

A Force Multiplier in the Age of Transport Diversity

Military SATCOM

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Since its inception, the U.S. Army Signal Corps has been at the forefront of military operations, enabling commanders to communicate, coordinate, and dominate the battlefield. From the early use of the telegraph during the Civil War to the adoption of radio communications in World Wars I and II, the Signal Corps has continually evolved to meet the demands of modern warfare. The Cold War ushered in the era of satellite communications (SATCOM), providing global reach and secure connectivity for military operations.

Today, as emerging reshape the battlespace, the Signal Corps remains critical to warfighting. Ensuring seamless and resilient communication across multiple domains – land, air, sea, space, and cyberspace – is critical to maintaining information superiority and enabling warfighters to execute complex, multi-domain operations.

The Army has shifted its warfighting strategy away from enduring counterinsurgency (COIN) missions to large-scale combat operations (LSCO), emphasizing the need for seamless integration of mobile, reliable, dynamic, and scalable communications. Commercial satellite communications (COMSATCOM) have been the preferred transport vector amongst commanders in recent years. As the battlespace evolves and COMSATCOM solutions expand their role in military operations, military SATCOM (MILSATCOM) remains a critical force multiplier that must not be discarded.

In April 2024, the 302nd Signal Battalion (SB) and 50th Expeditionary Signal Battalion-Enhanced (ESB-E) successfully leveraged a Continental United States (CONUS) Gateway and Global Agile Integrated Transport (GAIT) to pull services from a CONUS Regional Hub Node (RHN). While this frequently occurs overseas, traditionally, the Gateways that fall under 302nd SB have not been used to provide this capability, though it is readily available. This successful exercise highlights the resilience and adaptability of MILSATCOM in an era where proliferated low Earth

orbit (pLEO) constellations are emerging to support LSCO. Leveraging CONUS Army Gateways in this manner offer an increased footprint for landing SATCOM missions previously thought to be limited to RHN Liberty and RHN Roberts.

Transport diversity plays a key role in increasing capacity, alleviating the burden on aging military satellite constellations, and ensuring resilient communications in an era of evolving threats. By integrating MILSATCOM with COMSATCOM, the Department of Defense can enhance bandwidth availability, reduce single points of failure, and provide added redundancy in both contested and congested environments. Though this type of capability is often exercised in theaters Outside the Continental United States, the 302nd SB has the capacity to expand CONUS landing sites, providing greater flexibility and resilience to the warfighter. Despite the rapid advancements in commercial space capabilities, overreliance on COMSATCOM presents operational risks.

While commercial providers offer scalable and cost-effective solutions, most primarily serve civilian and enterprise customers, making them vulnerable to market fluctuations, regulatory changes, and adversarial targeting. In contrast, MILSATCOM provides dedicated, secure, and protected communications, ensuring that the military retains full operational control over its most critical transmissions, especially in high-threat environments.

The 302nd SB remains ready to provide transport diversity and dynamic solutions for the modern-day warfighter through a robust MILSATCOM infrastructure. The recent shift toward hybrid architectures – integrating military and commercial assets – demonstrates the necessity of maintaining a layered and redundant communication strategy. Our successful demonstration reinforces that MILSATCOM is not obsolete; it is indispensable. By leveraging transport diversity and integrating both military and commercial capabilities, we ensure that the joint force remains connected, agile, and mission ready, even in the most challenging operational environments.

Bio

Chief Warrant Officer 2 Tiffany Kitarogers is a native of Norfolk, Virginia. She joined the Army in January 2007 as a signal support systems specialist (25U), and in 2019 was appointed as a network operations warrant officer (255N). Her assignments include 2nd Brigade Combat Team, 101st Airborne Division (Air Assault); 160th Special Operations Aviation Regiment; and 2nd Security Force Assistance Brigade. Kitarogers currently serves as the senior battalion warrant officer for 302nd Signal Battalion, 21st Signal Brigade, Fort Detrick, Maryland.