

μCyber implementation will bring challenges

By CW5 Todd M. Boudreau

This article calls your attention to some of the challenges we will face implementing micro-cyber and solicits your support and assistance as we move ahead.

As I sat listening to the 37th Army chief of staff speak at the Army Training and Leader Development Conference, one of the areas he addressed was the triad: Ways, Means, and Ends.

One of his points was that the ends, regardless of our thoughts, desires, and opinions, remains; when called upon by our Commander in Chief - we will answer, we will engage, and we will prevail. In other words, we will not be turning down any missions. We will continue the four Ps-- prepare, prevent, prevail and preserve.

What will not be the same is the means. Our resources will decrease. We can fight for all the resources we can grab, but in the end, we will have less tomorrow than we had yesterday.

Therefore, we must focus the greatest amount of our effort on our plan to transform the ways. Our ways must transition to smaller and more capable systems. Micro-cyber is a strategy that addresses ways. Micro-cyber capitalizes on miniaturization of communications electronics equipment and the convergence of multiple technologies which result in a reduction of size, weight and power; and sometimes unbelievably, cost (SWAP-C). More is said on this throughout this journal, so I will not delve into the future adjustments of MOS, organizations, and training.

In TRADOC there is an acronym that ensures we look at all capabilities holistically: DOTMLPF (Doctrine, Organizations, Training, Materiel, Leader development, Personnel, and Facilities). If viewed quickly, micro-cyber looks very M-centric (i.e., materiel only). That is because much that has been discussed so far has focused on the materiel aspects. However, if that were true, we would be running full steam into some fairly significant challenges.

Micro-cyber is not a materiel solution. It is a holistic and synergistic approach addressing the ways in face of diminishing means to ensure we can accomplish our ends.

It is also important to understand that we do not have all the answers. In fact, I am fairly confident that we don't even know all the questions!

The questions should come fast and furious. If we took a legacy approach to this, we would have every question listed and matched with the appropriate answer--both available in five-eight years. The

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problem would be, however, that the questions would now be OBE (overcome by events) and several iterations of technology would have rolled out with a myriad of ONS, JUONS and associated ad hoc adjustments out in the field. In other words, our five-eight year ways plan would not be linked to the ends five-eight years from now.

Therefore, we are taking an extraordinarily different approach to ensure that we accomplish our objectives in a timely and mostly right fashion. This will take the effort of the entire Regimental leadership--noncommissioned, W-grade and O-grade officers.

Here are some of the challenges that exist in a few of the DOT_LPF areas. Some have been addressed. Some have been solved. Some have been mitigated, and with some we continue to struggle. We need your help, as Signal leaders, to ensure we set ourselves up for successfully meeting our required ends.

We have certainly not identified all of the challenges. I am only covering a few of the issues and not identifying all that we have discussed. We need your help to ensure that we do identify all of the hurdles before we get blindsided. We need to identify, analyze, and solve the issues prior to encountering them during collective training; absolutely before they are encountered on the battlefield.

We must address our organizations. Smaller teams are part of the micro-cyber paradigm. The smaller collective capabilities required to deploy, install, operate, administer, defend, and maintain small, medium, and large equipment sets must be accurately determined. Soldier-led technology teams require that both the technical capabilities and leadership for these quasi-autonomous teams be addressed. We must maintain centralized governance, decentralized authority, and autonomous execution - under the commander's intent by teams of individuals inculcated with the Army values

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and following current rules of engagement and laws of war. Finally, decentralized network execution must be appropriately coupled with centralized NetOps control.

Because technologies will be converged and more complexity pushed down to lower echelons, Soldier training and education must be addressed. Additionally, according to the micro-cyber paradigm, as technology advances and efficiencies and effectiveness dictates, devices will be replaced more often to take advantage of the newest technologies and technological advances. This means that the device a Soldier works with today might be replaced by a different (and more capable) device tomorrow. Such an environment begs for more systems theory education and less (though balanced) hands-on, button pushing and knob training.

These alterations offer critical challenges to our current training strategy. Digital training applications must be developed to support the Soldiers' learning of new equipment versions in support of their base education of network theory.

Smaller teams equate to fewer people per team which affects the ability to meet more of our Regiment's ARFORGEN requirements (Ends), but it also begs for multi-functional disciplined Soldiers (Ways). This will no doubt be one of the biggest challenges we face. Our Signal W-grade officer cohort is already in the midst of a personnel transformation.

We must now look at our Signal O-grade officer cohort as well as our Signal enlisted MOS to determine the right skills and functions to be grouped under each AOC/MOS. What will make this a success is addressing similar skill levels, career paths, as well as detailed and strategically overlapping functions to ensure a

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holistic and seamless development of personnel capabilities amongst all three cohorts while still taking into consideration organizations and positions that do not employ all three.

These few challenges represent just the tip of the μ Cyber iceberg. These challenges only scratch the uppermost crust of the surface. While the enormity of the iceberg is enough to elicit the response of terror in the most stable of us, the sheer scale of intellectual capability of our Signaleers (in my opinion)

is sufficient to melt it down to an ice cube. But we need your input. We need your help. Each of you has awesome ability and the responsibility to step up and contribute your best to this effort.

This is one of the greatest opportunities to influence the direction of our Regiment that I have witnessed in over 28 years of Army service.

Now is the time to remain watchful for our country.

Join the Discussion
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ACRONYM QuickScan

- ARFORGEN – Army Force Generation
- AOC – Area of Concentration
- CSA – Chief of Staff of the Army
- DOTMLPF – Doctrine, Organizations, Training, Materiel, Leader development, Personnel, and Facilities
- JUONS – Joint Operational Needs Statement
- MOS – Military Occupational Specialty
- NetOps – Network operations
- OBE – Overcome By Events
- ONS – Operational Needs Statement
- SWAP-C – Size, Weight, and Power – Cost