Command Sergeant Major

The Signal Corps: 165 Years of Relationships

As I wrap up my 30-year career in the Army as a member of the Signal Regiment, I reflect that my success hinged upon relationships. It goes well beyond the motto taught to me at Warrant Officer Candidate School: "A warrant officer never leaves another warrant officer behind." It started at Basic Combat Training with your battle buddy and solidifies itself throughout exercises, rotations, deployments, and even as you near retirement.

As we look back through history, we see major accomplishments such as Warrant Officer Jack H. Inman expedited to Vietnam to establish voice and teletype communications from Saigon to Hawaii using a never-before tested satellite system. He did not do this alone. It took industry, academia, and interservice cooperation to make this work.

The sergeants of the 96th Signal Battalion reestablished communications in Burma (now Myanmar) through an improvised system of rail and equipment over 20 miles in the dark with assistance from the 3rd Chinese Signal Battalion and defense provided by Burmese and British forces. They did not accomplish this alone.

As I spent my three years deployed in support of Operation Iraqi Freedom, I can't detail every time I relied upon my personal network, but I can say that it crossed branches, services, and even countries. The Adjutant General Corps expedited paperwork for my teammates, the Ordinance Corps found me parts, and the Quartermaster Corps always found me some coffee to get through those long nights.

I personally do not believe that anyone is "persona non grata" and will keep ties even if I have personal or professional disagreements. Everyone has something to contribute - whether within your formation or without, government or industry, American or allied partner.

The Signal Corps is currently undergoing an evolution in how we will provide critical communications in future conflicts. We cannot accomplish that alone.

As I depart the Army, the best advice I can provide to the Signal Regiment is to encourage our newer Soldiers to establish a network of professional contacts as well as friends, and for our leaders to mature and maintain their own.

Our ultimate goal is to, *"Get the Message Through,"* and we cannot do that alone.

Chief Warrant Officer 5 Chris R. Westbrook,
Regimental Chief Warrant Officer

From the Editor …

I often find myself looking back on previous months thinking, "Where did the time go?" As cliché as it is, the phrase, "The days drag on, and the months (years) fly by," bears so much truth. As I read through this edition of the Army Communicator, I was reminded of this truth – and subsequently, reminded of how important it is that we (you) – continue to "record" or "document" time. If I've learned anything during the past few years at the Signal School, it is that the Signal Corps has a very long, very proud history – and for great reasons. This was especially evident during the 165th Signal Corps Anniversary Ball held last month. What a phenomenal event! If you were there, I don't need to explain. If you weren't there, well, unfortunately you missed out, but I hope you will consider attending next year if able!

Now for a few admin notes …

I was in a meeting recently where someone said, "the requirement didn't go away, but the resources did," and it sort of resonated with me. I haven't exactly lost resources, but like so many, I am doing more than I was when I first took this job. And while I don't consider it a bad thing, it does bring challenges with it. For me, one of those challenges is a requirement to learn new software – something that might not be difficult for tech-savvy folks, but for someone like me, well, let's just say I am aware of my strengths, and generally speaking, learning new software is not one of them. But I will

Laura M. Levering
Editor, U.S. Army Signal School

adapt and overcome, because that is what we do! Why might this matter to you, the readers/contributors? One reason is that future editions of the Army Communicator may look slightly different and not contain as much content while I learn the software, which is going to be required for layout. For the most part, I have accepted (and published) the vast majority of articles received. In the future, I may need to be more selective with what gets published as I delve into training while also fulfilling other duties. If an article doesn't meet the standards outlined in submission guidelines, there is a possibility it will not get published. If I receive more submissions than I can feasibly include in an edition, I will give priority to those which are most relevant to the Signal Regiment at the time, support the Harding Project's intent to generate professional discourse, and/or support the themes determined for that particular edition of the Army Communicator.

Speaking of Harding Project, it isn't going away; rather, it is evolving. If you have not subscribed to the Harding Project Substack, I highly recommend that you do. It's insightful, it's relevant (to all branches), and it's shaping the way we view and produce military journals – the Army Communicator being one of them.

I also encourage you to take a few minutes to read "Expedited Revision: AR 600-100 stewards the Army's journals." Written by Lt. Col. Zachary Griffiths, co-founder of the Harding Project, the article highlights how professional writing directly contributes to the Army's success. Writing isn't something that should be left to admin personnel nor those who simply have extra time on their hands. It is a fundamental skill that every professional needs to have and use regularly.

I am committed to serving as an avenue for you, the Signaleer, to "Get the Message Through." Keep that at the front of your mind as you consider contributing an article for the Army Communicator. My hope is that you view this as a viable means to reach others who serve alongside you – many of them thousands of miles away – and not solely as a means to "get published" or "check a box." There is so much value in sharing and exchanging ideas in written form.

Submission guidelines

Articles need to be sent as a **Word** document with photos and graphics sent as **separate attachments.** Include a description of each photo/graphic along with the rank, full name, and unit of person who took photo (created graphic). Acronyms need to be spelled out on first reference, with the abbreviation of the term acceptable on subsequent reference. Between 500 and about 2,000 words per article is ideal. This helps ensure a minimum of one page and maximum of four pages in publication layout (depending on photos, etc.).

Fall 2025 themes: Pivot to What's Next: NGC2   *Fall 2025 deadline:* Sept. 12

Self-Reflection: Are You Stewarding the Profession?

Chaplain's Corner

Chaplain (Maj.) Glen Thompson
U.S. Army Signal School

Stewardship is one of the five characteristics of the Army profession along with trust, honorable service, military expertise, and esprit de corps.

According to the Army Leadership and Profession (ADP 6-22), "Strategic leaders, as senior *stewards* of the Army, are responsible for reinforcing trust and ensuring the ethical design, generation, support, and application of land power. Strategic leaders have the greatest influence on Army policies, regulations, programs, and systems. Their goal is to steward the profession by developing a core of Army leaders with relevant competencies."

Strategic signal leaders have an incredible responsibility to reinforce the military's culture of trust and traditions of the Army. Every level of stewarding the profession is important. ADP 6-22 continues to define the leadership roles of stewarding the profession. Organizational stewardship includes establishing a professional climate that fosters living by the Army ethic, strengthens mutual trust, and fosters cohesive teamwork. Organizations must be equipped, trained, and certified for current and future missions.

Chaplain (Maj.) Glen Thompson, U.S. Army Signal School

Down to the individual, stewarding the profession is key. Individual stewardship is the responsibility to strive continuously for excellence in the performance of duty, to pursue lifelong learning, and to accomplish every mission. Whether strategic, organizational, or individual, every mission counts – today's mission and future missions. Stewardship is a lifelong pursuit to excel in every area of the profession.

How can you actively participate in stewarding the profession?

Leaders of the U.S. Army Signal Corps can provide stewardship in several ways. First, we care for our Soldiers, civilians, and family members in our formations. Caring for America's sons and daughters is a sacred duty. We care for those in our formations, plus we contribute to their well-being. We share our knowledge and experience, come alongside them, and point them in the right direction. It is our duty to guide and direct them on their journey. Second, stewardship is wise use of resources. Signaleers and civilians must be good managers of the resources entrusted to them. We want to share our expertise with the wider community. We want to stay current with our education and pursue opportunities to expand our skillsets. Third, stewardship is passing the torch to the next generation. It is imperative that leaders at every level take the time to coach, train, and develop their subordinates.

In his article, "Improving readiness by developing leaders and using their talents," retired Army Col. and chief of the Army Leader Development Division in the Center for Army Leadership at Fort Leavenworth, Kansas, Frank Wenzel argues, "Leader development is essential to the Army's success. The Army's strategic leaders of tomorrow are serving in entry-level ranks and positions today. To maintain an Army of competent and committed leaders of character who have the skills and attributes necessary to meet the challenges of the 21st century, leaders must train, educate, and provide experiences to progressively develop subordinate leaders. This will ensure the Army prevails in unified land operations."

As current Signaleers, we must look beyond our current mission and develop the next generation of leaders. At every level, growing and maturing our future leaders must be our long-term goal. As a chaplain instructing ethics at the U.S. Army Signal School, it is a great privilege to care for the next generation of leaders attending their Basic Officer Leadership Course and their Captain Career Course. It is an honor to pass the torch of information and knowledge to encourage transformational leadership and the Army profession and professional ethic. It is inspiring to see students continue to develop their moral foundations as they journey through their primary military education.

Stewardship – one of the five characteristics of the Army profession. Pass it on!

From Building Model Airplanes to Building a Legacy
Signal historian retires

Laura Levering
U.S. Army Signal School

When Steven J. Rauch first arrived at Fort Gordon in August 2002, he had no idea what he had gotten himself into, much less the impact he would leave 23 years later.

Fresh out of the Army at the time, having retired from active duty after 20 years as an ordnance officer, Rauch decided it was time to put at least one of his masters' degrees to use. Having earned one in Adult Continuing Education from Kansas State University and another in History from Eastern Michigan, Rauch said, "I thought if I couldn't do history, I could at least do something in educational programs and planning. Then this job came up."

"This job" was the Signal Corps branch historian. Rauch admits he "didn't know much" about the Signal Corps when he applied for the job, but his passion for history overshadowed any concerns he had about the position.

Steven Rauch retired after serving 20 years as the Signal Corps branch historian. (Photo by Laura Levering, U.S. Army Signal School)

Early Life

Born in Dearborn, Michigan, the hometown of Ford Motor Company Founder, Henry Ford, Rauch had what most would consider to be very humble beginnings. Growing up in the Detroit suburbs, his father worked in the auto industry, and his mother was a stay-at-home mom. They shared a 900-foot square home with Rauch's younger sister.

Rauch's interest in history took seed at a young age, during the early 1970s – around the 25th anniversary of World War II. He distinctly remembers building plastic model warplanes, each kit bearing a historical fact about the plane on its packaging. The discoveries he made from building those planes became a turning point for him, because it was no longer merely about building model planes.

"I started looking up what the context of these things were used for," Rauch said. "I wanted to know what it did, where it fought … it was curiosity, I guess, and that's how I became interested in history."

Rauch went on to attend Eastern Michigan University (1978-1982), where he joined the Reserve Officers' Training Corps (ROTC) program with hopes of becoming an armor officer. Instead, he was granted his second choice: ordnance.

"I'm not sure I really understood what it meant to be an officer or a leader at the time; I just liked the Army stuff," Rauch said of ROTC.

On May 9, 1982, Rauch arrived at his first active-duty station, Aberdeen Proving Ground, Maryland. The next 20 years would be a journey all over the world, filled with career milestones and a marriage overseas (which 40 years later is still going strong, he added). During one of his final assignments (Fort Lee, Virginia), Rauch received a letter stating that the Combat Studies Institute at Command General Staff College, Fort Leavenworth, Kansas, was looking for history professors. He applied, was offered the position, and finished his final three years in the military serving as an assistant professor of history.

Career Part II: Signal Historian

From Army officer to civilian, from ordnance to signal, and seemingly a world apart geographically, Rauch had his work cut out for him.

"I showed up at Fort Gordon in 2002 – straight from Fort Leavenworth – knowing zero about signal history, and I'm the historian, so people are expecting me to know stuff," Rauch recalled half-jokingly. "That transition from Army to civilian was hard."

Rauch said it took him a good five years or so to

really "get comfortable" with signal and settled in. And as he settled in and built a rapport with others working on the installation, the more he took on.

Being a branch historian is about far more than |researching and studying the history of one's branch. In Rauch's case, it meant meeting military history instruction course requirements (put forth by U.S. Army Training and Doctrine Command), which through his tenure amounted to 11 different professional military education (PME) courses taught to more than 15,000 students. It meant grading/evaluating thousands of papers written by students, involved more than 300 staff rides, and preserving/maintaining 2,243 boxes of historical materials inside the history office – which Rauch was responsible for relocating to in 2010.

"[The move] was a massive effort that involved planning and coordination at the most detailed and highest levels," Rauch said. "It was painful, and it took about two years off my life, but it was done successfully."

As much as the abovementioned duties entail, they only touch the surface. In essence, being the branch historian meant performing the duties of multiple people – but that few, if any, would have noticed, because Rauch performed them without faltering. Just ask one of his former students.

Lasting Impact

Col. Julia M. Donley, 43rd chief of Signal and Signal School commandant, met Rauch in September 2005 during the Signal Captains Career Course (SCCC). Donley said she has fond memories of his class and staff rides. She even reached back to him on numerous occasions seeking guidance after she became a battalion commander.

"Mr. Rauch was always available for advice on how to both properly execute a staff ride and to ensure the leaders got the most of them," Donley said. "My husband, Kevin, worked with him from 2006 to 2008

Steven Rauch stands in one of 36 rows of the archival storage unit where the Signal Corps historical collection is stored. (Photo by Laura Levering, U.S. Army Signal School)

Steven Rauch retrieves a binder from the history office's Global War on Terrorism collection. (Photo by Laura Levering, U.S. Army Signal School)

as a [small group leader] and heavily relied on him to help students understand the importance of history."

Adding to what Donley said, her husband described Rauch "an integral part of every signal officer's professional development" – not only through impressing the importance of history upon them, but through helping them to refine their writing skills.

"During his blocks of instruction, he was able to show how the history of the Signal Corps was relevant to today's operations and how even if technology advanced, the principles remained the same," Kevin added.

Rauch was known to extend his passion of teaching history outside of PME walls. During Brig. Gen. Paul D. Howard's tenure as 42nd chief of Signal, Rauch met with him monthly, per the general's request.

"I first met Mr. Rauch years ago when I was serving as a field grade officer, however, our relationship deepened significantly during my time as the chief of Signal," Howard explained. "At that point, I relied on him more and more for his insight and expertise, and he became an invaluable resource as I navigated my leadership role."

Now serving as chief information officer for U.S. Central Command, Howard doesn't rely on Rauch these days. But the impact Rauch made on Howard – and the Signal Corps as a whole – is everlasting.

"Mr. Rauch's efforts in educating and mentoring have contributed to building a corps that not only understands its history but is also inspired by it," Howard said. "His influence has been crucial in fostering a sense of pride and unity within the Signal Corps that continues to resonate today."

Donley echoed similar sentiments about the retired historian.

"Mr. Rauch's passion for history and dedication to the history of the Signal Corps are unmatched, however, I think he is best known for his attention to detail and high expectations, Donley said. "He holds all of his students to the highest of standards because he wants us to be better writers, to be more critical thinkers."

Retirement

For someone who has made such a profound impact on one of the Army's oldest branches and who is as passionate about history as Rauch, retiring on one of Army's biggest celebrations in history only seemed fitting.

June 14, 2025, Rauch officially retired from the Army – for good – and on the same day as the Army's 250th birthday. The date was partially careful planning and partial coincidence. Rauch said he initially considered retiring in February 2025, but once he realized that June 14 fell on a Saturday (e.g. end of a pay period), he decided to stick around a little longer.

"Many of my history friends think it's neat that it worked out that way," Rauch said. "As for me, personally,

that date will be on all of my retirement documents, so I'm glad about that. Every June 14 from this point on will be the anniversary of my retirement."

Despite being excited about retirement, Rauch said he really enjoyed his time at Fort Gordon.

"To be paid to study and do what you love has been my dream, and it didn't just happen; I made it happen," Rauch said.

As for what he won't miss about it? The commute and long lines at the gate to get on the installation, followed by searching for a parking spot.

"There are days it seems like everything here is working against you to try to stop you from doing your job; I won't miss that one bit," Rauch said. "I calculated, and I figured I spent about 75 minutes in my car each day back and forth to work. Multiply that by about 255 workdays a year – comes out to be 19,000 minutes a year, times 23 years equals 440,000 minutes – and that equals 7,331 hours spent in my car for 23 years. That's 1.19 years of my life using the 24-hour day. If I just use the 8-hour workday, that's 3.59 work years spent in the car!"

Rauch is eager to replace time previously spent commuting with time spent doing more of what he enjoys– some being history-related, of course, beginning with events surrounding the 250th anniversary of the American Revolutionary War.

"I am going to write about it and hope to publish a book about the battles of Augusta, Georgia, in 1780 -1781," he said. "I want to control my time and do only what I want to do, when I want to do it, and how I want to do it. I'll read of course, but I'll also get back to some hobbies I once had … spend time with my grandson and probably drag him to history sites and events."

Steven Rauch poses for a photo with the U.S. Army Signal Regiment team after being presented with a Department of Army Superior Civilian Service Medal and the Signal Corps Regimental Association Brevet Colonel of the Regiment award during the 165th Corps Anniversary Ball, held June 28. (Photo courtesy of Tammy Newman Photography)

Adaptive Resilience Through Enabled Expertise

Leadership philosophy

Capt. Raza Muhammad, 1st Sgt. Clarence Durst
54th Signal Battalion

In today's technological Army and its task to protect the Department of Defense Information Network, U.S. Army Network Enterprise Center–Buehring (USANEC) plays an essential role in keeping the Army's network up and running - connected from the highest headquarters to the warfighter on the battlefield. But we are not just about maintaining the hardware and systems; we are here to support training, enable mission command, and protect critical information. As leaders in a high operational tempo environment, our success is not just about knowing the technical edge; it is about building strong teams, sharing expertise, and preparing everyone to adapt and excel no matter what comes our way.

Our leadership approach is all about "Adaptive Resilience through Enabled Expertise." That means creating a culture where everyone is skilled, confident in innovating, and ready to face challenges head on, building a network and a team that are both resilient using a "people first" approach.

A Changing Landscape and Need for Adaptation

The network environment is constantly changing. Threats are becoming more advanced, technology advances rapidly, and the Army's operational needs are always shifting. Relying on traditional, top-down leadership models is not sustainable when the warfighter must make decisions in time and space. Trying to predict every challenge and control everything from the top slows us down, stifles innovation, and makes us less effective at keeping our network secure and reliable.

At USANEC-Buehring, we face unique challenges. We are often the first line of defense against cyber threats, responsible for critical infrastructure, and supporting a wide range of users with different needs. That calls for a more flexible, quick-to-respond leadership style which is more in line with the emerging IT industry standards. We can't just manage the network; we need to lead the people who keep it running and protected.

Enabled Expertise: The Core of Resilience

Enabled expertise is not simply about delegation; it is about cultivating a climate of trust and shared

Capt. Raza Muhammad and 1st Sgt. Clarence Durst, 54th Signal Battalion command team, pose in front of their battalion headquarters. (Courtesy photo)

responsibility. Enabled expertise is built on three key pillars: continuous learning, decentralized decision-making, and connection.

Continuous learning. Keeping up with today's networking world means being a lifelong learner. Leaders should make it easy and encourage their teams to grow professionally. This can be through official training like CompTIA Security+, Microsoft, or CCNA or by attending industry events. But most importantly, giving time for self-study and trying out new ideas is key. We should think of ourselves as a learning organization that values sharing knowledge and sees mistakes as chances to get better. This approach lines up with the Army's focus on continuous growth and professional development, as outlined in Field Manual (FM) 3-0, Operations (Department of the Army, 2025).

Decentralized decision-making. Decentralizing decision-making to the lowest level that's capable really boosts how quickly things get done. Of course, this means everyone needs to clearly know their roles

responsibilities. It also means trusting your team members to make good choices, even if those choices aren't exactly what you might have picked yourself. Leaders should set the context, provide the tools and guidance needed, but then step back and let their teams take charge. This approach lines up with the principles of Mission Command from Army Doctrine Publication (ADP) 6-0, Mission Command (Department of the Army, 2019).

Connection. Technology keeps us connected on the battlefield, but at the core, it is our people that work at USANEC who connect us to our customers to then innovate and solve bigger issues all together for the force and mission at hand.

Building real relationships, encouraging open conversations, and really listening in the most human way possible are what matters most, so the decisions are made on lessons learned versus book solutions. That means taking time to understand what drives each team member, their goals, and the challenges they face. It is about creating a space where everyone feels comfortable sharing concerns, pitching new ideas, and questioning the usual way of doing things. Connection is not just internal; it's also about forming strong bonds with our stakeholders, understanding what they need, and thinking ahead to meet those needs before they even ask.

Leading with Intent and Giving Feedback

Enablement is not about stepping back and letting go. Leaders still play an essential role. It is important to lead with a clear purpose explaining the "why" behind tasks and goals. When team members understand the bigger picture, they can make smarter decisions and adapt more easily to changes. Also, giving helpful feedback is key to growth. Feedback should be specific, delivered at the right time, and focused on

behaviors rather than personal traits. It is most effective when given with empathy and a genuine desire to help someone improve. Regular check-ins, performance reviews, and after-action discussions are great ways to share feedback. The Army's after-action review process, detailed in FM 6-0 (Department of the Army, 2022), offers a solid, structured way to learn from experiences.

Building a Resilient Team and Network

Adaptive resilience is not just about individual skill; it's about building a team that can manage stress and bounce back from setbacks. That means creating a strong sense of camaraderie, working well together, and recognizing what each person brings to the table. We also need to apply these same principles to our networks. Having backups, solid security measures, and constant monitoring are key to keeping things up and running. But no matter how advanced technology is, it still needs dedicated, skilled people to manage and protect it.

Conclusion

Leading USANEC-Buehring into 2025 and beyond means shifting how we think about leadership. Instead of sticking to old command and control methods, we need to focus on adaptive resilience powered by our expertise. By investing in our people, encouraging ongoing learning, and giving them the freedom to make knowledgeable decisions, we can create a network that's not just secure and dependable but also flexible enough to handle constant changes on the modern battlefield. Taking care of the profession isn't just about keeping the network running; it's about growing the leaders and Soldiers who will protect it for years to come.

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Honoring Legacy and Mission Through History

Staff ride

Capt. Erick Sanchez
57th Expeditionary Signal Battalion-Enhanced

The 57th Expeditionary Signal Battalion–Enhanced (ESB-E) traveled to Boston May 5–9 in a staff ride to honor the unit's legacy and explore the birthplace of the American Revolution. The staff ride allowed the battalion's "Lightning Warriors" to step back in time, walk through history, strengthen team bonds, and connect with the battalion's roots. By studying the past, the team sharpened their focus for future missions.

Over the week, leaders explored Revolutionary War landmarks along the Freedom Trail and Battle Road – sites that set the stage for the birth of American liberty.

The team's historical briefings provided critical insights into the commander's foundational values: resilience, courage, and duty to serve a cause greater than oneself. The emotional core of the journey was the battalion's return to Camp Edwards, Massachusetts, where the 57th Signal Battalion was activated during the early days of World War II. For today's formation, it was a moment of connection – walking the same paths as their predecessors and standing where the battalion's legacy of lightning action first began.

"This staff ride was a first for me in my Army career, and it was incredible to see the battalion retrace its footsteps all the way back to where it began," said 1st Sgt. William D. Vargas. "It's not just history; it's our history."

Lt. Col. Geoffrey Love delivers a detailed briefing on the Massachusetts National Guard's enduring mission. (Photo by Sgt. Toan Vo, 57th ESB-E)

History of 57th ESB-E during World War II

The 57th ESB-E dates back to the early days of World War II. Activated on Feb. 10, 1941, at Camp Edwards, the unit consisted mainly of skilled telephone and power technicians. Their training was intense – featuring 25-mile ruck marches, technical communications education, and a strict daily routine marked by 16 bugle calls.

Initially intended for brief service, their mission extended after Nazi Germany invaded the Soviet Union and the attack on Pearl Harbor. From North Africa's deserts to Italy's mountains, southern France, and Austria, the 57th served longer in combat than any other Army signal unit during the war, earning a reputation for technical skill, endurance, and resilience in the face of fire.

In North Africa, the battalion operated in Morocco and Algeria before redeploying to Italy with the 36th Texas Infantry Division (ID). Although they missed Sicily's invasion, the campaign on mainland Italy became a tough fight from September to December 1943, as they supported the VI Corps and the 36th ID against harsh terrain, adverse weather conditions, and stiff German resistance. A significant moment came at the Volturno River when two linemen unknowingly crossed an uncleared minefield twice while laying communication lines. Supply shortages forced the battalion to improvise with local materials to maintain vital communications. Their teamwork with the 36th ID remains a powerful example of operational excellence and bravery, cementing the 57th's legacy as a key contributor to Allied victory. The 57th wasn't just a part of history; it helped shape it.

"Their role in the Allied victory is a legacy of innovation, sacrifice, and endurance that still matters today. After all, tactics and logistics mean nothing without effective communication," said Joe Yukna, co-founder of the Cape Cod Military Museum

Lightning Warrior Day

On May 7, the battalion commemorated "Lightning Warrior Day," a date chosen to mirror their unit designation and to honor their origins at Camp Edwards. This day of reflection was marked by a historical presentation from Yukna. Using rare materials from a World War II-era history book of the 57th Signal Battalion, Yukna detailed the battalion's deployment history and its lasting impact on the Allied victory. The day's highlight was the unveiling of the 57th ESB-E Heritage Rock at Overlook Point-1, the highest

Lightning Warriors gather around the 57th ESB-E Heritage Rock at Camp Edwards, Massachusetts. (Photo by Sgt. Toan Vo, 57th ESB-E)

retransmission site at Camp Edwards. The rock – painted with the battalion's insignia and featuring a Walt Disney-designed mascot (a bee clutching a lightning bolt) – serves as a reminder of the battalion's legacy and ongoing commitment to excellence in communications. The artwork was hand-painted by talented Massachusetts National Guard artists Staff Sgt. Trenton Deterra, Sgt. Adalberto Velez, and Spc. Alea Starcher, solidifying the bond between the unit's past and present.

"The heritage rock and historical briefings remind us how far we've come as a battalion," said Command Sgt. Maj. Richard K. Thomas." They highlighted the hard work, dedication, and legacy we continue to build every day."

Staff Ride to Battle Road and Freedom Trail

As part of the week-long commemoration, the 57th ESB-E conducted a staff ride across key historic sites of the American Revolution. Guided by Lt. Col. Geoffrey Love, director of Historical Services for the Massachusetts National Guard, the battalion explored key sites along the Battle Road in Lexington and Concord, the very ground the American Revolution began. Along the iconic Freedom Trail, the battalion reflected on the ideals of liberty, service, and sacrifice that sparked a new nation.

"Walking the Battle Road brought it all together," said Capt. Nnamdi Opusunju. "Starting at Lexington Green and ending at Parker's Revenge felt full circle. It was powerful to follow that arc of resistance and resilience, just like Capt. [John] Parker once did."

The Lightning Warriors gained deeper appreciation for the necessity and history of the National Guard

through this trip. Love highlighted its lineage that stretches from the colonial militia to today's modern military. Lessons from these sites brought context and clarity to their mission, reinforcing the timeless values of duty, courage, and unity.

Looking Forward

Although the past provides powerful inspiration, 57th ESB-E remains focused on its evolving mission to deliver resilient, secure expeditionary communications worldwide. Since its constitution in 1927, and its activation during World War II at Camp Edwards in 1941, the 57th has served with distinction in major conflicts – from North Africa and Italy to Southwest Asia, Iraq, and Afghanistan. Over the decades, it has undergone multiple reorganizations, including its transformation into an expeditionary signal battalion in 2008, and its redesignation as ESB-E in 2021, following the adoption of Scalable Network Node.

The 57th ESB-E has a proven track record of operational excellence. It supported Operation Desert Storm in 1990, provided theater-wide communications during multiple deployments to Iraq in the 2000s, and earned a Meritorious Unit Citation Medal during Operation Iraqi Freedom VI. It was the last ESB to deploy as a whole battalion to Afghanistan, marking the close of another chapter in its long and decorated combat history.

As the Lightning Warriors prepare for their next deployment in 2026, the legacy forged over nearly a century continues to guide them. From the bugle calls of Camp Edwards to today's multidomain operations, the 57th stands as a symbol of innovation, endurance, and service. Their recent return to Massachusetts for a staff ride was more than a visit. It was a reconnection with their origins and a powerful reminder that their history is not just something they carry but something they continue to write with each mission.

"Walking the Freedom Trail and spending time at Camp Edwards allowed us to connect with our unit's rich heritage," said Lt. Col. Randolph E. Donathan, 57th ESB-E commander. "It reminded us that our service is rooted in the sacrifices made by those who came before us. As leaders, it is our duty to honor the legacy of our predecessors. This event provided a unique opportunity for us to honor both the Soldiers who fought for our new nation and our unit."

Diverse Career Experiences Benefit the Signal Regiment

Stewarding the profession

Lt. Col. Daniel Murdough
NATO Communications and Information Agency

Dr. Seuss wrote a book, "Oh, the Places You'll Go!" I sometimes think of this when reflecting on my Army career.

Many company-grade officers and majors are told they must perform certain duties or follow a specific path to remain competitive for promotion and Centralized Selection List (CSL) assignments. Looking back, I realize that I have benefited from a diversity of assignments in support of the Signal Regiment, the Army, the Joint Force, and U.S. Allies. By sharing my experiences, I hope officers, NCOs, and civilians can learn about different opportunities and understand that military careers do not follow a "cookie cutter" model. Rather, many opportunities exist if you are willing to seek them out and convey to your career manager, your mentors, and your leaders that you desire diverse career development.

I have had opportunities to serve in many commands, including U.S. Army Forces Command, U.S. Army Special Operations Command (USASOC), U.S. Army Network Enterprise Command (NETCOM), U.S. Army Pacific (USARPAC), and, most recently, NATO.

Currently, in NATO, I apply my Army background to the joint and combined force in support of service delivery that directly enables command and control for Headquarters, Allied Land Command in Izmir, Turkey. This is a unique opportunity. When I began my service as an Army officer 17 years ago, I did not picture myself in Turkey providing command and control (C2) for a four-star NATO organization. My experiences at the tactical and operational levels helped shape me into the field-grade signal officer and leader I am today and serve as a model for others who may be considering their next career steps.

I began my career as an infantry officer, building a tactical foundation as a platoon leader, assistant operations officer, and company executive officer in 2nd Brigade, 25th Infantry Division, in Hawaii. As an infantry platoon leader operating at the National Training Center (NTC) and while deployed to Iraq, I became proficient in communications such as Blue Force Tracking (BFT) and frequency modulation (FM) radios operating on frequency hopping and cipher text. I learned how the Warfighter received and transmitted data to accomplish the mission. This experience as a leader in a maneuver formation benefited my transition to becoming an officer in the Signal Corps. After completing the Signal Captains Career Course (SCCC), I was assigned to another brigade combat team (BCT) and served as a signal company commander in 3rd Brigade, 1st Infantry Division (ID). There, I focused on training and readiness to execute our mission-essential task list in support of the brigade's mission command capabilities. I understood the importance of providing formations with multiple communication options, from the company's retransmission teams that could extend lower-tier communications to the upper-tier networks that defined the Warfighter Information Network-Tactical (WIN-T) concept of the early 2010s.

In 2014, I sought an opportunity to support special operations forces (SOF) and reported to USASOC at Fort Bragg, North Carolina, where I served as the battalion S6 for 9th Psychological Operations Battalion (Airborne). I had some mentors that helped steer me in this direction, and the visibility of SOF in the middle of the Global War on Terror was also prevalent in my mind. It seemed like a logical step for development, given I had already served two tours in BCTs.

In the SOF support community, I immediately noticed two stark differences from brigade combat teams. First, SOF battalions prioritize small teams below the company level, as they operate independently and require specialized support. Secondly, the equipment sets are very different. Despite these differences, my tactical experience served me well because I knew to listen to the battalion S3, company commanders, and team leaders about their specific missions and how the S6 could support them.

My background in tactical satellite communications from SCCC and 1st ID was invaluable, as the communications protocols for transmission – such as time-division multiple access and fixed-division multiple access operated the same in SOF, albeit with different equipment sets. This knowledge helped me translate operational requirements for teams operating in geographically disparate areas of responsibility to satellite engineers and technicians, ensuring mission success for key SOF operations worldwide.

After serving in USASOC, I had the opportunity to serve as a company commander in U.S. Army Recruiting Command for a large, rural area in Redding, California, with eight recruiting stations covering Northern California and Southern Oregon. I had been a battalion S6 in USASOC for 28 months and was encouraged to stay in the SOF community and possibly another battalion S6 billet. However, I felt that broadening outside of the Signal Corps was important for me at this point. I chose this assignment for two reasons: it provided another opportunity to command and offered broadening experience as a captain to understand the intricacies

of the Army's recruiting mission – arguably one of the most critical tasks the Army's Generating Force performs daily. Recruiting is a leadership challenge, involving geographically dispersed locations, monthly and annual missions with daily visibility at the brigade level and above, and engagement with civic leaders. As the face of the Army in areas with limited familiarity with the military, often beyond veterans and media portrayals, this role requires significant interaction. In many ways, recruiting was the most challenging job I've had in the Army due to these factors. However, the reward of this assignment was gaining insight into one of the Army's most vital missions: generating the force and providing strength for the operating force.

In 2019, I served in Korea with 41st Signal Battalion, 1st Signal Brigade. This was also my first experience serving in Korea and working within NETCOM. I was the battalion S3 and later the battalion executive officer (XO). I assessed that it was important to get experience within NETCOM, and although it was out of my comfort zone, I knew it was important to understand strategic signal support at this time in my career. My time in Korea was more challenging than I could have anticipated, but it prepared me well for the rigorous expectations placed on the Signal Regiment today.

That year, 41st Signal Battalion was tasked with stabilizing the massive move of strategic communications infrastructure from Yongsan Garrison to Camp Humphreys (South Korea). This effort coincided with the simultaneous opening of the new 8th U.S. Army Headquarters, United States Forces Korea (USFK) Headquarters, and 2nd Infantry Division Headquarters at Camp Humphreys, along with the modernization of numerous joint and combined communications systems that had suffered from years of deferred maintenance. On top of these challenges, Korea was one of the first major countries outside of China affected by the COVID-19 pandemic in February 2020. This was followed by a furlough of the Korean national workforce in March 2020 (during a renegotiation of the Special Measures Agreement), lasting 75 days and requiring Soldiers to fill positions typically held by technical subject matter experts.

I will never forget the incredible efforts of the entire 41st Signal Battalion team. Soldiers, Army civilians,

Korean national workforce members, Korean Augmentation to the U.S. Army (KATUSA) soldiers, and contractors all played vital roles. The most important lesson I learned was the value of communication, collaboration, and support between the battalion, 1st Signal Brigade, 8th Army, and USFK to overcome these challenges. Leaders who endured this crucible emerged better prepared to ensure the Signal Regiment remains ready to support future crises.

Most of my experience comes from the Indo-Pacific region. In addition to serving with 25th Infantry Division in Hawaii and 1st Signal Brigade in Korea, I spent three years at U.S. Army Japan (USARJ) serving as a command, control, communications, and computers (C4) network officer and later as the G6 director. My primary focus at USARJ was interoperability human, procedural, and technical levels.

I participated in numerous joint and combined exercises involving USARPAC and INDOPACOM, working directly with partners such as the Japan Ground Self-Defense Force, and the Australian army. We often wrestled with mission partner environment challenges but always found ways to establish bilateral and multilateral communications that supported theater campaign plans and exercise objectives. Later, as the G6 director, I coordinated extensively with incoming multi-domain task forces, division and corps G6s from USARPAC, and other elements to support exercises and real-world requirements. We assisted in establishing communications infrastructure that we could host and secure in Japan, thus increasing readiness for USARPAC units in theater and setting joint interior lines for command, control, and communications throughout the Indo-Pacific region.

Delivering continuous transformation and robust signal support to the Warfighter in today's security environment requires personnel with diverse perspectives and experiences. I encourage all officers, noncommissioned officers, and civilians affiliated with the Signal Regiment to pursue diverse career opportunities, seek a variety of perspectives from across the force, and engage in discussions with those who have served in key positions before them. Those bold enough to venture into new career opportunities will find the experience both personally and professionally rewarding.

About the author

Lt. Col. Daniel Murdough is the land C2 coordination officer for NATO Communications and Information Agency in Izmir, Turkey. He holds a Bachelor of Arts in Political Science from Providence College, Master of Arts in Information Technology Management from Webster University, and Master of Business Administration from North Carolina State University. Murdough has served with the 25th Infantry Division, 1st Infantry Division, U.S. Army Special Operations Command, U.S. Army Recruiting Command, 41st Signal Battalion, and U.S. Army Japan.

DMR Inductees Exemplify 'Skill and Courage'

Legacy of excellence

Article, photos by Laura Levering
U.S. Army Signal School

Lt. Gen. Maria B. Barrett, U.S. Army Cyber Command commanding general (left), and retired Chief Warrant Officer 5 Danny D. Burns exchange greetings.

The U.S. Army Signal School hosted its annual Distinguished Members of the Regiment (DMR) induction ceremony at the Augusta Marriott Convention Center on June 28. Seven new members were honored and inducted into the elite group, joining the ranks of 186 previously inducted individuals. Twelve of the total 198 were inducted posthumously.

Established by the Signal Corps upon regimental activation in 1986, the DMR program recognizes "personnel who have made a special contribution and distinguished themselves in their service to the Regiment."

The 43rd Chief of Signal and U.S. Army Signal School Commandant, Col. Julia M. Donley, opened the ceremony with a message to the inductees.

"It's always an honor to kick off the annual ball with this particular event," Donley said. "This year's 165th [Signal Corps Anniversary Ball] theme is, 'A Legacy of Communication: Where Skill and Courage Count.' The inductees … truly embody that legacy of skill and courage."

Distinguished Members of the Regiment must be current or former members of the Signal Corps Regiment. Nominees may be active duty, Army Reserve, Army National Guard, or Signal Regiment Department of the Army civilians (active or retired status).

The primary mission of DMR is to perpetuate the history and traditions of the Signal Regiment, thereby enhancing unit morale and esprit.

2025 Distinguished Members of the Regiment are:

* Lt. Gen. (Retired) John B. Morrison
* Maj. Gen. (Retired) Randy S. Taylo
* Chief Warrant Officer 5 (Retired) Deshawn L. Bell
* Chief Warrant Officer 5 (Retired) Danny D. Burns
* Chief Warrant Officer 5 (Retired) William L. Robinson II
* Lt. Col. William Wyler (Posthumous)
* Technician 5th Grade Charles J. Chibitty (Posthumous)

Each inductee was presented with a distinguished lapel pin and DMR certificate while their individual accomplishments and contributions were read aloud.

Regimental Command Sgt. Maj. Lisa M. Gandy closed out the ceremony before inviting everyone to continue the celebration at the 165th Signal Corps Anniversary Ball, which was taking place in the same building.

"You embody excellence and leadership in our regiment and what we all strive to be," Gandy said. "I have also been honored to have worked alongside some of you, and so as we celebrate our 165th birthday of the Regiment today, we also want to celebrate you and your families for their enduring support throughout your career."

A complete list of DMR inductees and more information about the program can be found here.

U.S. Army Signal Regiment command leadership join the 2025 Distinguished Members of the Regiment inductees for a group photo.

How 4th CAB Strengthens Signal Corps Capabilities

Stewarding the Signal Profession

Chief Warrant Officer 2 Cody T. Fields
4th Combat Aviation Brigade

Over the past 165 years, the Signal Corps has ensured that our forces have secure, reliable, and flexible communications. We have connected people, supported operations, and contributed to numerous victories.

I am proud to share some of my personal experiences serving as the network systems technician for the 4th Combat Aviation Brigade (CAB) in Fort Carson, Colorado, as we celebrate the Army's 250th birthday and the Signal Corps' 165th anniversary.

At 4th CAB, we have a clear mission: to empower five aviation battalions and the brigade headquarters with voice, video, and data capabilities, even in the toughest tactical environments. I am fortunate to work with a motivated team of signal professionals who pair their technical skills with creative problem-solving to keep our Soldiers connected, both on and off the battlefield. With a need to keep our Soldiers and equipment mission-ready, our responsibilities range from managing complex network operations, circuit engineering, continuous quarterly updates, maintenance, and spectrum allocation. Knowing that our work directly supports the success of our warfighters is something I take pride in.

The driving force of what we do is operational readiness. Upon arriving at the unit, less than 15% of the brigade's satellite transportable terminals (STTs) were fully mission capable. Maintaining the STTs is one of our main responsibilities, as they are essential for beyond-line-of-sight communications. We utilized our signal maintenance protocols by the systems' technical manual and conducted hands-on training sessions with Soldiers alongside our civilian U.S. Army Communications-Electronics Command team. After a few months, we achieved over an 85% STT readiness rate while enhancing the operators' skills and ensuring our systems remain mission capable. Even though the lesson learned was going back to the basics and conducting regular signal maintenance, overall, it's about ensuring that our warfighters need to communicate and guaranteeing that we are ready to support them.

To combat this continuously evolving environment of modern warfare, exercising adaptability is essential. A challenge our team faced was the requirement to access our local data environment during a rotation at the National Training Center. Our solution was to leverage Global Agile Integrated Transport with the Regional Hub Node to establish a "reach-back" connection to Fort Carson. This connection enhanced staff support, streamlined planning, and improved mission execution for the aviation task force. When resources are constrained, our ability to problem-solve and adapt is a testament to the enduring spirit of the Signal Corps.

During a division exercise recently, we faced the challenge of requiring bandwidth necessary to access cloud resources, live battle-tracking, and to communicate with higher echelons. With just a layer-three capable switch and an inline encryption device, our network operations team managed to put together a flyaway kit capable of tunneling through fiber pedestals located in the training area. We also utilized high-capacity line-of-sight connections for efficient command post displacement without losing bandwidth capabilities from the pedestal. Our priority was on maintaining connectivity without sacrificing efficiency. When a Soldier picks up a radio or logs onto a network, they trust us to deliver uninterrupted, secure communication. That trust drives every decision I make.

The most rewarding aspect of stewarding the profession throughout my career has been training Soldiers. I have witnessed their confidence grow as they hit checkpoints during assessments. Working alongside our division G6 and the Ivy Division Signal University, we lead two training sessions to boost our Soldiers' technical proficiency on their assigned systems. By guiding them through certification courses, engaging field exercises, and continuous validations, signal leaders help cultivate a culture of knowledge sharing, collaboration, and technical excellence. Investing in the next generation of leaders means every operator is equipped to handle the demands of current and future communications.

Fellow Signaleers, our roles may be different, yet they are still interconnected. Whether you are repairing essential equipment, developing new communication solutions, or mentoring emerging technical leaders, you are helping to build a legacy rooted in service, sacrifice, and technical innovation.

As we look toward the future, stewarding our profession continues to be pivotal as ever. We honor our storied past while expanding the limits of what is possible for the Warfighter.

My career as a network systems technician reflects the dedication, innovation, and responsibility inherent in the Signal Corps. I stand proud as part of a team that supports current battlefield operations and shapes the future of military communications. Together, we keep progressing, adapting, and inspiring, ensuring that secure, dependable communication remains a cornerstone of our nation's defense.

Examining the Life of MG George Owen Squier

Book review

Ivan Zasimczuk
U.S. Army Signal School

In the book "George Owen Squier: U.S. Army Major General, Inventor, Aviation Pioneer, Founder of Muzak," published by McFarland in 2014, Paul W. Clark and Laurence A. Lyons have meticulously researched and examined the life and times of George Owen Squier, the eighth Chief of Signal. This very valuable contribution extends and deepens the distinguished history and record of the U.S. Army Signal Corps.

This easy-to-read work is divided into 15 chapters and a technical appendix. Modern-day warfighters will find that the core themes of the book still resonate and can be plumbed for their wisdom. Some of these themes include the adoption of (or reluctance to adopt) new technology, officer career development, and military cooperation with industry and academia.

The book's content is a mix of historical prose and lower-level scientific writing. Although it has moments where its natural momentum is disrupted by technical language, it never overwhelms the narrative. Squier had a remarkable career by any measure. After graduating seventh in his West Point class of 1887, he joined the artillery and earned a doctorate in electrical engineering in 1893 from Johns Hopkins University while assigned to Fort McHenry in Baltimore (pp. 4-5). His education and scientific training made him among the few experts in the world in matters related to radio and submarine cable. This expertise paradoxically disrupted his conventional career several times and simultaneously created opportunities that would have been impossible without it. The modern Army places tremendous value on advanced education and owes a debt to the risk and scorn that Squier often bore for his graduate education.

The Army directly benefited from his scientific expertise throughout his entire career. Beginning in 1894, he and a partner accurately measured the muzzle velocity of artillery pieces with a new high speed Chronograph. The more accurate data resulted in increased combat effectiveness and accuracy by improving ranging and more precise powder measurements (p. 38).

Chief Signal Officer, Brig. Gen. Adolphus Greely, noticed Squier's talent and expertise and correctly reckoned that he was a better match within the Signal Corps and asked the adjutant general to reassign him to the Signal Corps Volunteers in 1897 (p. 49). He was put in charge of searchlight experiments for the Army in 1898 (p. 43) and later appointed a regular officer in the Signal Corps in January 1899 p. (53).

Greely had grand designs and uses for Squier's impressive repertoire of skills and experiences. He ordered Squier to the Philippine Islands in 1900, where his first major duty as a Signal Corps officer was to begin laying cable connecting the islands to each other to better facilitate their administration. Before he returned to Washington D.C., he had supervised the laying of 30 separate cables ranging over 1,300 miles, which connected all the principal islands of the archipelago (p. 64).

Upon returning to the United States, he was made the commanding officer of the Signal School and assistant commandant at Fort Leavenworth, Kansas (p. 75) in 1906. When Greely was promoted and reassigned, James Allen became the chief signal officer, and Squier became his assistant (p. 81). Allen immediately assigned him the task of preparing a comprehensive study of the "entire field of airplane, dirigible, and balloon theory and practice" (p. 82). Squier became a leading advocate for aviation and was present at the birth of this industry. In fact, he was the second passenger of the Wright Brothers when they delivered the first airplanes to the Army at Fort Myer, Virginia (p. 88). Later, the Army was awarded a radio research appropriation of $30,000, and Squier was launched headfirst back into studying electronic communications in 1908 (p. 101). The culmination of this research was the discovery of and patenting of multiplex telephony and telegraphy (p. 107).

After so much time in Washington D.C., Squier was due for a field rotation, but Allen recommended Squier for a two-year assignment to London as a military attaché (p. 113). Within a year, he reported on the aerial tactics and lessons of the Balkan Wars (p. 117). When World War I broke out in 1914, he was given the "exclusive privilege … to go with the British army in the field" (p. 123) even though other neutral powers' attaches were not (p. 126). Squier gathered critical data on the use of airplanes in combat (p. 127), staff organization, and ammunition expenditure rates (p. 134) as well as sending back books, Army orders, periodicals, proposed budgets, war photographs, front-line dispatches, publications on medicine, information about ordnance railroads, and signaling (p. 135). This vicarious learning enabled Army leaders to begin gaining a genuine understanding of the war. Squier was so valued by the American ambassador that when his two years were up, the ambassador's request was respected, and Squier was extended. He made a total of three trips

to combat zones in France (pp. 136-137). Squier returned much heralded for his exploits and within nine months was promoted from lieutenant colonel to brigadier general and appointed the Chief of Signal just as the Army was preparing to enter World War I in 1917 (p. 138). His greatest contribution as Chief of Signal was to force aviation upon a reluctant Army, securing the largest congressional appropriation for a single purpose in July 1917, for $640 million for Army aviation (p. 153). Despite this windfall of resources, aviation remained woeful compared to other world powers due to the nascent state of the industry, the double lack of reliable engines and a national lab, and a spate of patent-driven lawsuits.

In April 1918, the Secretary of War ordered the transition of the branch out from under the Signal Corps. Before he retired in December 1923, Squier supported early rocket research and commissioned professional scientists and engineers to increase the profile of these skills and their practitioners in the Army.

Today's Army is the realization of Squier's dual vision and legacy. He wanted an Army driven by the latest scientific discoveries and was as an advocate of the early adoption of new ideas and technologies, no matter how it might disrupt the current order. Despite some clumsy chapter transitions between the authors, this book is an excellent contribution to the history of the Signal Corps. While this book has broad appeal, it is best suited for captains and higher in the Signal, Aviation, Intelligence, Cyber and Electronic Warfare branches who make the greatest use of advances in electronics, communications, and STEM-related applications.
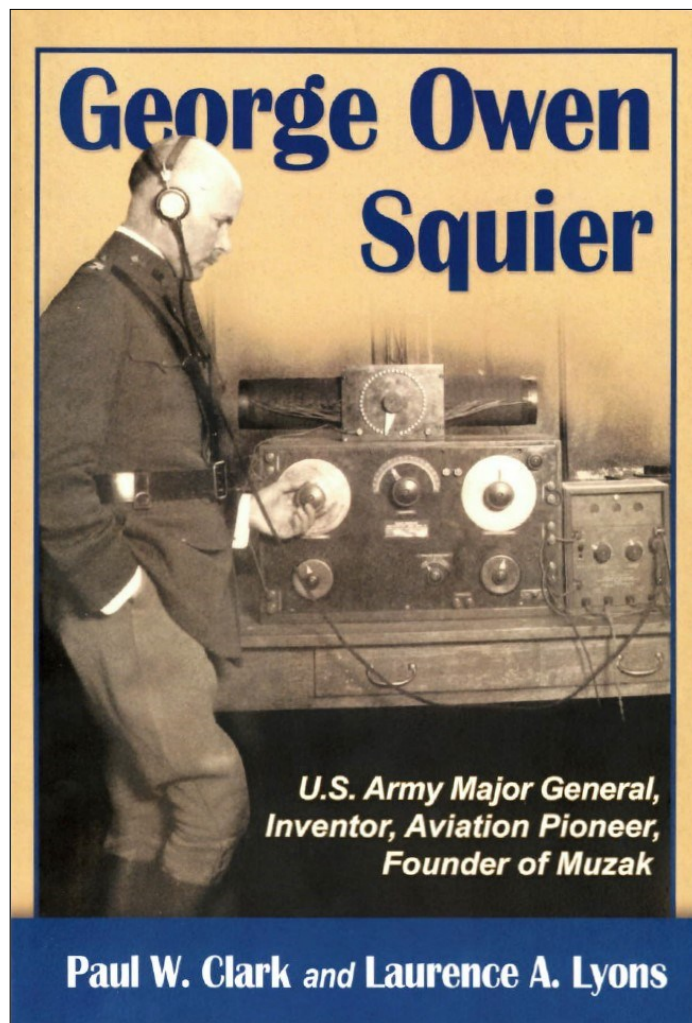
Published in 2014, the book "George Owen Squier: U.S. Army Major General, Inventor, Aviation Pioneer, Founder of Muzak" details the life and career of Squier, a chief signal officer during World War I. (Courtesy image)

About the author

Ivan Zasimczuk graduated from the University of California at Davis (UCD) with a Bachelor of Arts in History and Political Science, and a minor in English. He joined the Army through the UCD Reserve Officers' Training Corps and entered active duty in 1997 as an adjutant general officer. Zasimczuk has served in Germany, Bosnia, Kosovo, Kuwait, Iraq, and Jordan. He attended Kansas State University earning a Master of Arts in History with a follow-on teaching assignment at the United States Military Academy at West Point where he taught Military History and Leadership. He retired in 2017, then worked at the British Embassy in Washington D.C. for one year before becoming the Military History instructor for the U.S. Army Signal School. He is an archivist and will begin a new role as a training developer in July 2025. Zasimczuk is a frequent contributor to Army History Magazine.

Beyond the Static: Finding the FOT, Securing the Mission

Their mission, your connection

Sgt. George Mattison
U.S. Army Network Enterprise Technology Command

They aren't on the front lines, but their expertise ensures that those who are never lose contact. Tucked away on a seemingly quiet corner of Fort Huachuca, Arizona, operates a different type of Team: The High Frequency (HF) Gateway Center of Excellence. These Signaleers are the unsung heroes of U.S. Army HF communications, working to ensure clear and reliable connections across vast distances – regardless of terrain, weather, or equipment.

This dedicated team's operations cover the globe, providing unwavering support to a constant rotation of units and missions across thousands of miles. Their expertise extends far beyond simply operating equipment; they are the "go to" problem solvers, the whisperers of long-range communication. Whether troubleshooting a homemade antenna or establishing a critical link across continents, the HF team is the silent backbone of countless successful operations.

"HF communications is as much an art as it is a skill. If Soldiers don't regularly train with their HF radios and practice their skills, previous training is quickly lost. We here at the U.S. Army Network Enterprise Technology Command offer a variety of over-the-air opportunities for Soldiers and units to hone and refine their HF operator skills," said Paul English, chief of Army Military Auxiliary Radio System (AMARS). "Whether your unit is just needing to do quick radio checks for sergeant's time training, or you are interested in competing in HF competitions, we are here to help."

Beyond their daily operational support, the team has taken on a unique responsibility: becoming the driving force behind U.S. Army HF radio competitions. Recognizing the critical importance of maintaining and honing HF skills across the military, the team designs, organizes, and executes challenging competitions that draw participants from various units, branches, and countries. These competitions are far from simple tests. They simulate real-world scenarios, pushing teams to establish and maintain communications in challenging conditions, often with limited power and under time pressure. During spring each year, they host the Department of Defense HF Low Power Competition, or QRPX, testing U.S. and Canadian Auxiliary Forces ability to operate at low power. It is a testament to the abilities of the operators when seeing who and where they can reach while limited to 20-watt maximum output power in the competition. This year, the QRPX had 167 units/ auxiliarists participating from all over the United States to Japan, including some from Canada and Korea. Each year, the competition grows and becomes more complex as our force refocuses on HF operations.

"The competitions are about more than just bragging rights," explained Dylan Alton, the team's newest member. "They force participants to think outside the box, to adapt their skills under pressure, ultimately building a stronger, more resilient communications network across the entire military."

The NETCOM QRPX, July HF skills challenge, and Canadian-sponsored international HF competition offer Soldiers opportunities to train on HF skills, learn new operator skills, and to compete with similar units in a non-hostile environment – all while assessing and improving their own operator skills.

Though they may operate largely behind the scenes, the impact of the HF team resonates across every mission they support. They are the silent partners, the consummate professionals, ensuring that when a message needs to travel across mountains and oceans, it arrives loud and clear. Their commitment to excellence, both in daily operations and in fostering a culture of HF mastery, makes them a true force multiplier quietly shaping the battlefield with every signal sent and received. They love helping Soldiers build their expertise and advance the profession forward.

If you are interested in participating in an upcoming HF Skills Challenge, ad hoc over the air opportunities, or the Canadian international HF competition (Noble Skywave), reach out to the team at: usarmy.huachuca.netcom.mbx.g-33-atd-hf-gateway@army.mil.

Members of Fort Huachuca's HF team (left to right): Juanita Portz, Eric Trace, Julie Vanderdasson, and Dylan Alton. (Photo by Steve Goddard, HF Gateway CoE)

Historian Reflects on Research, Writing, Advice

Decades of wisdom

Lt. Col. John Geracitano
U.S. Army Student Detachment,
University of North Carolina-Chapel Hill

Few people have served the Signal Corps with the dedication and insight of long-time historian, Steven Rauch. He is an institution in more ways than one. His vision has shaped the Regiment's current leaders; their careers punctuated with stops through Greely, Cobb, and Saltzman Halls, Rauch always the constant.

An office call with him in 2012 was intended to strengthen my capstone paper. But I departed with much more: a deeper understanding of research and writing that remains with me today. With Rauch's recent retirement, I wanted to capture his process, honed and refined over decades, to share with the broader community. What follows is a glimpse behind the curtain. However, there is no mystery to the mastery, just patience, persistence, and awareness. of complexity, troubleshooting, and stress.

On Research and Writing

Like anything worth doing, planning comes first. Every January, Rauch starts the year by drafting an annual writing plan. He maps it out in a spreadsheet, breaking the year into time segments and pairing each with historical events. For instance, he'll look at what happened 100 years ago in March (i.e., March 1925), then 75 years ago in June, and so on.

"Then I would go to the periodicals from that time, the predecessors to the Army Communicator, and read through 1925 into 1926," he explains. "If I found some nuggets, usually two or three a year, I'd mark them on the calendar by the month they occurred and try to synchronize as that time approached."

The plan isn't rigid; it evolves throughout the year, giving him, as he puts it, "a framework for how to research without getting overwhelmed by everything out there." Still, even the best plans need room for spontaneity. Some of the most compelling topics emerge organically, fueled by a strong reading habit. Rauch believes being a curious, engaged reader is essential; it's how you stumble onto ideas you might otherwise miss. It's like a kid flipping over a log and discovering a whole world beneath while others walk past.

"There might be something that triggers you in one sentence," he says, "that seems to have much more behind it than what appears on the surface – like a throwaway line in the narrative about a commander moving in a certain direction."

It's those subtle, unexplored threads that keep him inspired. They are what sustains his interest over the long haul. Another great way to discover fresh angles is by looking for tangents within your field of interest. Sure, there may already be hundreds of books on a topic, but that doesn't mean every corner has been thoroughly explored. Sometimes, a small detail or a side topic has not received much attention. However, just because something hasn't been written about does not automatically make it worth diving into. It's crucial to stay curious and discerning. Some paths are less traveled for a reason. Once Rauch settles on a topic, the real digging begins. He combs through bibliographies to track down sources.

"I'm trying to get a handle on what's out there – that's something you *have* to do," he says. "You must know everything you can about a topic before writing and publishing. Otherwise, you might miss something that completely contradicts what you wrote."

The Information Age has made this at once simple and complex, but staying curious and following what genuinely interests you can help cut through the noise. Awareness and persistence go a long way in helping you dig deep, because, as Rauch puts it, "If you don't ground your topic with good research, it becomes untrustworthy."

Current book publishing practices add another layer of complexity.

"It's becoming an issue," Rauch admits. "Publishers aren't checking the information like they used to; they are just doing basic editing. I can't think of any I fully trust anymore."

That's where validation by triangulation comes in. To safeguard against inaccuracies, he suggests finding at least three sources that line up and then asking yourself if those sources are both credible and logical. Things get even trickier when it comes to biographies and autobiographies.

Former Signal Corps Branch Historian, Steven J. Rauch. (Courtesy photo)

"No one writes a book that says, 'I screwed everything up,'" he points out. On top of that, memory can be unreliable, and biographers often bring their own bias, positive or negative, into the mix. "You can't dismiss these sources outright, though. You must acknowledge them for what they are. You don't have to agree or disagree, but you do need to stay aware."

Developing a sharp eye for what's real and what's not becomes essential as your research progresses. One way Rauch does this is by talking to people who have served in positions like "typists or cooks" – jobs that rarely show up in the spotlight.

"You don't often hear people brag about support roles, but those stories are real," he says. "It's a collective effort. Not everyone was busting down doors or serving on SEAL Team Six. Understanding that comes from truly consuming and reflecting on your sources."

And yes, it takes time. How much time? That depends on the topic. You'll know you're ready when you've read enough, made sense of the material, and feel confident in your understanding. Throughout the research process, Rauch takes notes as he reads and doesn't start pulling everything together until later. Then, he builds a solid, logical outline and begins writing. Once a draft is done, he lets it sit for a while, allowing it to "gel" before reviewing it with fresh eyes. That space helps him catch mistakes and refine his message.

Rauch is also a firm believer in reading your work out loud.

"If you trip over a sentence, it probably needs to be rewritten," he says.

And if possible, get a second pair of eyes on your work. A different perspective can be invaluable.

Enduring Lessons

Throughout our conversation, two themes emerged. First, you must read as much as possible.

"Get the information into your head because you may not have the time again," he said. "You've got to have it when you need it. Whether it's long-form books, academic studies, or book reviews, the point is to start now. Don't wait for the perfect moment; make time for yourself now because you never know when you will have it later."

Rauch emphasized the importance of staying aware and knowing what books are on your topic of interest, even if you can't read them all. That's where book reviews come in handy; they give you a sense of the field and help you stay in the loop.

The second theme pertained to patience. His advice? Take a long view. Becoming a great historian, writer, or researcher isn't something that happens overnight. Your 20s and 30s are for gathering degrees, certifications, and experience. The following two decades are when you hit your stride. But you must keep reading, writing, and researching along the way. These are habits to cultivate, not just skills to use.

Rauch also talked about seizing opportunities. His graduate degree in history opened doors, helping him land positions at the Command and General Staff College and as a signal historian. These kinds of roles – civilian positions especially – are rare and competitive. But if you build a strong foundation, you'll be ready for the opportunities that will inevitably arrive, albeit fleetingly.

One more implicit lesson hung in the air: put yourself out there. Seek out those who inspire you. Find mentors and learn from them. Even a single conversation, something the mentor might immediately forget, can leave a lasting imprint on the mentee. Relationships matter. We are all connected, and the smallest gestures can often shape someone's path forever.

It all comes back to time - our most valuable resource. Rauch teaches us to treat it intentionally. Think of life like a pair of bifocals: one lens for the close-up tasks of today and the other for the broader vision of tomorrow.

We need urgency to avoid procrastination and patience to play the long game. This duality shaped the way Rauch approached his career and his work. The principles he lived by never went out of style. There are no shortcuts, no substitutes.

Rauch may have stepped away, but his influence endures. As he passes the torch, it's up to us to carry forward his legacy through our research, writing, and the spirit he instilled in us and the Regiment.

Lt. Col. John Geracitano is a signal officer and LTG (R) Dubik Writing Fellow who is currently serving as a doctoral candidate at the University of North Carolina at Chapel Hill.
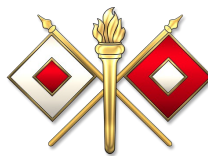
An S3's Evolution into XO in a Strategic Signal Battalion
Beyond the immediate fix

Maj. Ryan G. Tintera
39th Strategic Signal Battalion

In 2022, after wrapping up Army civilian schooling and an assignment as an instructor at West Point, I received orders to the 39th Strategic Signal Battalion in Chievres, Belgium. Coming from a tactical background, I'll admit I questioned whether this assignment would provide the kind of challenge or relevance I was used to. I asked my sponsor what kind of impact I could make, and he gave me a simple answer: "Fix Poland."

This article outlines my journey from a reactive S3 focused on immediate problems to an executive officer (XO) responsible for building long-term systems, and how we built a cohesive military-civilian team from the ground up.

Although the Poland mission fell within our overall responsibilities, it often felt like an additional task given our extensive support commitments to multiple general officers across the NATO area of operations, spanning 12 countries. When I picked up the Poland mission, I started with nothing but an empty rolodex, so I had to lean on the cold-calling instincts I picked up as a stockbroker, chasing down contacts across commands scattered throughout Europe such as U.S. Army Installation Management Command, U.S. Army Europe and Africa, U.S. Army Network Enterprise Technology Command, and V Corps. Once I started to make contacts, I relied on interpersonal skills to earn trust and build buy-in. What I found was not a lack of awareness, but a lack of integration. What we needed was someone to act as the glue, turning isolated efforts into coordinated action. That network that we built, our "coalition of the willing," is still active two years later.

Early on, success meant reacting fast. With the planned Network Enterprise Center in Poland indefinitely delayed, I adopted a fixer's mindset. Like the creative troubleshooters you see in movies, I leaned more on people skills, communication, and building networks than on raw technical knowledge. Key to all of this was building strong relationships with deployed S6 sections. By becoming the go-to for signal issues, we kept problems from escalating to the brigade commander and maintained a higher operational tempo.

The key was earning trust and showing results. I had to get good at triaging across a wide range of problems, often prioritizing the most sensitive or personnel-intensive ones first. It wasn't just about what we could fix quickly; it was about what mattered most.

Operating across the 1,000-kilometer distance from Belgium to Poland made soft skills essential. Whether over Outlook, Teams, or even WhatsApp, building rapport required understanding the social subtleties behind each electronic communication platform. As the S3, I sharpened my analytical abilities, breaking down complex problems quickly even when time did not allow for deep root cause analysis. But it was soft skills, diplomacy, tact, and discretion that allowed me to build and maintain a working network of people, tools, and data.

Maj. Ryan G. Tintera, 39th Strategic Signal Battalion

Stepping into my second key developmental year as XO involved a serious mindset shift. I quickly realized the skills that had served me well as an S3 wouldn't translate directly to the role of XO. I had to evolve from being able to solve symptoms to attacking root causes. This meant building systems that outlast me. Drawing from my company command experience, I learned that spotting broken systems is easy, but building a self-sufficient, enduring system is the real challenge.

One of the traps of being an S3 is solving today's problems at the expense of enduring solutions. As XO, the pressure to make fast, make-or-break decisions faded, but the complexity of the job only grew. The human element remained central. People's individual challenges still had the power to derail entire projects. I learned that effective leadership means staying flexible, not just being technically sharp.

The XO role required me to expand my toolkit. I had to get into the weeds on budgeting, property accountability, and staff coordination across S8, Logistics, and Human Resources. Each of these communities brings their own way of doing business, and I had to learn to speak their language. I picked up new systems like Global Combat Support-System-Army (GCCS-A) and the Integrated Personnel and Pay System (IPPS-A) and relied more on tools like Excel, SharePoint, and PowerBI than on Outlook, Teams and PowerPoint.

Unlike the S3 role, where my lane was well-defined, being XO meant owning everything that did not have a clear owner. Assigning a task didn't mean it was off my plate. I had to ensure it moved through

the system, tracked by milestones, with frequent touch-points integrated into the battle rhythm.

One of the biggest challenges of this role, but also most rewarding, has been integrating our civilian work-force. Managing two GS-13 civilians (our S1 and S4) meant learning new systems like Defense Civilian Payroll System (DCPS), DoD Performance Management and Appraisal Program (DPMAPS), and Automated Time Attendance and Production System (ATAAPS). It meant completing technical training, modeling for my civilian subordinates the necessity of mastering supervisory systems. But what really mattered was adjusting my leadership approach.

Early communication gaps made it clear: these were highly capable professionals, but with no Army background and no experience managing Soldiers. So, I launched our first Civilian Supervisor Professional Development session in April, focusing on counseling and the fundamentals of Army leadership: ADP 6-22, FM 1-0, The Counseling Process, and key tools like the Developmental Counseling Form (DA 4856) and the Electronic Evaluation System (EES). These were all new concepts for them. We have kept that momentum going with monthly sessions on training management, mission command, and military planning.

I recall a particular XO from my Navy days. At the time, he was a lieutenant commander, an O-4 like me now, and frankly, didn't register as particularly impactful. He wasn't a charismatic figure, didn't seek the spotlight, and operated with a quiet demeanor. It wasn't until years later, looking back with the perspective of an officer myself, that his true contribution became clear. He was the linchpin of our ship's logistical foundation, ensuring we *had* the quality of life support – the consistent flow of vital resources like food and fuel. In essence, he was the silent architect of our operational capability.

As an S3, my role used to place me in frequent, direct contact with the brigade commander. Weekly briefings and consistent visibility are inherent to the position. It's a role that thrives on interaction and, admittedly, often garners recognition. However, this experience has only reinforced the value of the XO's function. Like that Navy officer, I now find myself working largely behind the scenes, focusing on the intricate systems and processes that underpin the battalion's success.

The XO role, done effectively, is an invisible one. It's a position where success is measured not by accolades, but by the smooth, efficient functioning of the unit. While a part of me occasionally misses the direct acknowledgement that came with a more visible role, I've come to appreciate a deeper, more lasting reward. That reward is witnessing the battalion achieve maximum operational effectiveness – knowing that the processes and systems I've helped build are directly contributing to that success. It's a lesson learned from a quiet lieutenant commander years ago, and one I strive to embody every day: True leadership isn't always about being *seen*; it's about ensuring everything *works*.

Being XO demands a far broader skillset than being S3. It's about shaping the unit's long-term trajectory, not just winning today's fight. I get to mentor our civilians, invest in our people, and help build a culture that lasts. I also look "up and out" more, developing relationships with key NATO stakeholders and across combatant commands to support broader goals. At the end of the day, I execute the commander's vision, but I also translate it, shape it, and ensure it sticks. With a year left in this seat, my goal is to leave behind adaptable, capable leaders who can take the next hill, whatever that looks like.

About the author

Maj. (Promotable) Ryan G. Tintera is a native of northern New Jersey. He currently serves as the executive officer of 39th Strategic Signal Battalion in Chievres, Belgium. Tintera also served as a Navy electronics warfare operator on two tours of the Persian Gulf from 1996-2000. He earned a bachelor's degree in English Education from New York University and a Master of Arts in Russian Studies from Columbia University.

Agile, Distributed, Lethal CPs at NTC 25-03

Distributed C2

Maj. Adam Black, Maj. Nathan Tarter
1st Infantry Division

The execution of command and control (C2) blends the technical capabilities of Army systems and command posts (CP) with the commander's ability to drive the operations process to provide effective direction and guidance to the operating force. Divisions must adapt to the modern battlefield at the pace of war by leveraging existing and emerging technologies to increase dispersion, generate redundancy, and increase survivability of CPs.

Divisions that use enhanced network technologies, restructure CPs and breaking historical norms will not only survive, but thrive, on the modern battlefield.

The C2 system is a comprehensive framework that uses all available resources to support C2, ultimately enhancing the commander's ability to conduct operations. By organizing a C2 system, commanders can:

1. Support informed decision-making.
2. Gather, analyze, and maintain relevant information to inform the commander's and leaders' understanding and visualization.
3. Develop and communicate clear directives.

To achieve these critical functions, commanders must design and organize the four components of their C2 system: people, processes, networks, and CPs. By doing so, they can ensure a seamless and effective C2 process (as shown below in **Figure 1**).

Successful execution of distributed mission command relies on an understanding of the division staff's operational processes, including inputs, outputs, contributors, and functionality. During National Training Center (NTC) Rotation 25-03, 1st Infantry Division (ID designed a responsibilities matrix and developed a detailed primary (P), alternate (A), contingency (C), and emergency (E) plan, or PACE, which outlined communication pathways and protocols for each node and assigned battle rhythm event responsibilities. By focusing on processes and functionality rather than traditional CP layouts, the division staff developed a unique and effective approach to optimizing their CP structure and network architecture, ensuring proper accountability and preservation of critical functions.

Historical mission command structures were largely driven by equipment and manning considerations, and command preference. Current program of record equipment sets and manning levels necessitate the consolidation of key personnel into a select number of CPs where commanders, driven by decades of historical preference, consolidate key staff, advisors, and subordinate commanders for face-to-face meetings and planning sessions.

The modern battlefield requires greater dispersion of multi-node CPs to ensure survivability and provide rapid mobility and adaptability on the battlefield. Enabling this requires revisions to the people and network components of the C2 system by generating revised CP structures and mission command processes. A dispersed multi-node command structure consisting of the analysis and control element (ACE), targeting cell, plans cell, and two bounding current operations integrating cells (COICs) enables the division to posture, consolidate, and reorganize the physical structure based on mission parameters.

To fully realize the capabilities of distributed C2, 1st ID and the Army/Department of Defense at large need to maximize the availability of commercial network systems to provide the necessary connectivity to operate in this condition. The design/array of these cells using the C2 system enables protection and lethality for the division CP by leveraging the tenets of multidomain operations (agility, convergence, endurance, depth).

To effectively address the people aspect of the CP, it is essential to understand how specific individuals enable certain processes. In traditional division CP context, various personnel play critical roles in supporting the operations process. As seen in the 2025 MTOE design, the traditional

Figure 1:
Components of a C2 system
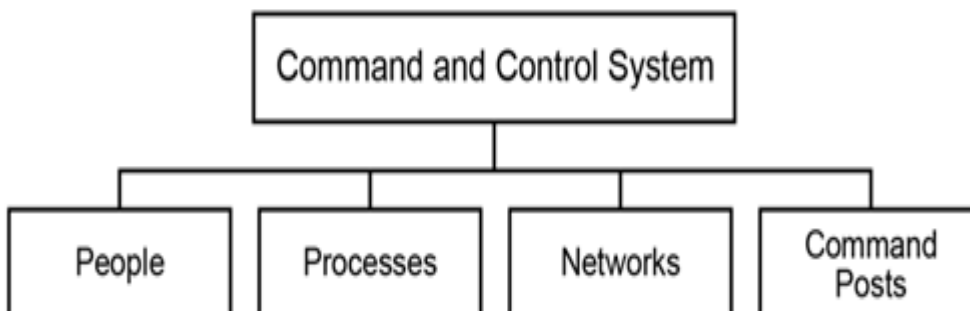
Source: U.S. Department of the Army, ADP 6-0 Mission Command, (Washington, DC: Department of the Army, 2019), 4-1.

CP structure is centralized at the division main CP (DMCP), resulting in a large C2 structure that is vulnerable to enemy targeting. The main command Post (MCP) has a larger personnel footprint, with 298 individuals representing all warfighting functions (WFFs) working together to plan, coordinate, and execute operations.

The traditional CP structure is cumbersome for the close area, making it an attractive target. At NTC 25-03, 1st ID revised its CP composition by reducing the MCP to approximately 90 personnel, representing all WFFs. The tactical command post (TAC) was further streamlined with only 25 personnel, focusing on C2, movement and maneuver (M2), fires, and intel to continuously operate for no more than 24 hours. The rear command post (RCP) had a larger personnel footprint, with around 300 individuals supporting C2, M2, intel, sustainment, and protection. This structure allowed the division to concentrate its continuous presence and analytical backbone in the rear area where it was less vulnerable and minimizes the targetable signature in the close area.

It's also important to note that the division CPs may receive additional support from enablers such as joint and coalition liaisons, a maneuver enhancement brigade (MEB), or a main command post operational detachment (MCP-OD). While it's not logical to plan solely on the availability of these enablers, they can significantly enhance the successful execution of processes. An MEB provides additional maneuver and security capabilities, enabling the division to respond more effectively to emerging threats. An MCP-OD can also offer specialized expertise and resources to augment the CP's planning and operations capabilities, such as enhanced intelligence, surveillance, and reconnaissance (ISR) or cyber support.

The network is no longer an inhibitor of operations/training for all WFFs as it was with legacy Warfighter Information Network-Tactical (WIN-T) Military Satellite (MILSAT) Transport. Armored Formation Networks – On the Move (AFN-OTM) and its capability as an expeditionary multi-transport network node allowed 1st ID to experiment fully with distributed mission command. AFN-OTM, which provides continuous mobile upper tier internet (TI) connectivity through geostationary/low earth orbit (GEO)/LEO Satellite and 5G connectivity enabled the division to maintain Mission Command Information Systems (MCIS) connectivity while dispersed and without requiring any physical connection between command nodes.

To maximize the effectiveness of the multi-nodal CP structure, 1st ID used Command Post Computing Environment (CPCE) for digital common operating picture (COP) management, Sharepoint for product distribution and sharing, Cisco Meet Service for battle rhythm events, and Web-based Mission Command (WEB-MC) for orders distribution to subordinate units via Joint Battle Command Platform (JBCP). To maintain common situational understanding, 1st ID maintained a continuously open "Hot Net" Cisco Meet Server (CMS) channel which allowed rapid and continuous synchronization between the responsible current operations integration cell (COIC) and the subordinate brigades, and between the division's distributed CP nodes. Distributed mission command necessitates development of a detailed and comprehensive PACE plan for communications, outlining feasible options varied by upper or lower TI to maintain connectivity between CPs and other units.

When assessing the PACE plan, three routes a planner must consider are:

1. Division à adjacent division à corps
2. Division à subordinate brigade/separate battalion
3. CP à CP

The traditional CP structure is familiar and comfortable. However, this approach can create vulnerabilities, such as concentrating critical personnel and equipment in a single location, limiting flexibility and adaptability, and restricting the ability to distribute C2 functions across multiple locations. To move towards a more modern and agile CP structure, we must re-examine the underlying assumptions and drivers that have shaped the current approach.

By understanding the processes, people, and network, the commander can make informed decisions on tailoring the CP's composition and disposition to support the specific operational requirements of the mission rather than being driven by traditional layouts. For example, the TAC can be subdivided into smaller, condensed nodes with specific functions and integrated into the other elements, allowing dispersion. 1st ID's TAC used this concept and employed the COIC, the Joint Air Ground Integration Center, and enablers as a cluster of independent elements supported by communication extension nodes. This approach enables the CP to be more flexible and adaptable, reducing its vulnerability to disruption or attack.

By using digital mission command systems, such as CPCE, to maintain a COP, CPs were modular and interchangeable, with COICs operating in a rotational configuration. This allowed for rapid and effective transitions between command posts and physical relocation of the COIC when necessary.

Use of duplicate COICs, operating in a rotational "UP-MOVING/WARM" configuration, provided an additional layer of redundancy and flexibility, enabling the command post to maintain continuity of operations — even in the event of a disruption or

attack. COIC cells were positioned within the FM retransmission range of the brigade combat team (BCT) formations, retaining primary responsibility for the execution of movement and maneuver and fires warfighting functions. COIC cells were positioned within the FM retransmission range of the brigade combat team (BCT) formations, retaining primary responsibility for the execution of movement and maneuver and fires warfighting functions. The successful execution of distributed C2 requires a deep understanding of the processes, people, and network that underpin the division staff's operations.

The 1st ID's experience during NTC Rotation 25-03 demonstrated the importance of understanding these components in designing a CP structure optimized for success in a rapidly changing and uncertain environment. This transition will see impacts across the Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities & Policy (DOTMLPF-P)

framework but is primarily concentrated in the material and personnel aspects supported by organization and training then codified in doctrine. These concepts require further development and testing at scale to implement Army standard doctrine for division-level distributed mission command but must be fed by the full-scale implementation of these distributed mission command systems at the Combat Training Center and other large-scale division-level training events.

Fielding of the necessary Command Post Modernization system, AFN-OTM system, and personnel augmentation to provide manned and capable CPs are key. The success of distributed C2 relies on commanders' understanding of the complex interplay between processes, people, and networks to design command post structures that are optimized for success in a rapidly changing and uncertain environment which enables the commander to mass forces against a determined peer enemy and win decisively.

About the authors

Maj. Nathan Tarter is an active-duty engineer officer who served as the deputy G3 for 1st Infantry Division from 2024-2025. Other notable assignments include 1st Armored Division and 1st Cavalry Division. Tarter has combat and operational deployments to Afghanistan, Europe, and Korea.

Maj. Adam Black is an active-duty signal officer who served as the deputy G6 for 1st Infantry Division from 2024-2025. Other notable assignments include 25th Infantry Division, 10th Mountain Division, and First Army. Black has combat and operational deployments to Iraq and Europe. Black holds a bachelor's degree from The Virginia Military Institute and master's degrees from Liberty University and U.S. Army Command and General Staff College.

Course Prepares 39th SSB for Data-Driven Future

Modernization

Article, photo by Candy C. Knight
2nd Theater Signal Brigade

Members of the 39th Strategic Signal Battalion (SSB) recently seized an invaluable opportunity to expand their leadership capabilities by participating in the Data for Leaders Course, which took place from April 30 to May 1, 2025. This two-day workshop, led by Capt. Derrick Kozlowski, chief data officer, U.S. Army Signal School, was tailored to enhance participants' understanding of data's transformative potential within military operations.

The course tackled critical topics essential for modern leadership, including data literacy, governance, cloud fundamentals, zero trust principles, and the use of Power BI, a powerful analytics tool. Designed for officers, non-commissioned officers, warrant officers, Department of Defense civilians, and emerging data professionals, the program aimed to cultivate a data-centric mindset vital for decision-making in today's rapidly evolving landscape.

April Pinsonneault, an IT specialist with the battalion, emphasized the course's relevance.

"The training provided practical skills that are directly applicable to our missions. The segments on data cleaning and Power BI reporting were particularly invaluable," she said.

Kozlowski's engaging anecdotes and real-world examples injected a practical dimension into the training, making complex concepts accessible.

"His passion and experience elevate the Data for Leaders Course beyond a standard training session; it's a true master class," Pinsonneault added, highlighting how these elements deepened the participants' understanding of data analysis.

The initiative to bring this training to the "Watchdog Battalion" stemmed from the proactive efforts of 1st Lt. Ashley Ulricson. Aware of the critical need for improved data literacy in modern military operations, Ulricson orchestrated the course's scheduling, exemplifying her dedication to the professional development of her peers.

"I met Captain Kozlowski during my undergraduate internship with the 160th Special Operations Aviation Regiment's Data Integrated Maintenance Environment," Ulricson recounted. "His influence inspired me to commission as a signal officer. He has been at the forefront of the U.S. Army's adoption of data literacy and has championed a data-centered Signal Corps."

Ulricson's vision for the course centered on creating a shared understanding among senior leaders about the significance of adopting a data-centered mindset to facilitate faster and better-informed decision-making within their operational areas.

"As members of a strategic signal battalion, our missions are increasingly data-centric. It's imperative that we cultivate at least a fundamental understanding of data governance and its implications."

In an ever-evolving military landscape, initiatives such as the Data for Leaders Course represent crucial steps toward cultivating an informed and agile force. The 39th SSB, alongside the 2nd Theater Signal Brigade, is not merely keeping pace with the future; they are actively shaping the next generation of leaders for success in a data-driven world. Armed with the skills acquired from this course, these participants are leading the charge in the Army's crucial data transformation efforts.

Capt. Derrick Kozlowski, chief data officer, U.S. Army Signal School, talks data analytics during the Data for Leaders Course April 30, at Chièvres, Belgium. 39th SSB personnel participated in the two-day workshop that is designed to enhance understanding of data's transformative potential within military operations.

Integrating ATP 6-02.53 into 3/1CD NTC Training

Voice of Greywolf

Capt. Daniel M. Horoho
3rd Engineer Battalion

In July 2024, as I took command of Charlie Company, 3rd Brigade Engineer Battalion, I knew that in nine months the "Greywolf Brigade" would be squaring off against one of the most professional opposing forces (OPFORs) in the challenging environment of Fort Irwin, California, as part of our National Training Center (NTC) Rotation, 25-06. Having completed an NTC rotation just 12 months earlier (NTC 24-06), the Greywolf Brigade understood that this environment was capable of exploiting organizational weaknesses through stressors that include a high operational tempo (OPTEMPO) and rapid decision cycles.

Utilizing Army Techniques Publication (ATP) 6-02.53 and the commander's intent, signal leaders across the brigade combat team developed and executed a five table RETRANS training program tailored to the brigade's training progression, nesting with gunnery windows, command post exercises (CPXs), and multi-echelon exercise events. Whereas the tables in the ATP are a good beginning, they are generic, my article attempts to show how this organization applied the doctrine and put "meat to the bones" showing a way to conduct a training progression during a short period between essentially back-to-back Combat Training Center (CTC) rotations.

Command Support

After action reviews (AARs) from NTC 24-06 identified a standardization shortfall in the Greywolf Signal Enterprise – the lack of a unified common operating picture (COP) for retransmission (RETRANS) operations to provide shared understanding between the brigade signal company and the battalion S6s. To address this shortfall, Brigade Commander, Col. Edward L. Arntson, directed the development of a training progression that seamlessly integrated RETRANS operations into brigade operations.

Like anything, units do well at what the commander checks, and there were many touchpoints, and azimuth checks with him to ensure his intent was being met. This training progression enabled eventual success during our NTC 25-06 rotation as noted from AARs throughout at all levels.

Train-Up

Synchronization and integration as themes were incorporated in planning, training, and execution. The ABCT saw unprecedented growth in the integration between the signal company, the brigade S6 shop, as well as each battalion S6. Once the brigade departed for the first brigade operation at NTC, there was no doubt that every signal asset in the box was, if needed, a BCT asset.

Table I (Soldier Level Certification)

Table I occurred two weeks prior to the brigade's tank and Bradley gunnery window serving as the signal version of Gunnery Skills Testing that the tank and Bradley crews were simultaneously executing. The signal company RETRANS platoon and brigade S6 NCOIC executed this table in accordance with the Training and Evaluation Outline (T&EO), validating all RETRANS teams in the brigade prior to gunnery and CPX progression. Training was conducted over four days: Day One in a classroom setting reviewing RETRANS operations and planning; Days Two and Three focused on round robin practical exercises; and testing on Day Four where the objective for certification is to establish two networks in accordance with T&EO standards. The end state of the training was that crews were prepared to support either gunnery or a CPX.

Key lessons learned during this table were the creation of a brigade standard for RETRANS operations. This enabled teams across the brigade to interface with each other and share best practices, allowing brigade leadership to evaluate commander capabilities.

Table II (Crew Level Certification)

Table II occurred during the brigade's gunnery window and CPXs 1 and 2 in the fall of 2024 (about seven months from NTC 25-06). Table II key tasks included stressing communication systems to identify equipment shortfalls. We did this by executing communications checks over distance, conducting continuous RETRANS operations, and incorporating sustainment operations. Pre-combat checks (PCCs) and pre-combat inspections (PCIs) required operators to conduct comms checks one week out at five pre-determined points set by the brigade S6 and signal company commander to validate equipment and frequency modulation (FM) communications at a range up to 13 kilometers.

Once validated, teams deployed with their respective battalion and established a hasty RETRANS site based on Systems Planning Engineering & Evaluation

Device (SPEED) analysis conducted by the battalion S6 or RETRANS platoon leader. Hasty RETRANS in the Greywolf Brigade is defined as the establishment of two priority NETs – Command (CMD) and Fires Voice or Data at echelon. Crews were certified by the RETRANS platoon leader/platoon sergeant or battalion S6 OIC/NCOIC prior to Table III. During this table, battalion S6 and RETRANS platoon leadership executed Logistics Package (LOGPAC) operations to sustain their teams. In addition, proper site security was evaluated for each of the teams. This added crucial training tasks to ensure survivability for RETRANS teams.

Key outcomes include synchronization between the brigade S6 and signal company commander, fostering relationships between the sustainment and signal communities, building leader trust and confidence in the FM network, and signal maintenance.

Table III (Platoon/Section Certification)

Table III occurred during the brigade's situational training exercise combined arms live fire exercise training three months prior to NTC 25-06. The purpose of Table III is to certify the RETRANS platoon and battalion S6 sections in an operational environment. Table III took three weeks to execute in support of the cyclic nature of each battalion's rotation into gunnery. During this table, the brigade S6 and signal company commander assessed the following certification criteria. Daily updates were briefed to the brigade commander on the progress of each team:

* Brigade S6/Brigade Signal Company Commander

  - Develop and maintain RETRANS execution matrix to control the battlefield and limit overlapping locations. Matrix should be published over the Joint Battle Command-Platform (JBCP) to battalion command posts and RETRANS platoon leader.

* RETRANS Platoon Leader (PL)/Platoon Sergeant (PSG) and Battalion S6 OIC/NCOIC

  - RETRANS PL/PSG: Using the provided matrix, develop operational orders (OPORDs) and send to team chiefs over JBC-P. Evaluate team chief's execution of troop leading procedures (TLPs). Commander receives all platoon messages to validate the PL's ability to issue clear and concise orders. The signal company first sergeant validates team chiefs' ability to establish a site and certifies PSG's ability to execute LOGPAC in support of brigade RETRANS team.

  - Battalion S6 OIC/ NCOIC: Using the matrix provided, send missions to team chiefs over JBC-P. Evaluate team chief's execution of TLPs. Brigade S6 OIC receives all battalion traffic to validate the battalion S6 OIC's ability to transmit an order in a clear and concise manner. The brigade S6 NCOIC validates the battalion team chief's ability to establish the site and certifies the

NCOIC can coordinate LOGPAC in support of their battalion RETRANS site.

* Brigade RETRANS Team

  - Execute three jumps (one must during limited visibility).
  - Establish two hasty RETRANS sites.
  - Establish three deliberate RETRANS sites.
  - Conduct one Forward Passage of Lines (FPOL)/ Rear Passage of Liens (RPOL) per team chief simulated by a truck having a mechanical failure. Practice immediate action drills (take one net down, bring another net up) to ensure there is limited network outages.

* Battalion RETRANS Team

  - Conduct three Jumps (one must be at night).
  - Establish two hasty RETRANS sites.
  - Establish three deliberate RETRANS sites.

Key lessons learned during this table were the complexity of land management, the importance of cross-communication between signal leadership, consideration of RETRANS locations when selecting main command post locations, and the complexity of FPOL/RPOLs with brigade RETRANS team to ensure limited gaps in coverage.

Table IV: FM Mesh Validation (Brigade-Level Certification)

Table IV occurred during the brigade's FTX, which was our division-level certification prior to NTC 25-06. The purpose of the table was for division observer coach/trainers (OC/Ts) to certify and validate RETRANS operations nested with the brigade's scheme of maneuver.

During Table IV, the brigade S6 and brigade signal company commander participated in the brigade military decision-making process (MDMP) and published a RETRANS execution matrix as part of the brigade OPORD. This matrix helped synchronize battalion S6s and RETRANS PL prior to the brigade combined arms rehearsal (CAR). The following occurred during this table:

* Brigade S6

  - Maintained control of the FM Network.

* Brigade Signal Company

  - Deployed one RETRANS team as an anchor point to establish the initial brigade FM bubble.
  - Maneuvered a second team to a call forward area (CFA) where a hasty RETRANS site was established. On order, established a deliberate RETRANS site at the primary or alternate location predetermined during MDMP.
  - Provided LOGPAC standard operating procedures (SOP).

- **Battalion S6 Teams**
    - Deployed team in accordance with the brigade RETRANS execution Matrix.
    - Provided LOGPAC per SOP.

Key outputs during this table were the brigade/battalion commander's ability to communicate within the FM Network, refinement of CP locations during offensive operations, use of triggers to move RE-TRANS teams from site to site, and the importance of coordination between the signal company commander and the brigade mobile command group comprised of the brigade commander, brigade S3, and field artillery battalion commander.

CTC Rotation (Table V)

While we were successful as an organization, we learned some key lessons to apply to future iterations of RETRANS Tables. The first lesson was how to balance tempo and aggression when emplacing RE-TRANS teams. During the first brigade operation, we were attritted to 5/9 available teams due to an aggressive emplacement plan. Additional emphasis and training on timing and tempo during Table I will increase the overall survivability of our teams.

Our second lesson was the use of JBCP Chat with all the RETRANS teams. This proved invaluable and should be incorporated during Table III. We found great success during our rotation using this chat feature. In addition to internal use, it allowed teams to provide vital intelligence to the brigade. Repetitions during Table III will create more streamlined reporting during operations. Integrating these lessons into our tables will allow Greywolf Signal Enterprise to improve Greywolf's communications and its overall lethality.

Capt. Daniel M. Horoho, 3rd Engineer Battalion

Conclusion

Our goal going into NTC 25-06 was to build upon lessons learned from home station during Tables I-IV to provide secure, rapid, and reliable FM communications. During our rotation, the brigade reaped the benefits of active crosstalk daily between the signal company commander and the battalion S6s to ensure a COP. Further, RETRANS teams acted as critical OPs which resulted in the destruction of one enemy OP, one enemy jammer, and three armored personnel carriers.

These and many other examples of success in the rugged and unforgiving operational environment of NTC validated our implementation of the RETRANS home station training progression and contributed to a successful rotation. NTC OC/Ts agree with this assessment remarking that NTC 25-06 was one of the most synchronized rotations. This is largely attributed to the emphasis on signal operations from commanders and leaders within the Greywolf Brigade at echelon.

About the author

Capt. Daniel M. Horoho is a signal officer with four years of tactical communications experience. He is currently serving as the commander for Charlie Company, 3rd Engineer Battalion, 3rd Armored Brigade Combat Team, 1st Cavalry Division. Horoho has deployed to U.S. European Command and has been to the National Training Center four times. He holds a Bachelor of Science in geospatial information sciences from the United States Military Academy.

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Maintaining Interoperability While Pursuing Innovation
Transformation in Contact

Capt. Ryan Pidcock
7th Army Training Command-Joint Multinational Readiness Center

The Army's Transformation in Contact (TiC) initiative is the most dramatic coordination effort between industry and the tactical edge in the past decade. By driving innovation and organizational change across warfighting functions at brigade and below, the Army delivers more agile capabilities to the warfighter.

Leaders are currently putting higher emphasis on rapidly fielding systems and prototyping to ensure Soldiers and civilians are empowered to learn and experiment with new equipment during Combat Training Center (CTC) rotations. This leads to more lethal, survivable, and mobile formations. Here at the Joint Multinational Readiness Center (JMRC) in Germany, there is an additional criterion used to judge unit readiness and technology on multinational interoperability.

Units rotating through JMRC receive an assessed rating of 0 to 3, based on the effectiveness of their communication, collaboration, and cooperation with multinational units, across the three interoperability domains of human, procedural, and technical factors. With the rapid change of pace and innovation, I recommend that the interoperability domain assessments expand from solely multinational units to include U.S. maneuver brigade interoperability, especially when working with joint forces and multi-domain enablers like Army Aviation. Task-organized as a division level asset, the aviation task force, in a CTC exercise, often operates in direct support of the maneuver brigade. To leverage aviation capabilities, it is essential to be interoperable with battalions, brigades, and division-level echelons.

The core competencies of an aviation task force are summed up by "see/sense, strike, move, and extend" (FM 3-04). These competencies increase a ground commander's understanding of the battlefield, enable more agile movement and maneuver, and increase lethality through sustainment and combined arms fires. Ground brigades who do not integrate manned aviation assets into their scheme of reconnaissance, maneuver, and fires, fail to gain air domain dominance. Without air dominance, brigades rarely leverage multiple forms of contact against adversaries. Considering the current aggressive fielding of new systems ground units are experiencing – such as drones, artificial intelligence, electronic warfare, and command and control (C2) systems – how are maneuver brigades able to maintain interoperability with an aviation task force that is not receiving the same systems?

Communications equipment fielded to ground units involved with TiC include the Tactical Assault Kit (TAK) to maintain a common operating picture (COP), and the Integrated Tactical Network (ITN). Two key waveforms associated with ITN are the Tactical Scalable Mobile Ad hoc network (TSM), a line-of-sight network whose key feature is the simplified use of an organic, self-healing mesh; and the Mobile User Objective System (MUOS), an over-the-horizon capability that replaces the legacy Integrated Waveform (IW).

TAK offers enhanced situational awareness by incorporating position data fed to it through TSM, Long-Term Evolution (LTE) cellular network, and legacy Blue Force Trackers (BFT-2). Of those listed above, aviation units are only equipped with BFT-2. Despite the equipment and capability gaps between ground brigades and aviation task forces, observations made during JMRC fiscal year 2025 exercises provided insight on how units can overcome these challenges and increase interoperability.

During a recent JMRC TiC exercise, the ground brigade, with assistance from the Regional Cyber Center and U.S. Army Forces Command enabled its TAK services to be transported over Non-secure Internet Protocol Router Network (NIPR), allowing non-organic units without TAK devices to view and contribute to the brigade COP using a Windows-based TAK application (WinTAK). Using this method, the brigade and aviation task force achieved a shared understanding of both an airspace picture and friendly situation to successfully deconflict manned and unmanned aerial systems and limit air-to-ground fratricide. During deep attacks in support of the division, the aircraft could be tracked over WinTAK using the aircraft's BFT-2 system. While this position data shared between BFT-2 equipped aircraft and WinTAK systems was successful, the aircraft could not achieve over-the-horizon voice communications with any supported units on ground.

While providing direct support to the brigade during close attacks, position data shared between TAK end user devices and the BFT-2 in the aircraft proved invaluable for pilots, enabling them to understand friendly locations and avoid fratricide. However, air-to-ground voice communications were entirely dependent on joint terminal attack controllers using an unencrypted, ultra-high frequency (UHF) radio, and this voice-only link limited helicopter lethality and sensor-shooter handovers. Even with the successes observed during recent TiC exercises to overcome interoperability challenges, more could be done to achieve higher integration with COPs to enable both brigade fighting and division-shaping operations.

A COP creates shared understanding across echelons and enabling units. For units pushing the limits of innovation, experimentation, and going beyond doctrinal boundaries during TiC, a recommendation is to share TAK data across the Multinational Partner Network and provide access through the Maven Smart System (MSS). This would require the cooperation of several organizations, at echelon, to not only build the cross-domain solution necessary to move TAK data from its native Secured-but-Unclassified Network–Encrypted (SBU-E), but to also build the data connections within MSS. While difficult, I think this is the appropriate direction to better support the warfighter with a unified network, to maintain interoperability with U.S. forces who are behind on fielding C2 systems, and to ensure success with allies.

When coordinating with aircraft during the brigade close fight, three recommendations to improve communications are: make full use of ITN radio capability; include time for testing and troubleshooting TAK messaging to aircraft during the mission command validation exercise; and integrate Link-16 capability at the battalion, brigade, and division level.

We must utilize the dual-channel capability of ITN radios, dedicating one channel for internal communications over TSM, and the second channel to talk on the legacy Single Channel Ground and Airborne Radio System in the aircraft. It is also crucial to engage the Mission Command Support Center and Nett Warrior team to assist with troubleshooting text messages sent from the aircraft's Joint Variable Messaging Format to the ground units' TAK end user devices and Mounted Mission Command-Systems, which is the software upgrade to the ground based Joint Battlefield Command Platform. If lower echelons include ground-based Link-16 stations with battalion and brigade level tactical air controller parties, as well as with the Division Joint Air Ground Integration Center, the maneuver brigade would wield an additional avenue for processing targets. A more robust air-to-ground communications plan during the brigade close fight is critical for increasing lethality while mitigating the risk of fratricide.

When conducting deep attacks in the division area, having voice communications with aircraft is vital. To accomplish this, prepare early by making the satellite access requests for MUOS, including the bridging solution for IW. To accomplish this, the maneuver brigade coordinates with enabler units like the Aviation Task Force to determine the number of users and radio platform types using IW, ensuring a patching solution to improve voice communication with the aircraft is in place. This enables the division and brigade to be more dynamic in taking advantage of opportunities created by the aviation task force.

Technical solutions are feasible but not easy; the correct procedures must also be in place to enable them. Starting during the planning cycle, the unit of action should include all multinational, joint, and enabler units in discussions on capabilities to develop a realistic and robust communications plan across warfighting functions. The Primary, Alternate, Contingency, and Emergency (PACE) communications plan must also be tested at realistic distances. As the plan becomes more defined, communication cards and signaling instructions must be codified and distributed to all stakeholders.

Finally, after publishing the communications annex, enablers must take part in the information collection/fires rehearsals and combined arms rehearsals at echelon. For aviation units to integrate properly, we must also go beyond normal rehearsals and C2 validations and complete to the equivalent of aviation technical rehearsals. Helicopters must test live sensor-shooter handovers between medium and long-range reconnaissance drone operators at a distance. This will ensure greater lethality.

As we continue to transform organizationally as an Army, aggressively pursuing innovation and experimentation, we must maintain interoperability as a high priority consideration during acquisition, fielding, and training to ensure synchronization with our partners and enablers. Otherwise, maneuver brigades risk losing opportunities to increase lethality through combined arms and multidomain operations on a dynamic battlefield.

About the author

Capt. Ryan Pidcock is currently the S6 observer, coach and trainer for the Falcon Team at the Joint Multinational Readiness Center in Hohenfels, Germany. He holds a Bachelor of Arts in political science from Miami University, and a Master of Science in information systems from Depaul University. During his career, he has served as a platoon leader and battalion S6 in the 2nd Infantry Division in Washington; J6 director for the Special Mission Wing, Special Operations Advisory Group in Afghanistan; and company commander in the 516th Signal Brigade in Japan.

Driving Lethality Through Signal Gunnery Validations

Enabling the fight

1st Lt. Courtney Huhta
96th Aviation Support Battalion

In modern large-scale combat operations and multi-domain environments, command and control remains a decisive factor. The 101st Combat Aviation Brigade, a core component of the 101st Airborne Division (Air Assault), mission success in air assault operations rely on our robust, redundant, and resilient communication networks.

Charlie "Cipher" Company, 96th Aviation Support Battalion, is the primary signal company charged with providing expeditionary network support by sustaining the digital lifelines across the dispersed and dynamic aviation operations. The company enables secure and reliable voice, data, and satellite communications in support of air assault planning, execution, and sustainment operations. Cipher Company is uniquely structured with specialized signal assets capable of establishing both upper and lower Tactical Internet (TI), ensuring a seamless digital battlespace from division main to the most forward aviation task force element. The mission spans from establishing tactical network infrastructure to validation of communication nodes that enable brigade combat teams, aviation task forces, and higher echelons to synchronize fires, movement, and logistics in support of deep and close fights.

Training & Validation: Signal Gunnery

To maintain a high state of readiness, Cipher Company routinely conducts signal gunnery exercises to validate and certify teams under realistic operational conditions. These gunnery lanes are not just technical verification, they are mission-rehearsed events designed to simulate degraded, contested, and dynamic communications environments. Modeled after the doctrinal framework from TC 6-02.1, it is a performance-based training strategy aligned with Army Training and Evaluation Outlines, providing structured grading criteria to validate teams and their ability to establish and maintain communications under increasing levels of complexity, troubleshooting, and stress.

Table I begins with individual-level tasks to include: preventive maintenance checks, communications security loading, system configuration, and standard operating procedure development. Soldiers validate their ability to perform duties such as loading encryption keys into KG-175D Tactical Local Area Network Encryptions, configuring Single Channel Ground and Airborne Radio Systems and Army/Navy Portable Radio Communication Model 117G (AN/PRC 117G) radios, and preparing maintenance documentation. Grading criteria for these lanes are evaluated by the OIC or NCOIC and focus on establishing a technical baseline across both upper and lower TI teams.

Table II introduces controlled team-based operations. Upper and lower IT crews do walkthroughs of equipment setup in a low-threat environment. Tasks include assembling the Large Communications Node-Tactical, Satellite Terminal Setup, and Command Post Node, and demonstrate technical accuracy with each lane.

Table III implements time standards and movement. The upper TI teams establish nodes within one hour during the day and two hours at night; whereas lower TI teams conduct retransmission (RETRANS) lanes under 45 minutes during the day and 90 minutes at night. The lanes are conducted in austere environments and focus on "jumps" in order to rehearse mobility, tactical setup, and reestablishment of communication in dynamic conditions.

Table IV is the culminating event of signal gunnery where teams are tested on having upper TI systems for a battalion or brigade level operation solidified in 30 minutes during the day or one hour at night. RETRANS teams must set up their site in 25 minutes during the day, and 45 minutes at night.

All training is planned and executed in accordance with the Army's 8-Step Training Model, integrating operation orders, risk assessments, training aids, and formal after-action reviews. The rigorous training for Charlie Company Soldiers allows Cipher to deploy agile signal teams to forge vital communication links that empower the 101st to dominate in the battlefield, truly earning their place as the "Voice of Destiny."

About the author

1st Lt. Courtney Huhta enlisted in 2018 as a signal operations support specialist (25U) in the Illinois Army National Guard before commissioning into the Signal Corps in 2022 with a Bachelor of Arts in journalism. She currently serves as the range extension platoon leader and executive officer in Charlie "Cipher" Company, 96th Aviation Support Battalion, 101st Combat Aviation Brigade. Her previous active-duty assignment includes the 2nd Infantry Division Artillery as the Joint Network Node platoon leader.

2nd TSB Unveils Property Accountability Report & Tool

Management efficiency

Laura Gonzales
2nd Theater Signal Brigade

The 2nd Theater Signal Brigade's Data Engineering Office (DEO) is excited to share updates on the S4 Property Accountability Report and the continued development of the S4 Property Accountability Tool. Both tools enhance property management efficiency and improve data accuracy across the theater. The DEO team, in close collaboration with the brigade's Logistics Management Directorate, developed a Power BI report that meets both the Logistics Management Directorate and the brigade commander's requirements. This report has undergone several iterations, with input from all stakeholders, to refine data sources, improve layouts, and optimize integration with key platforms.

What is the Property Accountability Report?

The S4 Property Accountability Report surpasses traditional data documentation, embodying a crucial advancement in the modernization of property management and the enhancement of operational efficiency for S4 personnel. Key initiatives include:
*   Collaborative requirements development in partnership with the brigade commander to ensure alignment with operational goals.
*   Completion of tool development, confirming operational readiness for deployment.
*   Introduction of the S4 Property Review Report, which improves the assessment of G-Army data.
*   A comprehensive demonstration of the tool for data council offers, highlighting its scalability and efficacy.

This report positions Logistics Management personnel to optimize property management practices and achieve greater accountability.

Strengthening Property Accountability

By integrating data-driven accountability, Logistics Management personnel are empowered to respond with increased agility, conduct more thorough audits, and achieve greater accuracy in resource management. This initiative not only boosts operational efficiency and standardization but also enhances tracking capabilities, resulting in a more streamlined and proactive approach to property oversight.

Key Milestones in Development & Deployment

The journey to develop and deploy the S4 Property Accountability Tool has been a collaborative one. Both teams, along with the brigade commander, have collaborated closely to establish a framework that aligns with operational requirements. This joint effort has not only addressed the evolving needs of the Logistics Management team but also ensured readiness for real-world implementation.

The initiative reinforces scalability and effectiveness, encouraging broader organizational adoption.

A comparative analysis of G-Army versus Army Vantage illustrates the progress made as the report successfully transitioned through development, testing, and production environments. Logistics Management personnel conducted a thorough review of navigation and usability, resulting in updates to the data tables.

Additionally, a data diagram dictionary and tactics, techniques, and procedures documents were created for reference. This framework enables Logistics Management teams to assess G-Army data via daily updates from SPECTRUM, thereby diminishing reliance on physical inspections.

Why It Matters and What's on the Horizon

The S4 Property Accountability Report and the continued development of the S4 Property Accountability Tool are not just tools; they are essential components. They are game-changers that provide users with a host of benefits, including:
*   **Enhanced Decision-Making**. The integration of real-time G-Army data with daily updates from SPECTRUM facilitates improved analysis, effectively reducing the necessity for manual verification processes.
*   **Increased Accuracy**. The implementation of automated data validation significantly minimizes errors, ensuring reliable tracking of assets and maintaining financial accountability.
*   **Optimized Workflows**. This report streamlines operational processes by decreasing paperwork and offering a centralized digital platform for property reviews.
*   **Scalable for Theater-Wide Application**. This initiative is designed with future growth in mind, establishing a robust foundation for broader implementation across various units.

Through ongoing enhancements, this report and the accompanying tool are set to become integral to our operational success. They will offer actionable insights that foster long-term improvements in accountability and effectiveness, paving the way for even more exciting developments in the future.

Offsite fosters discussion for 'heavy' but necessary topics

State of change

Article, photos by Laura Levering
U.S. Army Signal School

In an organization where one of the constants is change, keeping up with the latest can be a challenge. To address these challenges and other topics, staff primarily from the U.S. Army Signal School and 15th Signal Brigade gathered for an offsite June 10.

"We are in very interesting times … there is a lot to talk about, and we're squeezing this into one day," said the 43rd Chief of Signal and U.S. Army Signal School Commandant, Col. Julia Donley. "Command Sgt. Maj. [Lisa] Gandy and I … we're in this every day listening to what's going on out there," she continued.

The forum included a series of briefings intended to convey the direction the Signal Corps is heading in the future while generating discussion.

"This is an exchange of information among the people who are going to have to make things happen in the institutional and the operational Army," said John Batson, U.S. Army Signal School deputy commandant.

"We are not going to teach what we are teaching today, years from now," Donley added. "It's just the way the Army is headed."

The Network Integration and Operations, Army Capability Manager-Network & Services (ACM-N&S) branch chief joined in virtually, kicking off the briefing portion with a presentation on Next Generation Command and Control, or NGC2. ACM-Tactical Radios leadership provided insight on the evolution of radio data networks, ranging from Legacy to C2 Fix and Integrated Tactical Network (ITN) to NGC2 (4th Infantry Division prototype). Sections within the Signal

Maj. Phil Dowd, Army Capability Manager-Tactical Radios Operations branch chief, presents information related to Army modernization initiatives.

School that briefed include Training and Development, Signal-Mobile Advanced Readiness Training, Office Chief of Signal, and Resource Management.

C2 Deliberate Transformation, C2 Transport, a review of military occupational specialties (MOS) current knowledge/skills (with a focus on what is needed in the future), and strategic budgeting were among numerous topics briefed and discussed.

Each presentation was followed by an opportunity to ask questions, but staff was encouraged to engage in discussions at any point of a presentation, which occurred numerous times throughout the gathering.

In closing, 26th Regimental Command Sgt. Maj. Lisa Gandy said she appreciated "all of the back and forth" discussions, noting that it would be used to help inform where they are heading.

"We are in interesting times, as all of you know, with all the transformation and lots of things going on, and we cannot keep pushing forward without all of your ideas," Gandy said.

Donley said she hoped everyone was able to gain a clearer picture of where the Signal Corps is heading, noting that their response would be heavily considered when making decisions about the future.

"I really need feedback from everybody as to how it's going to impact all of you," Donley said. "Start thinking about what we're going to have to change, because we absolutely have to change."

Ravunda Graves, U.S. Army Signal School, asks a question during the offsite hosted by the Signal School and 15th Signal Brigade.

Enabling Freedom of Maneuver in the EMOE
Modernizing the 25E

Sgt. Maj. Nicholas A. Perez-Santalla
U.S. Army Forces Command

Earlier this year, I had the honor of leading the Fiscal Year 2025 (FY25) 25E Critical Task Site Selection Board (CTSSB). For those of us in the military occupational specialty (MOS), this was not just a routine review of tasks; it was a chance to reimagine how our Soldiers manage and maneuver within one of the most contested environments in modern warfare: the electromagnetic operational environment (EMOE).

What made this board truly impactful was the range of expertise at the table. This was the first hybrid CTSSB where we were able to bring together 25Es from across the active Army, National Guard, and Reserve components, as well as major commands like Army service component commands, corps, divisions, and Security Force Assistance Command. These were not just participants; they were seasoned leaders who have operated across the full spectrum of conflict.

The discussions we had were frank, sometimes tough, but always grounded in the reality of today's operational demands. We were not just thinking about frequency assignments anymore. We were wrestling with how our MOS must evolve to support distributed operations, joint integration, and emerging threats, particularly those posed by near peer adversaries that are actively trying to deny us the very spectrum we depend on.

Shifting Role of the 25E

In recent years, the EMOE has transformed from a largely technical concern into a critical element of military operations. It's no longer just about managing radio frequencies or issuing assignments. The EMOE has become a contested, congested, and dynamic environment that affects everything from precession fires; position, navigation and timing (PNT); unmanned aerial systems (UAS), and mission command. As adversaries invest heavily in electromagnetic warfare (EW) and spectrum denial capabilities, the Army must ensure it has the expertise and infrastructure to not just operate, but maneuver freely within the EMOE. That is where the 25E comes in.

The role of the 25E spectrum manager has expanded significantly. Today, these NCOs must be ready to support electromagnetic attack (EA), coordinate closely with cyber and intelligence teams, understand direction finding techniques, resolve interference, and align efforts with joint, interagency, and multinational partners.

These are not optional skills; they are mission critical. And they require seamless integration with targeting, maneuver, cyber, and command and control elements. As laid out in Joint Publication (JP) 3-85, the modern 25E must be an enabler across all warfighting functions (WfF). This shift is not abstract. When we talk about long-range precession fires, we talk about systems that depend on uninterrupted spectrum access for both guidance and targeting. When we deploy future vertical lift platforms, we're relying on secure spectrum links for navigation and data sharing. And when we execute distributed operations under Army 2030, we are fundamentally depending on spectrum continuity to maintain synchronization and tempo.

Building Operational Readiness

When we convened the FY25 CTSSB, our purpose was clear: ensure the 25E MOS remains aligned with the realities of modern warfare. That meant updating our tasks to reflect operational demands; not just in theory, but in practice.

One of the biggest recommended additions we made was a task focused on supporting EA requests within the Continental United States (CONUS) and U.S. territories and possessions. This is not something we can treat as an afterthought. The rise in threats to domestic infrastructure, both from malicious actors and unintended interference, makes it essential for spectrum professionals to be ready here at home, not just overseas. This requires close coordination with
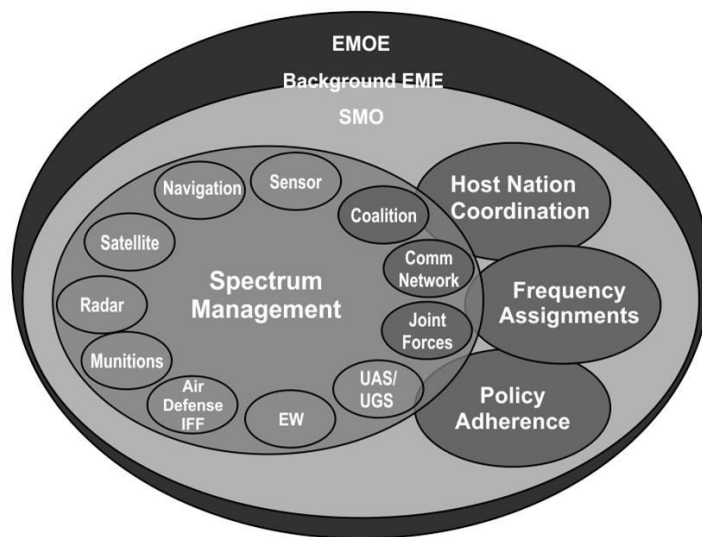
LEGEND

Comm	communications	IFF	identification friend & foe
EME	electromagnetic environment	SMO	spectrum management operations
EMOE	electromagnetic operational environment	UAS	unmanned aircraft system
EW	electronic warfare	UGS	unmanned ground system

civilian authorities like the Federal Communications Commission (FCC) and the National Telecommunications and Information Administration (NTIA), as well as Army installations. It is grounded in regulations such as Chairman Joint Chiefs of Staff Manual (CJCSM) 3320.01D and Army Techniques Publication (ATP) 6-02.70 .

Our responsibility to the operational force is to clearly define ownership of spectrum requirement coordination, from the maneuver battalion level to the Pentagon, and to formalize this ownership through this task and other authoritative efforts. This eliminates processing time, confusion, and combat service support to enable realistic training at home station across the Army.

We also refined our focus on joint interoperability. The EMOE does not stop at Army lines. 25Es must be capable of working alongside their counterparts in the Navy, Air Force, Marine Corps, Space Force and allied forces. That means aligning with joint doctrine – specifically JP 6-0 and understanding how to integrate into joint and combined staff operations. Interoperability is not just a buzzword; it's the difference between synchronized fires or fractured effects. Part of our effort involved taking a serious look at emerging tools.

We received briefings on systems like the Electromagnetic Warfare Planning and Management Tool (EWPMT) and the Spectrum Situational Awareness System (S2AS) from Army Futures Command (AFC) Army Capability Manager- Electromagnetic Warfare (ACM-EW). These tools are not perfect yet, but they are the future. Being part of the development without 17-series counterparts is crucial to providing shared understanding of the EMOE.

Collaboration Is Combat Power

One of the most important themes that came out of this year's CTSSB was the need to embed the 25E deeper into operational planning – not just in G6 shops, but across the staff. That means making sure spectrum managers are in the room when decisions are made about maneuver, intelligence, fires, and cyber. EMOE considerations cannot be bolted on after the fact. They must be integrated from the start. To do this effectively,
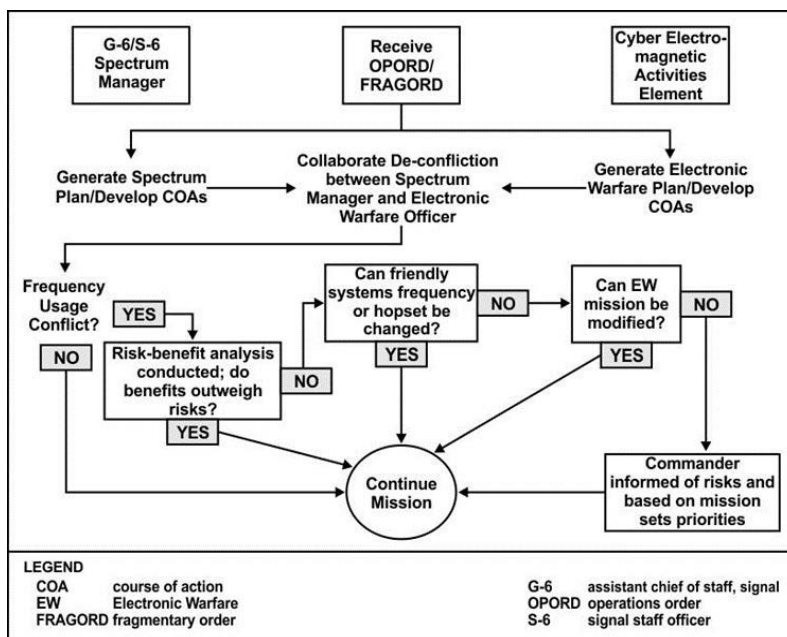

Diagram of the ATP 6-02.70 Staff Collaboration Process

25Es need to understand how to speak across warfighting functions. That includes working closely with signal intelligence (SIGINT) analysts, targeting and cyber planners, and even legal advisors to ensure compliance with international rules and authorities. This cross-functional approach is already happening throughout strategic headquarters. It is time we brought that same mindset into planning and training across all echelons.

We also addressed one of the cultural challenges inside the MOS: the perception that 25Es operate in isolation or are solely responsible for frequency assignments. That view is outdated. Today's 25Es are operational enablers who contribute directly to mission success. The CTSSB placed emphasis on doctrinal alignment and standardized tasks to ensure 25Es can operate confidently at all echelons, from the tactical edge to strategic level planning.

This collaboration also extends to our counterparts in the 17-series Career Management Field (CMF), whose expertise in cyber operations and EW compliments the spectrum focused role of the 25E. Many 25Es today operate directly within G3 Cyber Electromagnetic Activities (CEMA) sections, where they work side by side with cyber professionals to synchronize effects across the EMOE. This integration reflects the Army's recognition that spectrum dominance cannot be achieved in isolation – it requires persistent, coordinated action across the cyber, intelligence, and electromagnetic spectrum communities.

Strengthening the NCO Corps in 25E

Something we cannot afford to overlook is that the 25E MOS is made up entirely of NCOs. That is both a strength and a responsibility. We often emphasize the technical expertise required in this field, and rightly so; however, leadership must remain at the core of everything we do.

A strong spectrum manager is not just a good technician; they're a team leader, a mentor, a trainer, and a standard bearer. During the CTSSB, we reinforced this by incorporating leadership expectations into how tasks were written and evaluated. We also discussed

improving professional development pathways, including increasing access to NCO Education System (NCOES) opportunities and embedding leadership challenges at unit level training events.

Maybe most importantly, we emphasized the 25E's role as an educator. Whether briefing a commander on EMOE vulnerabilities or explaining interference risks to junior Soldiers, 25Es must be ready to teach, coach, and mentor. That demands more than technical skill; it requires confidence, clarity, and the ability to translate complexity into actionable insight. It also requires time management, because none of this replaces the core NCO duties of counseling, discipline, and Soldier care.

Building a "Future Ready" 25E Force

The 2025 CTSSB was not just an administrative update; it was a deliberate effort to position the 25E MOS for the future fight, whatever that might be. We grounded our recommendations in doctrine and pushed ourselves to think operationally, anticipate threats, and invest in the leadership and tools our NCOs need to thrive in a contested EMOE. That future will not be easy.

The EMOE is constantly shifting, congested by commercial use, contested or denied by near-peer adversaries, and shaped by emerging technologies. Our Soldiers will face jamming, spoofing, surveillance, and cyber-physical threats, but if we train them right and equip them with the mindset and mission understanding, they will not only survive… they will dominate. This will require more than updates to training manuals, critical tasks, or equipment lists. It will require a cultural shift. We must foster a corps of 25Es who are not only technically proficient, but also agile, proactive, and deeply engaged with the broader mission. That means encouraging innovation, sharing best practices, and staying in tune with the evolution of joint and interagency electromagnetic spectrum operations (EMSO).

In the end, our goal is not simply to manage the EMOE; it is to exploit it. We must shape it in ways that enable freedom of maneuver and allow our EW counterparts to deny it from our adversaries. To do that, we need leaders. We need mentors. We need warfighters in the truest sense who just happen to be experts in one of the most complex and consequential environments on today's battlefield.

About the author

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US Must Harden Space Ops Against China and Russia

Countering the invisible war

Capt. Adrian Pickett
2nd Squadron, 3rd Cavalry Regiment

Russia's focus on Starlink and space-based assets during its ongoing military operations has raised concerns about countering Western space-enabled communications and intelligence platforms. Russia's approach includes targeting Starlink, which provides a significant battlefield advantage in Ukraine, and attempting to jam or spoof Starlink transmission using advanced electronic warfare (EW) platforms like the Tirada-2S and Tobol systems. Russia has also explored cyberattacks against the Starlink network and the possibility of targeting ground terminals or uplinks with kinetic or cyber-hybrid strategies.

Russia's strategic doctrine classifies space as a critical warfighting domain, aiming to deny or degrade adversaries' access to space assets, particularly for intelligence, surveillance, and reconnaissance (ISR); navigation, and command and control (C2). Russia has tested kinetic anti-satellite (ASAT) missiles and is developing ground-based systems that can blind, dazzle, or disrupt satellite sensors and communications.

Russia is utilizing EW platforms to target GPS, satellite communications (SATCOM), and drone control links, demonstrating its ability to interfere with commercial and military satellite links. NATO and U.S. forces focus on resilience by hardening space-based communications, improving anti-jamming technology, and diversifying low Earth orbit (LEO) and medium Earth orbit (MEO) satellite architecture. Future systems will feature proliferated LEO constellations for redundancy and survivability under EW and kinetic threats.

China's First-Strike Strategic Aspiration

China and Russia are increasingly concerned about the U.S.'s space-based capabilities, particularly Starlink and other LEO satellite constellations. As the People's Liberation Army (PLA) modernizes, it strategically focuses on counter-space operations and EW to deny the U.S. and its allies a space advantage in future conflicts. China focuses on countering Starlink's military potential through a defensive strategy that includes offensive space, EW, and cyber capabilities. Starlink's dual-use capability, which has been successful in Ukraine, has led to research advocating for developing systems to track, jam, or destroy satellites. China is also exploring swarm targeting using AI-enabled satellite tracking systems. Integrating EW and cyber capabilities under one command allows China to attack satellite networks in multiple ways.

China is investing in ground-based EW platforms that can jam U.S. military SATCOM, GPS, and commercial networks like Starlink and developing AI-based spoofing that can confuse navigation and ISR data. Then, we are addressing China's space threat, which the U.S. addresses through expanding resilient satellite constellations, hardening against EW, and integrating with allies through shared space defense architectures. This strategy aims to disrupt, degrade, or destroy space-based assets through EW and related means, triggering an accelerated space resilience race.

The United States must employ resilient technologies, joint deterrence strategies, and active diplomacy to counter China and Russia's attempts to weaponize the space and EW domains. By strengthening alliances and promoting norms, the U.S. can defend its interests and uphold the International Space Organization in the new era of contested space.

China and Russia have a strategic doctrine that views space as a warfighting domain, with EW being a key pillar of Russia's A2/AD strategy. The PLA Strategic Support Force (SSF) integrates space, cyber, and EW missions under Russian Aerospace Forces and EW brigades. Primary concerns include Starlink enabling C2, ISR, and drone swarming; U.S. space dominance threatening strategic autonomy; and Starlink supporting Ukraine's battlefield communications and ISR. Advanced PLA cyber units can target SATCOM ground stations and Starlink uplinks, while ground-based systems can jam GPS, SATCOM, and radar.

Space domain awareness rapidly improves space tracking and monitoring through AI and sovereign space sensors. Domestic LEO constellations are developing Guowang, which relies more on denial than competition. Both nations see Starlink and U.S. space-based infrastructure as strategic vulnerabilities to exploit in a conflict.

In conclusion, the U.S. must combine resilient technologies, joint deterrence strategies, and active diplomacy to defend its interests and uphold the International Rules-Based Order (IRBO) in the new era of contested space.

Capt. Adrian Pickett is a signal officer assigned as a battalion communications and information systems officer (S6). The views presented in this commentary are those of Pickett and do not necessarily reflect the views of the U.S. Defense Department or any of its components.

AESMP Employs Continual Improvement

ServiceNow

Edward Jones
U.S. Army Enterprise Service Desk

On Sept. 21, 2023, the Army Chief Information Officer (CIO) and Deputy Chief of Staff G6, in coordination with U.S. Army Cyber Command and U.S. Army Network Enterprise Technology Command, transitioned Army Information Technology Service Management (ITSM) operations to the Army Enterprise Management Platform (AESMP). The transition included consolidating Non-Classified Internet Router Network (NIPRNet) and Secret Internet Router Network (SIPRNet) service management platforms and services to globally accessible, cloud-based, ServiceNow-based platform solutions. The consolidation of Army's six legacy ITSM systems and more than 1.2 million customers into one enterprise-level ServiceNow system was successfully completed in less than one year.

Following the successful implementation of AESMP, efforts are now concentrated on enhancing its functional and technical capabilities through the addition of new features and improvements to core functionality – putting the Information Technology Infrastructure Library's continual service improvement practice into tangible use for the field.

At the forefront of every new technology release into Army's enterprise environment is security, and that is indeed a critical focus across the platform as it evolves globally. Other key focus areas are: accountability and visibility of Army's assets (e.g. hardware and software; integration of Virtual Agent (VA) into other Army technologies, such as Microsoft Teams, to allow easy transitions onto the platform; and the enhancement of the customer/user experience during service support/request interactions on the platform.

Additional improvements to support under the AESMP umbrella include simplification of the service desk call tree to ensure calls are routed correctly and expeditiously. These three areas enhance the platform functional and technical capabilities across the Army and are briefly discussed below.

Hardware and Software Management

AESMP rolled out the ServiceNow Information Technology Operations Management (ITOM) module for asset discovery in 2023, and the Hardware and Software Asset Management (HAM and SAM) modules in 2024. AESMP Asset Discovery uses more than50 Management, Instrumentation, and Discovery (MID) servers deployed across the entire Army enterprise, both NIPR and SIPR, to discover networked hardware devices, the software installed on those devices, and the relationships between them. Asset data is also ingested from interfaces with the Army's Tier-0 Microsoft Endpoint Configuration Manager (MECM) system, which provides information about systems on the legacy Active Directory domains, and from Microsoft's Intune cloud service, which provides data about systems that have migrated to the new Army Unified Domain System (AUDS).

As of June 1, AESMP is tracking more than 1 million hardware devices, with more than 70 million installed software packages across those devices.

The HAM module allows Army hardware asset managers to track the lifecycles of the hardware for which they are responsible, from purchasing to retiring. They work with the AESMP team as needed to upload data about devices that are not discoverable on the network, and track costs, end of support dates, and device locations and assignments at each echelon.

The SAM module allows Army software asset managers to track license purchases via entitlement records, including costs and license renewal or expiration dates, and license consumption via allocation records, noting which user or device has that software installed and if more or fewer licenses were purchased than needed.

AESMP Virtual Agent (VA) Integration

The AESMP Platform Engineering team is working to integrate AESMP with Army 365 Teams before end-of-year 2025. Combined with the existing bring your own device (BYOD) solutions available, this integration will put AESMP "in the pocket" of every Army user.

AESD Call Tree Simplification

Redesign of the Enterprise Service Desk call tree simplifies the call tree for our customers by reducing the number of prompt options, allowing quicker navigation connecting them to the best available service agent and faster support *(see chart on next page)*. Platform improvements specifically for the Army are often identified from feedback on AESMP operations and user experiences. Because AESMP is deployed as an enterprise tool, improvement ideas and feedback from stakeholders are essential to ensuring the Army derives the maximum value from its investments in

Thank you for calling the Army Enterprise Service Desk.
Front End Message Announcements if required

If you are calling about a current open case, or, want to submit a new case, you can save time by going directly to our customer service portal at h t t p s colon forward slash forward slash w w w dot a e s m p dot army dot mil. Here you can check your current open case status, browse the knowledge base for self-help fixes or submit a self-service ticket. If there is an issue preventing you from logging into our portal or you would like to speak to an agent, please remain on the line for the next available agent.

Please enter your 10-digit DoD ID number followed by the pound key.

"You entered"
(dod) XXXXXXXXXX
Is this correct, press 1 for yes or 2 for no"

Please listen carefully as our options have changed. We have added the Army Training Help Desk. If you are calling for support from the Army Enterprise Service Desk press 1. For the Army Training help Desk press 6

Prompt 1: ATHD or AESMP: Main Menu

① ATHD

For Unclassified NIPR systems and services press 1
For Classified SIPR systems and services press 2

Prompt 2: Classification Menu

If you are calling for status of an existing case, press 1.,
For support in the CONUS theater press 2.,
For the Korea theater press 3.,
For the Pacific theater, press 4.,
For Procurement Systems Press 5.,
To return to the Main Menu press the star key.,
To repeat these options press 9.

① Unclassified

① Ticket Status Updates
② CONUS
③ Korea
④ Pacific
⑤ Procurement

Please remember this is not a secure line.
If you are calling to status an existing ticket, press 1.,
For support in the CONUS theater, press 2.,
For the Korea theater, press 3.,
For the Pacific theater, press 4.,
To return to the Main Menu press The star key.,
To repeat these options press 9.

② Classified

① Ticket Status Updates
② CONUS
③ Korea
④ Pacific

the service across the enterprise and positive impact on the operational environment. Additionally, stakeholder feedback helps determine where Army resources need to be focused to ensure future configuration and customization improvements result in added value to the Army's IT enterprise.

AESMP provides users with a single point of entry for Army IT service requests and incidents. AESMP is permissions-based, granting general users the ability to request IT services and report issues through an online portal while IT service personnel can route and log activities within the system. The AESMP provides unprecedented network insight and the ability to track, report, and measure service performance across the Army's IT environment.

AESMP supports Army convergence, digital transformation, and unified network operations. AESMP is the future, and the future is now.

About the author

Edward Jones has a career spanning over four decades in communications and networks operations across the Air Force and Department of Defense as an Army civilian. His experience across multiple commands reflects a deep-rooted understanding of military communication strategies and operations. Jones is a graduate of National Defense University. He is currently a member of the SAIC team supporting U.S. Army Cyber Command as they transitioned the Army to the Army Enterprise Service Management Platform.

Lessons from SAG-U and a Path Forward

Securing coalition communication

Lt. Col. Ricardo Layne, Capt. Kenneth Musselwhite
Security Assistance Group-Ukraine

The need for seamless and secure communication within multinational coalitions is paramount.

Rapid establishment of the Security Assistance Group-Ukraine (SAG-U) Network demonstrated a systemic vulnerability: a tendency to underestimate the importance of quickly establishing robust unclassified information environments. This oversight delayed coordination, introduced security risks, and consumed valuable resources in reactive problem-solving. SAG-U specifically required a commercial network accessible to coalition partners, providing reach-back support to essential systems and enabling access to communication applications restricted on Department of Defense Information Network–Authorized (DoDIN-A) networks. Currently, no existing Department of Defense solution offers the necessary flexibility and scalability to meet these needs for both allied partners and U.S. personnel.

This analysis details the challenges encountered, and proposes recommendations to institutionalize a more proactive, agile, and secure approach to coalition network development.

During SAG-U's initial deployment, a critical capability gap emerged – the lack of an operationally ready unclassified network for real-time coordination with multinational partners. This absence directly hindered operational tempo, degraded shared situational awareness, and created friction within the coalition's operational rhythm. Without a dedicated network, partners struggled to share vital information efficiently, causing delays in decision-making and execution. Reliance on insecure, ad-hoc communication methods increased the risk of data breaches and compromised sensitive information.

This gap also impeded the integration of diverse technological systems essential for effective collaboration. Resources were diverted to develop temporary and often inadequate solutions, impacting immediate effectiveness and creating long-term sustainability challenges. The SAG-U experience underscored a broader operational vulnerability in establishing and securing multinational information environments during crisis response. While certain specific classified networks exist for sensitive exchanges, they did not address the need for day-to-day, unclassified collaboration crucial for mission execution.

Classified networks, while secure, are designed for high-level strategic and operational communication. Army doctrine (HQDA, 2019) emphasizes that interoperability is key to information flow and is an advantage in joint and multinational operations. However, these networks are insufficient for routine tasks (planning, logistics, administration, and coordination with non-military entities) that don't require high classification.

The absence of a unified unclassified network forced partners to rely on insecure methods like commercial email and personal devices, increasing vulnerabilities. A truly interoperable network, as defined by HQDA (2019), requires compatibility, standardization, agility, capacity, flexibility, mobility, redundancy, reliability, scalability, and timeliness – all of which were lacking in the initial SAG-U setup.

To address these deficiencies, a deliberate approach to establishing unclassified information environments is vital. We must prioritize investment in scalable, flexible network solutions deployable and adaptable to unique coalition requirements. Furthermore, a culture of proactive cybersecurity and continuous improvement is essential to ensure resilience against evolving threats. To achieve this, four key recommendations are proposed.

First, developing a Modular Multinational Network Toolkit will provide a pre-configured, rapidly deployable unclassified network solution. This toolkit should be scalable, adaptable to varying partner capabilities, and include hardware (portable devices, secure routers, satellite systems), software (secure platforms, encryption tools, interoperability protocols), and procedural components (standardized procedures, cybersecurity guidelines, training materials). Security tiers should align with partner capabilities, balancing accessibility with security.

Second, establishing Expedited Security Authorization Pathways will allow mission commanders to operate with speed and maintain robust cybersecurity. This involves pre-approved security frameworks, System Security Plans (SSP), and provisional Risk Management Framework (RMF) pathways aligned with Army policy. The Afghan Mission Network (AMN) experience (Serena et al., 2014) demonstrates that even a decade into a conflict, establishing a network for information sharing took significant time. Streamlining authorization processes will accelerate deployment without compromising security.

Third, integrating coalition network requirements into operational planning is crucial. Unclassified network needs must be incorporated into all phases of crisis response planning, concept development, and exercises. This proactive approach ensures partners are equipped with the necessary tools and protocols before deployment. Lessons from AMN (Serena et al., 2014) highlight the importance of early integration efforts.

Fourth, creating Multi-Tiered Partner Integration Protocols will effectively incorporate partner equipment with varying levels of technical and cybersecurity maturity. Standardized procedures should allow for graduated access based on assessed capabilities, ensuring all partners can contribute securely.

Serena et al. (2014) emphasized the varying equipment and security protocols among partners. Robust security measures at each tier (advanced encryption, multi-factor authentication, continuous monitoring) are essential.

Finally, training and equipping rapid information management teams will ensure swift deployment of secure coalition information environments. These teams require expertise in both technical deployment and operational integration, along with the latest communication technologies. Regular exercises and simulations are vital for maintaining readiness. The SAG-U experience confirms that unclassified network interoperability is not a technical afterthought, but a fundamental operational necessity. Treating these networks as peripheral introduces unacceptable risk. A proactive, planned approach – incorporating the recommendations above – is essential to ensure coalition forces can communicate, collaborate, and operate effectively in an increasingly complex world.

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Signal Officer Planning for CPs during LSCO

Roles and responsibilities

Lt. Col. Joe Kaminski
3rd Infantry Division

The ongoing conflict in Ukraine has confirmed the vulnerability of traditional command post (CP) structures that were designed for low-threat, counter insurgency environments. Static, easily detectable CPs, both visually and in the electromagnetic spectrum, are highly susceptible to modern intelligence, surveillance, reconnaissance (ISR) capabilities, and long-range precision fires against near-peer competitors.

This article identifies signal officers' responsibilities and roles within Mission Command, the planning considerations through both science and art, to support CP emplacement, and proposes a practical framework for enhancing CP survivability in large-scale combat operations (LSCO). These lessons were learned by the 3rd Infantry Division (ID) G6 from a recent deployment.

The 3rd ID has reimagined the role of the signal officer when planning for CPs during LSCO. For decades, U.S. military operations, primarily focused on counterinsurgency and counterterrorism in the Global War on Terror, relied on stationary CPs operating within a force array of a wide area security construct. Signal officers focused on "making their systems work" and were less concerned about command and control (C2) CP nodes maneuvering on the battlefield in a combined arms maneuver environment. However, the emergence of near-peer adversaries with advanced ISR, loitering munitions, and long-range strike capabilities within a more defined forward line of troops necessitates a fundamental shift in how the Army structures, deploys, and secures its C2 nodes and the requirement to maneuver CPs on the battlefield to enable survivability.

The Problem

Armored formation CPs, often large and immobile, present lucrative targets for adversaries seeking to disrupt or destroy C2 capabilities. Within 3rd ID, our threat environment dictated if we were going to consolidate CPs to increase C2 effectiveness or if we were to distribute CPs that would lead to less C2 effectiveness but increase survivability. We found that consolidated capabilities of both our Joint Air-Ground Integration Center and ISR processing, exploitation, and dissemination strike cells helped in shaping the deep area while brigade CPs were forced to be more distributed and mobile in the close fight.

CP vulnerability stems from several factors:

* **Signature**. Adversaries can exploit large physical CP footprints, electromagnetic emissions, and predictable patterns of life. This makes traditional CPs easily detectable by sophisticated ISR systems.

* **Lack of mobility**. Stationary CPs are inherently vulnerable to targeting by adversaries once located, especially by long-range artillery and missile systems.

* **Dependence on vulnerable infrastructure**. CP reliance on host nation fixed infrastructure, such as power grids and communication networks, creates critical dependencies that adversaries can exploit through both kinetic and non-kinetic means.

CP Emplacement

The 3rd ID identified a gap in understanding for signal officers' role in support of Mission Command and planning within the division during a LSCO fight. The 3rd ID developed and utilized a well-defined framework for CP emplacement and survivability that involved synchronization between the G6/S6, the division higher headquarters battalion (HHBN), and the G3/S3 current operations (CHOPS).

3rd ID signal officers are responsible for planning CP emplacement within the division; we accomplished this by identifying where signal assets needed to be placed, within time and space, on the battlefield while tailoring the communications package, a la carte style, based on mission requirements. Our signal officers coordinated this effort through the unit's operational synchronization matrix with both the G5 planners to align the CPs with the operational plan and with the G2 planners to identify the enemy's kinetic and non-kinetic capabilities during the fight.

Finally, our signal planners planned with the Cyber Electromagnetic Activities section and G39 to plan electronic warfare (EW) masking and deception operations to increase survivability. This plan was nested with all warfighting functions through the commander's visualization, Targeting Working Group, and then it was approved through the Targeting Decision Board.

After approval for the movement of the CP, the division HHBN was responsible for the movement of the CPs from "point-A to point-B" within the plan that the G6 provided. HHBN controlled and planned the movement chalks of each section, setup checkpoints, and provided C2 for overall movement. When the CP or communications node was ready to displace, the G3 CHOPS owned the Mission Command transition between nodes to control the fight. Each warfighting section had well defined Go/No Go criteria to help inform the commander on the capabilities of the Mission Command node's transition between CPs.

The Science

To enhance CP survivability in LSCO, the 3rd ID G6 adopted a more agile, distributed, resilient approach to employment by developing a CP survivability

posture framework. This framework is categorized into four separate threat levels and provides guidelines for tailoring CP configuration, manning, and communication capabilities:

* **Permissive threat**. CPs can operate under canvas, both static and consolidated, with minimal risk. The CPs communication systems support traditional military systems that are non-mobile and have high-power draw; this enables consolidation of highly technical equipment and personnel to run these systems.

* **Low threat**. CPs remain static and consolidated but employ camouflage, concealment, and counter-fire measures to mitigate enemy harassing fires. The CP is outside of enemy's ISR close strike range and outside of the enemy's ability to mass fires but is within enemy's harassing fires capability; the CP possesses counter-mortar, rocket, or artillery systems to facilitate protection. Communication systems can support at-the-halt (ATH), Upper Tactical Internet (TI) and nodal communication systems.

* **Medium threat**. CPs either disperse into smaller, mobile nodes while in the open or consolidate within hardened structures while utilizing Commercial-off-the Shelf communications for low-signature operations. The CP is within the enemy's ISR strike and artillery range while the CP possesses counter-mortar, rocket, or artillery systems to facilitate protection. During this time, a commander has options to either disperse CP nodes or to consolidate the CP into a harden building or sub-terranean location. For dispersed CPs, network transport like proliferated low Earth orbit (pLEO), small basebands, and virtualized servers support on-the-move communications. For consolidated CPs, commercial communication systems that operate KU band, 4G LTE, or 5G network transport support integration into a software defined Wide Area Network construct provide signal dispersion through obfuscation.

* **High threat**. CPs are within enemy ISR strike and artillery range and operate in a highly dispersed and mobile manner, relying on robust, low-probability-of-intercept (LPI) communications, such as mesh networks and LPI radios, to support C2. Maneuver is critical in keeping nodes and platforms alive.

The Art of CP Disguising

In 3rd ID, we are rethinking how signal officers plan CP emplacement during LSCO. They need to operationalize the electromagnetic spectrum by utilizing frequency as a weapons system. We identify enemy EW capabilities during reverse-intelligence preparation of the battlefield and through signal intelligence signal surveys to understand the signal noise floor to then determine if a CP needs to hide within the electromagnetic spectrum, blend into the electromagnetic

spectrum, or saturate the electromagnetic spectrum. This is not a binary choice, rather a commander can switch between these approaches throughout the battle.

* **Electromagnetic Spectrum Operations:** 3rd ID worked with techniques to "hide, blend, or saturate" within the electromagnetic spectrum to evade enemy detection and targeting of CPs.

- Hide: CPs use the periscope method to go "dark" within the electromagnetic spectrum until they need to push/pull data. Units can then "periscope down" by turning off emitters and then conducting a CP survivability jump. This approach needs to be well-rehearsed through well-defined tactics, techniques, and procedures and identification of changing reporting times.

- Blend: CPs utilize the environmental electromagnetic noise to blend into their surroundings. This works well in an urban environment where a unit can mimic the civilian radio frequency noise that is present in the electromagnetic spectrum. Units can utilize host nation local infrastructure to operate out of and utilize host nation network transport for C2. Divisions can utilize this approach through systems that support fiber, 4G LTE, 5G, and KU-band pLEO commercial satellite systems.

- Saturate: CPs use EW decoys that mimic a CP's electromagnetic signature to saturate a large area to confuse the enemy in their targeting. This approach works well outside of urban areas where the enemy would easily detect emitters. The 1st Armored Brigade Combat Team, 3rd ID, utilized EW saturation with a deception CP during their rotation to the National Training Center in 2024. This unit utilized legacy Warfighter Information Network-Tactical (WIN-T) systems, in conjunction with additional EW decoys, to confuse the opposing force's targeting cycle.

Adapting for Future Warfare

The days of static, heavily defended CPs are over. Rightfully so, the Army has recognized the changing environment and transitioned our combined training centers to a full-on Decisive Action Training Environment rotation with an emphasis on mobility. Contrarily, the days of signal officers sole focus being on "just making comms work" need to morph into understanding and planning the maneuver requirements for nodal and Mission Command CPs within LSCO. Modern warfare demands a paradigm shift towards agile, distributed, and resilient C2 and leadership.

By embracing the lessons learned from Ukraine, implementing an adaptable framework like the 3rd ID model, and investing in key enabling technologies, the Signal Corps can ensure that the Army's CPs remain survivable and effective in the face of evolving threats.

2nd TSB Launches Financial Management Invoice App

Innovation

Candy C. Knight
2nd Theater Signal Brigade

In an era where efficiency and accuracy are paramount, the introduction of innovative applications can make a significant difference in operations. The 2nd Theater Signal Brigade's (TSB) new Financial Management Invoice Application is replacing the aging Configuration, Accounting Integrity Reports Security (CAIRS) application, marking a pivotal shift in how invoices are managed and processed.

The Financial Management Invoice Application, designed by the 2nd TSB Data Engineering Office, is a comprehensive tool that simplifies various aspects of the invoicing process. The app's functionality extends beyond mere submission to include invoicing accuracy, customer cost association, and generating verification reports.

A few standout features include:

*   Ability to compare communication service invoices against PDF totals.
*   Link funding from the General Fund Enterprise Business System to customer codes.
*   Export data in text format, including Journal Voucher amounts.

The app also includes a "rollback" feature. This enables users to identify specific transactions requiring reversal while also verifying details and ensuring the adjustments reflect accurately in the customers' financial records. This feature also aids financial managers in maintaining transparency/trust in billing practices.

"Additionally, the application enables finance managers to link customer mobile telephone numbers directly to their respective customer codes," said Chris Kolbe, financial management specialist, 2nd TSB. "This functionality ensures financial records are meticulously organized, allowing managers to retrieve and manage customer information during transactions or inquiries quickly. By associating mobile numbers with unique customer identifiers, the app enhances communication efficiency and improves customer relationship management, making it easier to reach out to clients when necessary."

Transitioning to the Financial Management Invoice Application is not just a matter of modernization; it's a crucial financial strategy meant to save substantial resources. The previous CAIRS application had become obsolete, requiring costly licensing fees – expenses that the new app seeks to alleviate. With an estimated $1.2 million in annual funding saved through its implementation, this application promises a significant return on investment. The Financial Management Invoice Application is a notable enhancement in operational efficiency, according to Sgt. Malcolm Pope, the brigade's data officer and the app's principal software developer. Pope emphasized that the app not only simplifies financial operations but also improves accuracy, enabling personnel to focus on mission-critical tasks with greater reliability.

"The time taken to submit an invoice has plummeted from 24 hours to under one hour, freeing up valuable staff resources and enabling quicker financial processing," Pope said. "The new app also improves accuracy, which is vital in preventing the loss of funds that had been a recurring issue under the previous system."

Launching the Financial Management Invoice Application showcases the 2nd TSB's commitment to innovation. By using existing resources, such as Power Apps, Power Automate, and Power BI – tools that fall under their already purchased software subscriptions – the brigade is efficiently reallocating its funds toward the development of this new application.

"Power Apps serves as the foundation of this new project, enabling the creation of a responsive and user-friendly interface that enhances the overall user experience," he said. "Power Automate automates repetitive tasks, minimizing human error and increasing efficiency. Meanwhile, Power BI integrates data sources to generate accurate reports, allowing for real-time insights and interactive visuals that bolster decision-making processes."

The Financial Management Invoice Application launched May 30. It is available to all applicable users. The excitement surrounding the Financial Management Invoice Application reflects not only an embrace of technology but also a broader commitment to enhancing operational effectiveness and fiscal responsibility.

With its array of innovative features and potential for significant financial benefits, the Financial Management Invoice Application is more than a software replacement; it represents a strategic advancement towards greater accountability and transparency in the invoicing process. As organizations strive for excellence in service delivery, the Financial Management Invoice Application sets a benchmark for innovation, demonstrating that by leveraging available resources and embracing new technologies, the brigade is able to provide exceptional financial management for its customers.

Division Tactical Network Architecture for LSCO

Optimization

Maj. Richard Bradt,
Chief Warrant Officer 2 Justin Carrier
1st Infantry Division

Current conflicts in large-scale combat operations (LSCO) prove that the old standard of large, static command posts (CP) with high electromagnetic signatures cannot survive in austere environments. Legacy Army network equipment is not sufficient to support agile, dispersed CPs required for division operations.

The rapid proliferation of commercial satellites in low earth orbit (LEO) has revolutionized the satellite communications (SATCOM) landscape, with operational satellites skyrocketing from approximately 1,500 to over 13,000 over the past decade. This growth has created an opportunity for the military to leverage commercial communications solutions to overcome the limitations of its legacy networking equipment.

The 1st Infantry Division's (ID) National Training Center (NTC) Rotation 25-03 provided the Army with a successful example of how to use commercial solutions to address critical shortfalls in its traditional networking capabilities. 1st ID's success demonstrates the potential for commercial technologies to enhance military communications and drive modernization efforts. The Army must continue using commercial solutions to improve tactical capabilities and keep up with technological advancements.

Department of Defense Information Network (DoDIN) Operations planning for NTC Rotation 25-03 began with guidance from 1st ID's Commanding General, Maj. Gen. Monté Rone:

> *"... the division will train with multiple command post configurations during NTC 25-03 to prepare for future combat operations. [Task Force] Danger command posts must be grounded in four fundamentals. Command posts must be **distributed, survivable, functionally integrated, and redundant** in their functions..."*

Based on this guidance, the division established planning priorities for the tactical network architecture:

1. Integrate smaller and more dispersed division nodes into the tactical network with corps headquarters, NTC, Home Station Mission Command (HSMC), brigade elements, and other supporting units to enable distributed command and control (C2).
2. Optimize tactical network nodes by reducing the physical footprint and shifting computer-intensive functions away from the tactical edge to improve network reliability.
3. Leverage commercial equipment to cover legacy Army network architecture shortfalls, minimize bandwidth friction points, and enable a complete network contingency plan.

To address these priorities, 1st ID employed a multi-faceted approach. Enabling CP dispersion would require each CP to operate independently while allowing the staff to maintain a common operating picture. 1st ID's HSMC network, with its Tactical Hub Node (THN), acted as the central point for all CP connections to limit inter-node dependencies. 1st ID limited bandwidth utilization by distributing critical services between their HSMC network and the division's tactical edge; they distributed processing power by experimenting with virtualizing Mission Command Information Systems (MCIS) to be used remotely. Additionally, they leveraged commercial network infrastructures and the Armored Formation Network-On The Move (AFN-OTM) system to take full advantage of the strategic transport agnostic capability of the Global Agile Integrated Transport (GAIT) team's internet virtual private network (iVPN) technology. By doing so, 1st ID could reduce its electromagnetic footprint, blend into the electromagnetic operating environment, seamlessly exercise network contingency plans, and tactically distribute communications assets to enhance resilience and survivability.

Home Station Mission Command

The 1st ID HSMC network played a crucial role as the central hub for the division's primary server stack, connecting all nodes on Fort Riley, Kansas, including the Mission Training Complex and Division Headquarters, as well as forward nodes on Fort Irwin, California. Likewise, the 1st ID THN acted as the central point for route distribution, processing all network traffic using HSMC servers. This centralized architecture enabled the division to streamline network management operations and improve network security by centralizing network monitoring. By hosting common services (such as SharePoint, chat, and email exchange) on HSMC servers and placing only select services forward, 1st ID reduced the amount of deployed equipment required, minimized the physical footprint, and lessened the logistical burden associated with deploying and maintaining these systems. This approach also allowed the division to optimize

resource allocation, ensuring that critical systems and services were always available and accessible to those who needed them.

1st ID's experimentation with virtualizing mission command systems further amplified the success of the HSMC network. By creating a virtual desktop hosted on the HSMC network with pre-configured Joint Automated Deep Operations Coordination System (JADOCS) client software, the division could provide users with secure and reliable access to critical systems and applications from any 1st ID CP. This innovation enabled JADOCS users to process fire missions remotely, leveraging the processing power of the HSMC network to perform complex calculations and data analysis. The benefits of this approach were twofold: not only did it reduce the amount of equipment required at forward command posts, but it also significantly decreased bandwidth utilization by offloading client and server processing to the HSMC network. 1st ID conserved bandwidth by only passing remote desktop traffic through the wide area network, ensuring efficient and effective completion of critical communications and data transfers.

In the future, 1st ID will virtualize additional mission command systems, leveraging the HSMC network's processing power and scalability to support a broader range of applications and services. This approach will enable the division to reduce its physical footprint further, minimize logistical complexity, and enhance overall operational agility.

1st ID will achieve a balanced hybrid network by actively assessing which services to keep at the tactical edge and which to virtualize, thereby providing the benefits of both centralized and distributed capabilities. This hybrid approach will enable the division to maintain the benefits of centralized network services while providing forward-deployed units with the autonomy and flexibility they need to effectively operate in dynamic and unpredictable environments.

As the division continues to push the boundaries of what is possible with virtualization and centralized networking, the HSMC network will remain a critical component of 1st ID's network architecture, enabling the division to stay ahead of the curve and maintain its operational edge.

Armored Formation Network

NTC Rotation 25-03 served as a validation event for the AFN-OTM solution, which features a compact, low-SWaP (size, weight, and power) design installed on select tactical vehicles and provides a multi-transport network architecture for armor formations by integrating geostationary (GEO) and low LEO satellites, Fifth Generation (5G) Long-Term Evolution (LTE), and mesh radio capabilities.

With an experimental application for bandwidth virtualization, the AFN-OTM network was able to load-balance network traffic amongst every transport option. The AFN system also includes a variable height antenna for line-of-sight retransmission capabilities and stand-alone LEO terminals as "kick-out dishes" for dismounted connectivity. As the capability evolves, 1st ID expects to enable system emplacement on inconspicuous vehicles, allowing command posts to reduce their visibility and avoid detection by enemy forces.

During NTC Rotation 25-03, 1st ID successfully utilized five AFN trucks to support the division's mission. With the AFN-OTM's mobility, the division could support dispersed, independent command posts (CPs). Two trucks were dedicated to the Division Tactical Action Center (DTAC) node and were tethered to an "Expando" van for the Joint Air Ground Integration Center (JAGIC) and current operations CUOPS to conduct operations. Although the AFN trucks can work OTM, the division benefited most at-the-halt or short-halt, with the ability to rapidly establish a stable and secure connection to the 1st ID High Speed HSMC network.

The remaining three AFN trucks supported other critical functions. Two trucks supported the targeting cell and mobile command group (MCG), providing them with the necessary connectivity to conduct their operations. The fifth truck, meanwhile, played a crucial role in supporting the analysis and control element (ACE) from the rear CP, providing them with the bandwidth they needed to function effectively. This support was a significant win for the ACE, as there were no other tactical systems available that could meet their bandwidth requirements aside from a fiber connection. The AFN truck's ability to provide reliable and high-bandwidth connectivity made it an essential asset for the ACE, and its success in this role was a key factor in the overall success of the rotation. The combination of LEO, GEO, and LTE technologies offers a significant enhancement to traditional beyond-line-of-sight (BLOS) Ultra High Frequency (UHF) Tactical Internet (TI) capabilities.

Unlike traditional military satellite (MILSAT) systems, which rely on GEO constellations and are characterized by high latency (typically 650 milliseconds or greater) and low bandwidth, the AFN solution provides a much more robust and responsive communications capability. With data speeds reaching an upwards of 250 Mbps, the AFN system far surpasses the limited bandwidth of traditional MILSAT equipment, which typically ranges from 512 Kbps to 16 Mbps. The limitations of traditional MILSAT systems become even more pronounced in congested environments, where bandwidth availability per terminal or

unit decreases as more forces enter the theater. In contrast, the AFN system's ability to leverage LEO, GEO, and LTE technologies enables it to provide a more reliable and high-bandwidth solution, even in environments with high demand for SATCOM. By addressing the limitations of traditional MILSAT systems – including latency and congestion – the AFN solution enables commanders to receive, process, and send critical data promptly and effectively.

Successful integration of emerging technologies, including the AFN-OTM package, during 1st ID's NTC rotation has yielded significant outcomes and lessons learned. Notably, the division could complete its rotation without relying on fiber connections for any of its CPs, demonstrating the effectiveness of commercial LEO terminals as a primary SATCOM system.

The Army should prioritize the rapid procurement of commercial LEO terminals for every formation and invest in researching ruggedization and anti-jam capabilities for future LEO terminals. Additionally, the Army must allow divisions to invest in their

HSMC networks with regular upgrades and life-cycle replacements to remain current with emerging technology and security requirements. These upgrades will enable units to maintain a high network uptime and support level, as demonstrated by 1st ID's impressive uptime during the NTC rotation.

The 1st ID Network Operations section's success in supporting the division's network priorities has laid the foundation for future missions. It is a model for how units can leverage innovation to enhance their capabilities. Virtualized mission command systems and commercial LEO SATCOM are prime examples of how the unit of action can use emerging technologies to improve operational effectiveness.

As the Army continues to evolve and adapt to new challenges, it is essential that units are empowered to innovate and adopt new technologies and that the service prioritizes investment in the infrastructure and capabilities needed to support these efforts. By doing so, the Army can ensure that it remains at the forefront of technological innovation and is well-equipped to meet the demands of future operations.

About the authors

Maj. Richard A. Bradt is currently serving as the division network engineer for 1st Infantry Division at Fort Riley, Kansas. He holds a Master of Science in Security Informatics from Johns Hopkins University and a Bachelor of Science in Computer Science from Cedarville University. During his career, Bradt has held signal positions for 60th (Offensive Cyber Operational) Signal Battalion providing support to the U.S. Army Cyber Command G6; U.S. Army Cyber Protection Brigade; U.S. Army Test and Evaluation Command; and 1st Cavalry Division.

Chief Warrant Officer 2 Justin Carrier is currently serving as the division network operations warrant officer for 1st Infantry Division at Fort Riley, Kansas. He holds a Bachelor of Science in Information Technology Management from American Military University. During his career, Carrier has held various signal positions for 1st Brigade, 25th Infantry Division; U.S. Joint Special Operations Command; 4th Psychological Operations Group; and 82d Airborne Division.

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26th RCSM Takes Charge in Combined Ceremony

Change of responsibility

Article, photo by Laura Levering
U.S. Army Signal School

The U.S. Army Signal Corps embraced its new senior enlisted leader and bid farewell to another beloved leader May 22. Command Sgt. Maj. Lisa M. Gandy received the reigns from Command Sgt. Maj. Linwood E. Barrett during a combined change of responsibility and retirement ceremony at Eisenhower Conference and Catering. The ceremony was hosted by Col. Julia M. Donley, 43rd Chief of Signal and U.S. Army Signal School Commandant, and Col. Brian C. North, director of Commander's Action Group, U.S. Army Futures Command. Gandy replaced Barrett, who served as the 25th regimental command sergeant major since January 2023.

Donley began her remarks expressing gratitude for everyone who made the momentous occasion possible, acknowledging it took a large team to plan and execute the event. After welcoming Gandy and her family to the team, Donley went on to praise Barrett for the impact he had on the Signal Corps, noting that he "made it cool to be 'orange.'"

"Command Sgt. Maj. Barrett has changed the entire esprit de Signal Corps," Donley said. "He blasted the lids off of stovepipes of excellence and shone the light on every corner of our great Signal Corps, generating an almost unfathomable amount of pride, resulting really in raising the levels of confidence of countless Soldiers and civilians that we can do this, we can take on what many days seems impossible and give voice to our great Army."

Donley paused to present Barrett with a Silver Order Mercury, the highest award achievable through the Signal Corps Regimental Association. Following the award citation, she directed remarks toward Gandy, whom Donley said she happy to welcome to the team.

"The Army always seems to find the right person for the job, at exactly the right time," Donley said. "Our Army is transforming … these changes are going to directly impact our Regiment, its structure, its people, how we train them, really everything we do here at the Signal School and across the Corps, and I am honored to be able to stand at Command Sgt. Maj. Lisa Gandy's side as we tackle these hard challenges."

Gandy most recently served as commandant of the Cyber Center of Excellence Noncommissioned Officer Academy, where she oversaw professional military education of signal, cyber, and public affairs NCOs.

Looking at a room filled to capacity, Gandy thanked everyone, with a special few words for her mother and late father, who helped shape the person she is today.

Regimental Command Sgt. Maj. Lisa M. Gandy delivers remarks during her change of responsibility ceremony.

"They taught me not to accept my own self-imposed limitations or other peoples' preconceived notions of what I was capable of … and to push my limits," Gandy said.

The daughter of a retired U.S. Navy Master Chief, whose career began in the Philippines during the 1960s, Gandy enlisted in the Army in 1997 as a network switching systems operator/maintainer (31F). At the time, the Army was the best option for her to provide for her own family, being a single mother at the time. Looking back, she never would have imagined that decision would lead her to where she is now. From being a Signaleer who at one time considered herself the "least connected" among her peers, to now having an established immense sense of pride, Gandy said so much has changed – for the better – and she has leaders like Barrett to thank.

"Regimental Command Sgt. Maj. No. 25, you changed the game," Gandy said of Barrett. "You have spent your tenure ensuring that we all feel connected. You have reminded us all of the pride that we as Signaleers should have in what we do and how we support the overall mission."

Addressing the Regiment as a whole, Gandy said, "The current rate of change in technological advances requires us to be adaptable and agile … but above all, to be experts in our craft. I promise to be the leader that builds trust … to continue the path of excellence that all of my predecessors have forged moving the Regiment into the future."

In closing, Gandy said she was excited to be Donley's "battle buddy" and looked forward to seeing where they will lead the Signal Regiment.

"No comms, no bombs. Signal strong. Signal proud. Let's go!"

A couple photos that did not make the cover but that we believe are cover-worthy!

Spc. Nevean Hanson, a signal operations support specialist assigned to Headquarters and Headquarters Company, 1st Squadron, 113th Cavalry Regiment, speaks on a radio at the Joint Readiness Training Center, Fort Johnson, Louisiana, June 13 . (Photo by Staff Sgt. Annalise Guckenberger, 135th Mobile Public Affairs Detachment)

Pvt. Johnathan Delgado, 96th Aviation Support Battalion, is evaluated during his Command Post Node Day validation as part of the signal gunnery. (Photo by 1st Lt. Courtney Huhta, 96th ASB)

Do you want your photo to be the next cover?

Photographs should be ***at least*** 1MB (higher is better) and include at least one Soldier. Rank, full name, and unit of Soldier(s) in photo must be included along with a sentence or two description.

Send to: Laura.M.Levering.civ@army.mil

On the Cover: *The U.S. Army Signal Corps celebrated 165 years of "getting the message through." From the birth of Albert J. Myer's wig-wag system to present-day operations, U.S. Soldiers around the world have relied on Signaleers - and will continue to - for decades to come. (Cover design and photo illustration by Tài Doick, U.S. Army Signal School)*

Up next …

The **Fall 2025** theme is:
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