Meeting military network requirements

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Effective military networks have become increasingly important in the battlefield in recent years, as today, timely communications are literally the difference between life and death. In some cases, the use of Wideband Global Satcom capacity is not the best solution, which is where engagements with commercial entities come in to play. Philip Harlow, President and COO of XTAR, explains how the military network requirements have changed in recent years in the face of increasingly hostile threats, and what this means for commercial satcom entities.

The US military has changed in many ways in the last few years. This includes troop withdrawals from two wars in the Middle East, at the same time as realizing the need to develop a strategy to counter increasingly aggressive adversaries who have created a highly contested global security environment. With all of these changes, the Department of Defense (DoD) has started to turn its focus to incorporating more innovative technologies and methods to successfully defeat threats in every type of environment everywhere around the world. To execute and achieve such mission success, commercial providers have come to support these new DoD concerns with greater flexibility, efficiency and innovation. Commercial satellite providers, including XTAR, have dedicated themselves to filling this role as they understand that communications stand at the core of mission success in today’s rapidly changing security landscape.

Engaging more actively with industry
To understand this military shift toward increased innovation, one element of the DoD can demonstrate how these changes impact the warfighter and the need for new ways to defend national security interests around the world. This element is the Special Operations Forces (SOF), which operates across every service: Army, Navy, Air Force, Marines, and which report under US Special Operations Command (USSOCOM). They have grown in number, have deployments on every continent and fulfill the missions that other parts of the military can no longer achieve based on the continuing budget constraints. As such, they have become a critical user of satellite communications.

USSOCOM has evolved in recent years, not just in number and reach, but also responsibility. Recently, USSOCOM has totaled about 70,000, with deployments in a record number of locations - 135 nations. Just as attacks on US interests around the world have become more sophisticated, SOF has responded with more innovative and effective technology. And, USSOCOM does not need to rely on the individual service’s budgets to rapidly develop and buy mission-specific equipment, supplies or services. According to the head of USSOCOM acquisitions back in January 2016, “Special Operations Forces cannot be mass produced. Innovation and iteration will feed mission success faster.” This intense focus has strengthened their growing relationship with commercial providers, including nascent technology companies, that all know how to achieve more using fewer resources - getting more bang for every buck spent!

When specifically looking at communications and the supporting networks, USSOCOM has its own perspective and goals. Communications needs are met using a variety of means so all of SOF’s operations are based on resilient communications methods. These range from host-nation communications to expeditionary satcom using military and commercial leased space assets. Both milsatcom and comsatcom together support survivability and redundancy for all tactical, operational, and strategic missions globally. In virtually all scenarios, USSOCOM forces have unique requirements. These include portable, reliable, and easy to operate secure communications that can be employed at a moment’s notice for quick reaction missions, often in austere environments covering disparate geographical regions. SOCOM needs to get secure, relevant, and timely data to users faster without taking fiscal resources from other functional areas of missions.

In the current resource-constrained environment, USSOCOM leaders have engaged more actively with industry to help meet these needs by simplifying and making technologies
more efficient. This is one of the largest challenges across SOCOM, both related to the cost in personnel and capacity, as well as time to deliver capability to the users.

Securing alternative satellite capacity
To respond to these challenging network demands, commercial satellite providers have developed many strategies.

XTAR, the only US provider of commercially available and advanced X-band services, has met with many users who need the most flexible and effective satcom solution. Frequently, they are looking for an alternative to Wideband Global Satcom (WGS) and the bureaucratic and cumbersome nature of gaining access to this government owned and operated satellite network.

In one instance, a user first attempted to secure WGS service for a training mission, but learned they were not given enough priority to access the needed milsatcom. They then looked at leasing commercial Ku-band, a frequent alternative, but not automatically the best or most effective one. The user also looked at XTAR and found X-band was the most efficient in supporting their sub-1m antenna – it required less bandwidth on X-band than Ku-band, and was less susceptible to atmospheric attenuation.

Commercially available X-band operates in the same frequencies reserved for government and military users exclusively for these kinds of missions. (Thus, this user also avoided the 'CNN-effect,' bidding higher prices for capacity or getting bumped by commercial entities also operating in commercial spectrum of Ku-band). Priced competitively, XTAR’s X-band was fast, and easy to confirm and deploy. When users focus on working within tight fiscal constraints, even SOF with its unique authorities and timely missions, obtaining favorable and flexible commercial terms can mean quicker and more efficient service provision. Once you have leased this flexible, high-throughput X-band capability from XTAR, it’s yours, and you can’t be bumped off, unlike on WGS.

Providing a better user experience
In today’s contested environment where missions heavily depend on Intelligence, surveillance and reconnaissance (ISR), and situational awareness for accurate decision-making, the warfighter wants to deploy a communications network quickly, not after several days.

Postponement of a mission in search of satcom is not only inefficient and financially wasteful; it can mean greater risks and a compromised outcome. Special Operations Forces are at the leading edge of pursuits with commercial providers to deploy the latest, best available technology, including XTAR’s X-band service. And the outcome is a much better user experience that enables the users to move ahead with their mission, fully confident in their resources.

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