

Battalion communications officer relates NIE experiences

By Amy Walker

Please describe the role and responsibilities of a battalion S6 at the Network Integration Evaluation.

The traditional role of the battalion S6 is to oversee the deployment of all communications assets in a unit. They use experience and practical planning guidelines to advise the commander on how to spread assets out on the battlefield. At the NIE, the equipment is cutting edge and how it is being used is unique to every exercise. The planning guidelines aren't always clear, so it is a matter of finding out which way to utilize each item best. The NIE also requires more focus on Network Operations and integration; how to make all of the pieces fit together. Each piece is validated by the vendor, but when it comes together there are usually some challenges. At the operator level experience isn't always there, so it falls to the battalion S6 to make that difference. His or her role is to help the operator remember the training, to grow with experience, and to merge what the project managers, industry partners, and other experienced members of the military community know about that equipment, so that operators don't make the same error twice and get better every time. We are able to do that quite successfully.

How is your job changing as the Army expands the tactical communications network to deliver greater connectivity to lower echelons, such as the company and dismounted squad?

The basic principles of the S6 job remain the same. What changes is the complexity and density of equipment. We merge radio, line-of-sight, and satellite networks all the way down to a platoon and sometimes even squad level with IP-based communications, which we haven't used before at those levels. That complexity requires more systems and more efficiency in NetOps. One piece of equipment isn't a standalone piece anymore. If it functions great on its own that's good, but once it's integrated into a network it can affect a different piece of equipment completely outside the scope of that operator and unit. It can make an affect all the way up to the corps level depending on information dissemination policies. The view and understanding of how the big picture works together are not always available at every level. It takes a NetOps section. It takes several people at several levels to come together to be able to troubleshoot small issues. Before, if the



CPT Charles G. Feher, Battalion (4-27 Field Artillery Regiment) communications officer (S6) for the 2nd Brigade, 1st Armored Division (2/1 AD) works with a Warfighter Information Network-Tactical Increment 2 Tactical Communications Node on 29 February 2012 at Fort Bliss, Texas.

radio operator knew the five things needed to operate the radio, he was good. Now, when the radio doesn't work it can be due to a local hardware or software configuration or it can be due to a change in a router a thousand miles away that the operator didn't touch.

It is very tempting for operators and maintainers to try and fix something that may not actually be broken. Understanding and accepting that reality and taking a pause to allow other people to figure out the problem for you is a great challenge. Most Soldiers want to fix it and want to fix it right away. It takes a lot of time and patience to allow other people to assist in that process.

Can you describe a real-world scenario to illustrate the operational value of having network connectivity while on-the-move?

Most of our Army Battle Command or Mission Command Systems are laptops or data devices that store and share information in a client server role. This equipment may not always be utilized while moving down the road because the vehicle commander and the driver have other things to look at, but the equipment can continually update while they are doing that. The equipment will be immediately ready to go as soon as that operator

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needs it. If the commander is in the midst of the battlefield and the orders change, but they don't impact him right away, he can get that later. He can get that off of email, Command Post of the Future or look at Tactical Ground Reporting as soon as he has time to pause. On-the-move technology decreases the delay in communications that is naturally present while waiting to receive new information. One of the greatest examples of immediate use of data on-the-move would be a route clearance platoon that gets its brief, rolls out and is executing its mission over a period of five to 12 hours. Previously, if the intelligence community got new information, you could radio it down, but you might miscommunicate exactly what the new threat is or how to handle it. With data on-the-move you can actually send images. You can send directions and locations. You can be clear, precise and minimize ambiguity. That additional clarity should allow the route clearance platoon to find many more devices that might be out there, minimize damage to equipment, and actually save lives.

How will Warfighter Information Network-Tactical Increment 2's upgraded NetOps component facilitate the planning, initialization, monitoring, management and response of the network at your level and throughout the brigade?

What I see it bringing to the fight is a greater efficiency, an ability to manage a complex network by effectively managing multiple pieces of communications equipment without having to physically touch them. WIN-T Increment 2's NetOps will provide increased network situational awareness at the battalion level and will enable sharing that information to the unit level.

It will also help to ensure and confirm that all of the necessary configuration changes that happen overtime occur and we don't leave one piece of communications equipment out to dry. Everything updates at the same time and allows you to view a coherent network that works and functions without having to go up to higher levels to ask them "Hey, is my stuff working?" WIN-T Increment 2 should eventually bring a lot of that situational awareness down to the company level. It will take a lot less time and effort to manage our own equipment and alleviate a lot of stress off of the brigade NetOps, which is now beginning to have more and more equipment to manage than it has ever had before.

From your perspective, what will be the value of fielding the network as an integrated "capability set" throughout the brigade, rather than fielding equipment piece by piece?

The largest benefit is that you won't have to integrate piecemeal components that have different configurations. They have actually been put together, utilized and tested. You receive a relatively full and complete package. This allows you to transition to new equipment with confidence and an understanding that it will operate, without the problems of trying to use two systems at once or having things not be backwards compatible.

What are some of the major lessons-learned from the NIE setting that you think the Army could apply to its planned network upgrades?

The Network Integration Evaluation is the largest integration of anything that I have ever experienced myself. Outside of the NIE we do small updates. We will update a system's software. We'll update one section of one

capability. In the NIE we bring hundreds of pieces together and find that it is extraordinarily important not just to look at the one piece of equipment to ensure that it functions, but to understand how it impacts the rest of the environment. You need to make sure that when you add it to the network it is not going to cause outages and that it will continue to function and create the capability that it was designed for. A lot of times these systems may be backwards compatible with themselves, but they rely on transferring data to other Army systems and those systems are not always at the same level. If one system leap-frogs in front of the other, you get a mix-match of capabilities and in a highly technical world a mix-match of protocols do not talk to each other in the right way. So upgrading all the components at the same time and understanding their interoperability is huge when it comes to updates, integration, and maintaining a level of communications that don't reduce your capabilities.

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