

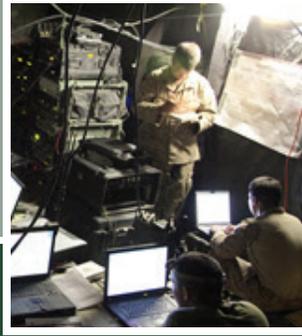
The Official Newsletter  
of the U.S. Army System  
of Systems Engineering  
& Integration Directorate



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# The Integrator

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NIE insights support  
'game changer' capability Pg. 2

# Network at NTC





## From the Executive Director

It's only been 90 days since I started this job, but a few things are already obvious.

First is that this organization is critical for ASA(ALT) and the Army. The PEOs do a phenomenal job of executing their missions, and our role is to support them as we look across those different functions to identify gaps and work together to find solutions. Technology is so integrated today that it's essential to have an organization synchronizing across portfolios, so we can deliver holistic capability that gives our Soldiers the edge.

Second is that we have an incredible workforce. From the staff and synch fielding experts in Warren, to the NIE and AWA integration team at Fort Bliss, to the network engineers at APG, to the Cyber Focal and COE teams in the NCR, to the folks whose missions fall outside these categories – our strength is in our people. That's why we will continue to cultivate leaders, mentor new talent, stay on top of certifications, and pace ourselves to maintain balance.

Third is that there is no constant for SoSE&I but change. One of our core attributes is the flexibility to adapt to execute Army priorities as they shift. As the Army continues to evolve the NIE process as part of the balance between end strength, readiness and modernization, I am confident this team will once again rise to any challenge up ahead.

# Network improvements for NTC

At Fort Bliss, the Army has network integration down to a science. At Fort Irwin, it's been hit or miss.

That's now changing, as SoSE&I joins forces with the National Training Center (NTC) to ensure that units conducting rotations with Capability Sets (CS) can get the most out of their new gear.

"We're taking the processes and lessons-learned from the Network Integration Evaluation (NIE), and trying to do a better job of transferring it over to the operational guys at the training centers when they need assistance," said Col. Terrece Harris, director, Capability Package, for SoSE&I. "We've done the integration effort, so we should be able to take the guesswork out of what it takes to make it work."

One key tool recently added to the NTC's arsenal is a comprehensive Validation Exercise (VALEX) manual that is essentially a "how-to" guide for standing up a brigade CS network, which consists of a wide range of equipment that includes networked vehicles, satellite dishes, servers, radios, mission



The 2nd Stryker Brigade Combat Team, 2nd Infantry Division described Capability Set 15 as a "game changer" at NTC.

command software and more. Since units enter NTC rotations with different timelines to get their communications established, and often struggle with the complex new gear, the guide breaks down the multistep process to load, establish, integrate and validate a comprehensive network into chunks of three, five and 10 days.

To further expand NTC's network capabilities, SoSE&I, in conjunction with PEO C3T and

others, is working to provide additional training and CS equipment to the Observer-Controllers (OCs) who monitor units' performances during their rotations.

After meeting with NTC leadership in January, the CPD team will also be visiting the JRTC at Fort Polk, La., and other unit locations.

"We're being proactive by hitting the ground and giving units what we can from NIE to help them be successful," Harris said. ■

## IMS a growing resource for PEOs

When you hear "strength of schedule" this time of year, you might think of March Madness and college basketball brackets.

But there's another important schedule that focuses not on how teams match up on the court – but instead on how programs match up for Soldiers.

The ASA(ALT) Integrated Master Schedule, or IMS, provides a single integrated repository of key program milestones and activities across the ASA(ALT) portfolio. This tool enables leadership to track capabilities and integration timelines across PEOs through the identification and linking of interdependencies, in order to align fielding plans with Army modernization objectives such as the Mission Command Network of 2020, Force 2025 and Beyond initiatives and CS fielding. As of mid-February, the IMS included 1,025 key milestones and activities



The ASA(ALT) IMS identifies integration challenges early.

across 56 programs and an additional 23 sub-program components – and counting.

"The more data that's added, the more powerful the tool, ultimately enabling the community to identify integration challenges before they happen," said Kim Bowen, chief of the SoSE&I Engineering Planning & Schedule Integration division. "By closely collaborating with the PEOs, we are continuing to link dependencies across programs,

which has already enabled us to work with stakeholders to mitigate cross-organizational impacts earlier in their programs' life cycle."

For example, the IMS recently helped facilitate a major, complex analysis supporting the network modernization plans for Armor Brigade Combat Teams, and, in conjunction with other SoSE&I schedules, helped identify a fielding discrepancy between the HMS Manpack radio and an Army National Guard unit more than two years in advance.

The next step for the IMS is to increase community access through the implementation of the Primavera scheduling tool for the enterprise, which enables PEOs to see interdependent program schedules and pull targeted reports at their own discretion. The EPSI team will be conducting Primavera training in March with PEO schedule representatives. ■



With ART, a Soldier overseeing hundreds of networked systems can quickly pinpoint and address cyber vulnerabilities.

## Streamlined cyber toolkit boosts security

It's hard to fight a hacker with a spreadsheet.

But today, that's how signal Soldiers catalog the hundreds of systems installed on Army unit networks, and keep track of the systems' potential cyber vulnerabilities and available security patches. It's a time-consuming process that lacks consistency and is prone to human error.

Now, a new collection of automated tools is modernizing the process in order to improve security compliance while consuming less bandwidth. Known as the Assured Compliance Assessment Solution (ACAS) Reporting Toolkit, or ART for short, the capability will rapidly provide unit commanders and program managers with current, comprehensive information on their cyber posture.

"It's going to allow us to see the network as we've never seen it before," said Chief Warrant Officer 5 James Ebeler, who spearheaded the project for Army Network Enterprise Technology Command (NETCOM). "It will allow us to see down into the tactical enclaves, down to the end user devices, what vulnerabilities exist and what patches are needed, so we can patch more rapidly and make sure that our security posture is as up to date as possible."

With ART, a Soldier overseeing hundreds of networked systems

can pinpoint a single vulnerable piece of software in minutes, rather than hours or days. A commander can evaluate a potential threat and accelerate a security patch ahead of schedule.

The information will also be fed into the Department of Defense (DoD) Cybersecurity Scorecard, a critical metric that gauges how well different systems and units are protected against cyber threats. "ART will give unit commanders and the greater Army a clear, specific and timely picture of cyber vulnerabilities and how they are being addressed," said Col. Bryan J. Stephens, director, Cyber Focal for SoSE&I. "Not only does the technology streamline processes at the operator level, it also enables broader goals such as the Cybersecurity Scorecard and automated patching for improved mission assurance."

In support of a NETCOM initiative to streamline and standardize security patch reporting across the Army, engineers from Cyber Focal and the Program Executive Office Command, Control and Communications-Tactical (PEO C3T) Project Manager Warfighter Information Network-Tactical (PM WIN-T) quickly developed ART using available technology that is compatible with both ACAS – security software that is widely used throughout DoD – and existing

Army programs of record.

The toolkit combines capabilities for system identification, vulnerability scanning and desktop reporting into a powerful, automated solution that can produce tailored cybersecurity reports for operators and leaders at various levels. That not only cuts down on spreadsheets – it also reduces the bandwidth and processing power required to track, store and transmit cyber vulnerability data.

"The detailed scanning happens in the background and is transparent to the user, who gets the actionable information needed to accomplish the mission," said Col. Ward Roberts, product manager for WIN-T Increment 3. "As the Army continues to add more capability to the network to ensure Soldiers at every echelon remain connected and engaged, we must give them the tools to stay on top of these capabilities, especially from a cyber perspective."

After an initial pilot at Fort Campbell, Ky., and Fort Bragg, N.C., ART is slated for deployment to units in the European and Pacific theaters over the next few months. The Army is developing training materials and reachback support to enable widespread fielding, and will continue to improve the capability based on user feedback, Ebeler said.

"As we keep refining it, we can

improve the dashboard interface to make sure we're really seeing exactly the information we want to see," he said. "Like anything in the cyber domain, ART will constantly evolve over time." ■

### A Closer Look: Army PNT IPT



Participation spans Services: Army, Air Force, Marine Corps, Navy and Coast Guard

**50+** stakeholder organizations represented at the past two IPT meetings in June and September 2015



Facilitates collaboration to align capabilities and execute transition to Assured PNT and M-Code



Bi-annual event directed by Army Acquisition Executive



Next meeting scheduled for **8-10 March** at Aberdeen Proving Ground, MD



# SoSE&I Team Spotlight

**NAMES:** Emad Musbeh, Gene Shreve, Jack Wong, Sarah Douglass, Maxx Poliachik, Robert Lee, Larry Grosberg, Jack Li

**ORGANIZATION:** Common Operating Environment (COE) Architecture Team

**BUILDING BLOCKS:** You’ve heard the pitch: the COE changes the acquisition paradigm by putting interoperability first. But what does “interoperability” mean, and how is it implemented? Those questions are what drive the Architecture Team, whose mission is to define a technical process model that Programs of Record can use as they transition to COE-compliant Computing Environments (CEs). The team is developing engineering templates, guidance, tool suites and standard resource libraries with initial focus on the four critical Cross-Cutting Capabilities (CCCs) needed to achieve COE version 3 fielding in FY 2019: Standard and Shareable Geospatial Foundation, Common Overlay for Geospatial Applications, Assured Position, Navigation, and Timing, and Chat. “It’s like Lego blocks, where the CCCs are the foundation blocks that enable warfighting functionality,” Shreve said. “So they can go to a central repository, find the Lego block that applies to them, bring it into their architecture and know exactly what these common capabilities will provide – which allows them to focus on their specific warfighting functionality.”

**COMMON TOUCH:** The team closely collaborates with CE leads and architects, TRADOC and CIO/G-6 through the COE Integrated Architecture IPT. The IPT builds the architecture for each CCC, including the environmental constraints and user requirements across the CEs – for example, the network capacity needed to support the exchange of map data in a command post, versus in a vehicle or on a handheld device – as well as how information will be transmitted between them. “It has to fit in each one of the CEs and be technically feasible in the timeframe we’re targeting,” Shreve said. “That’s why we need to dive into details.”

**NEXT UP:** The team will branch out into 10 additional CCCs for COE version 4.

**WORDS TO LIVE BY:** “One team, one fight.” ■

# Employee Spotlight

**NAME:** Vanessa Pittman

**ORGANIZATION & TITLE:** Division Chief, Budget Execution & Army Audit Readiness

**TRUCKS TO TANKS:** Ms. Pittman came to SoSE&I in 2015 after stints at PEO CS & CSS and TACOM. Before joining the government, she was a contractor at General Motors from 1999-2006, starting as an administrative assistant and working her way up to budget analyst for Global Product Development. From her perspective, the two worlds – Army and automotive – are not that far apart. “They go through phases similar to our acquisition lifecycle, which is plan, design, procure and sustain,” she said. “To me, budget is budget – the terminology is the only thing that differs.”



**SERIOUS STAKES:** Ms. Pittman now oversees two areas with high visibility and impact. First, she supports the Army Audit Readiness initiative with the documentation and standard operating procedures required to demonstrate sound financial management practices. Second, she monitors SoSE&I’s obligations and disbursements to meet goals set by OSD – a unique challenge, as the SoSE&I budget does not fund a conventional program but rather recurring NIE and AWA events with schedules that span more than one fiscal year. “The schedule does not align with the way that OSD expects you to execute the funding,” she said. “Within these constraints, we are working to improve execution rates.”

**OFF DUTY:** Ms. Pittman enjoys spending time with her 7-year-old son, volunteering at his school, and teaching Zumba fitness at a domestic violence shelter.

**WORDS TO LIVE BY:** “Never give up on your dreams – no matter how far or unrealistic it looks, just never give up.” ■

# El Paso STEM students visit NIE



**1** Clint High School students demonstrate their robot to Col. Terrece Harris. The students visited the Integration Motor Pool at Fort Bliss, Texas, on February 11.

**2** The El Paso STEM Foundation, in conjunction with the Brigade Modernization Command, announced the Five Star Innovation Cup STEM Competition.

**3** A variety of Army vehicles were on display, exhibiting the technologies Soldiers will evaluate at NIE 16.2.

**4** Students learned about the overall process to design and create capabilities for the Army.

**5** Students from Parkland High School show how their robot catapults foam balls into the air. ■