



Building next-generation defense networks for future mission success





In defense operations, communication is the connective tissue holding every mission together. From domestic military bases to the skies, seas and tactical edge, a reliable low-latency network that maintains connectivity even in remote, contested environments is critical to achieving decision advantage. But for years, contracting has treated networking like an afterthought tacked onto the fine print of RFPs rather than a mission-critical asset.

“Networking has been commoditized, if you look across the Department of War,” said Tang Pham, vice president of the national security group at AT&T. “When we talk about legacy communications infrastructure, the reason it can’t be reconciled is because we continue to commoditize the networking aspects across a multitude of programs and records and contracts.”

To break free of legacy constraints, defense agencies must adopt a new approach to acquisition that treats networking as paramount to success rather than tangential.

Acquisition reform drives innovation

Many current acquisition models have taken a “lowest price technically acceptable” approach to networking, which worked well enough when the primary objective was simply to access the internet. As capabilities grow more advanced and AI becomes a core mission-enabler, however, a fragmented infrastructure managed by disparate providers is no longer sufficient.

“You have to centralize your networking ... and actually put investments in and thought leadership into how to do networking to enable all the technology for the future mission,” Pham said. “If you want a single pane of glass into your network, you need to start viewing your network as a critical piece of the pie.”

As the current administration prioritizes acquisition reform, Pham noted that it is creating an atmosphere conducive to rethinking how the public and private sectors can collaborate to transform defense networks.

“This is probably, in my 20-plus-year career, the most active I’ve seen an administration in how we do things in the federal government landscape,” Pham said, “from acquisition reform to the engagement with commercial industry.”

Recent [White House directives](#) on public-private partnerships reinforce this shift, emphasizing how procurement consolidation and commercial solutions can yield more efficient and cost-effective acquisitions.

As a result, “I do see a trend where different agencies are going specifically to companies for what they specialize in, as opposed to a purely competitive bidding approach.”

Working with industry experts like AT&T, agencies can produce repeatable capabilities that scale across multiple missions or departments rather than disparate solutions built around isolated requirements.



Operationalizing 5G and FutureG for advanced mission needs

As acquisition reform evolves, industry providers like AT&T continue to innovate solutions that can be used across both private and public sectors. Operationalizing current 5G networks while exploring FutureG promises transformative impacts for defense operations.

During a recent [demo outside AT&T Stadium](#) in Arlington, Texas, AT&T and Ericsson explored how Integrated Sensing and Communication (ISAC) over 5G networks can support low-altitude threat detection. Using Ericsson technology and AT&T network expertise, the demo successfully detected, located and tracked multiple drones.

“Integrated Sensing and Communication is about how do you take 5G radios that are propagating signal for cell phones and utilize it for detection purposes,” Pham said, “using 5G technology and FutureG technology to enable the mission as opposed to just getting connectivity.”

From low altitudes to space, Pham also sees opportunity for 5G to bring greater precision to satellite communications. Deploying satellites over areas like major cities that already have dense terrestrial coverage through 5G may be unnecessary and redundant.

“The conversation is how do we get better connectivity where we don’t have it, and then

how do we build [5G] infrastructure to the point that satellite communications can shift to the next location,” he explained. In other words, as 5G and FutureG coverage becomes more robust, organizations deploying satellites can narrow their focus to areas with holes in 5G coverage.

“As the nation continues to invest in the infrastructure of the country, continues to expand the fiber footprint, the wireless footprint and then the satcom footprint, you can imagine the coverage in the next 10 years,” Pham said.

Acquisition reform drives innovation

Modernizing defense communications is about more than just boosting speed and upgrading hardware. It requires building a flexible foundation to support future missions all the way to the tactical edge. By moving away from piecemeal acquisitions and investing in deliberate, strategic collaboration and relationships, defense agencies can eliminate legacy vulnerabilities, unify their networks and help tap into the promise of satellite, edge computing and FutureG capabilities.

“We want to be thought leaders in this segment, and the conversations we’re having right now show that there is an appetite for this technology,” Pham said, “and for how we get better and better in communications, whether land, air, sea or space.”

Learn more about how AT&T can support defense agencies on their network modernization journeys.

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