EWA Warrior Services Now Part of Sigma Defense, Bringing Enhanced Capabilities to Space Command Data Frameworks

Executive Summary

EWA Warrior Services, a division of Sigma Defense, can provide the U.S. Space Force with a DevSecOps environment to support the reimagined data architecture of the National Space Test and Training Complex (NSTTC). This builds on Sigma Defense's test, training and evaluation (TT&E) success with the 25th Space Range Squadron.

Current Objectives and Opportunities

Under the U.S. Space Force, NSTTC supports warfighter readiness by providing a secure test and training environment across electromagnetic, orbital, cyber and digital warfare domains. It presents a range of simulated battlespaces—enabling live, virtual and constructive training to prepare space mission crews for real-world operations.

As the NSTTC evolves, it faces a pivotal moment in rebuilding its data architecture. By utilizing advanced TT&E technologies within a robust DevSecOps framework, the Space Force can achieve efficient, secure and modernized command and control (C2) systems that address technological and cultural challenges. This approach accelerates software delivery, ensuring robust security and seamless integration with existing systems.

This is imperative as the Department of Defense continues to develop Combined Joint All-Domain Command and Control (CJADC2). This ambitious goal will require all DoD organizations to share data through interoperable systems that can connect with different data networks in real-time. As the Space Force moves forward with its role in CJADC2, it requires systems that offer this capability and continue to decrease sensor-to-shooter times.

The Sigma Defense Solution

In 2024, Sigma Defense acquired EWA—the parent company of EWA Warrior Services—to deliver an enhanced portfolio of capabilities to our customers in the DoD. Now operating as a division of Sigma Defense, EWA Warrior Services deliver electronic warfare (EW) and TT&E capabilities to the U.S. Space Force—bringing the power DevSecOps, digital modernization and more to Space Force missions.

This acquisition vastly expanded Sigma Defense's capabilities in Space Force training. It has enhanced our ability to leverage critical knowledge, excellent past performance and strong relationships at the NSTTC, allowing us to deliver comprehensive solutions in the training domain. As a result, Sigma Defense is better equipped to meet the strategic priorities of the Space Force and position Sigma Defense as a key player in space defense.

Under Sigma Defense, EWA Warrior Services is crucial in enhancing the Space Force's operational capabilities, especially within TT&E. Working closely with the Space Delta 11 under STARCOM, we provide essential capabilities like the Transportable Range Operation Center (TROC). This system integrates satellite communications, data management and operational oversight, enabling real-time global command and control of space ranges.

TROC serves as a cornerstone of the NSTTC, supporting diverse test and training activities, including multi-domain operational simulations. These environments

allow Space Force personnel to train in scenarios closely mirroring actual space operations. TROC also facilitates the integration of Electronic Warfare (EW) and cyber capabilities, offering a platform for evaluating and training in various threat environments.

We specialize in software-defined radios (SDRs) and software-defined waveforms (SDWFs), which are crucial for maintaining adaptable communication systems across terrestrial and on-orbit platforms. These technologies ensure seamless interoperability, enabling the Space Force to respond swiftly to evolving threats and enhancing mission resiliency.

As part of Sigma Defense, EWA continues to serve as a trusted partner to the Space Force and other space-focused organizations, delivering integrated solutions that enhance operational readiness, decision quality, and situational awareness. The TROC initiative—along with Sigma Defense's strong track record of success across Navy, Air Force, and Army contracts—shows a commitment to providing tailored, mission-driven solutions that connect warfighters and commands seamlessly.

As Space Force advances, Sigma Defense can layer DevSecOps and software modernization on top of EWA Warrior Services offering that can serve as an integral piece to the Space Force's modernization, particularly in C2 and mission management systems. Through DevSecOps, we streamline software development, security and operations, creating a scalable and secure framework for rapidly deploying mission-critical software.

This is exemplified in our work on the Forge C2 program, where we help develop modernized ground architectures that support integrating new systems and technologies, such as SBIRS and OPIR satellites. With the development of sensor plugins for the Virtual Management Operations Center (VMOC), each mission has satellites with defined sensors that VMOC must manage. Sigma Defense wrote code to move data between VMOC and Flying Dynamics (OASYS) via MDPAF's C2MS bus to ensure these sensors adhered to an appropriate schedule.

DevSecOps practices also extend to DCO-S, where we develop software and systems ensuring cybersecurity for space operations. This includes mission management software, telemetry tracking, and ground control systems essential for securing and efficiently operating space assets.

Enhancing the National Space Test and Training Complex

The NSTTC is critical for the Space Force to maintain and advance its space operations. In this primary environment for TT&E activities, Space Force personnel can engage

in realistic simulations and scenarios that replicate the challenges they may face in actual space operations, ensuring new technologies and strategies are rigorously vetted before deployment.

As space warfare and operations become more complex, the NSTTC is undergoing significant changes to meet the Space Force's evolving needs. The current architecture is being expanded to incorporate advanced capabilities such as multi-domain operational environments, enhanced EW, and cyber warfare simulations. These changes aim to provide a more comprehensive and flexible testing environment that accommodates new space technologies' rapid development and deployment and create an environment that allows personnel to train while they fight.

Integrating cutting-edge technologies such as artificial intelligence, machine learning, and sophisticated cyber defenses could revolutionize how the Space Force conducts TT&E. These enhancements would improve training effectiveness and ensure that Space Force remains at the forefront of space defense, ready to counter emerging threats with agility and precision.

A Progressive Approach to Data Architecture

As the NSTTC undergoes significant transformations, Sigma Defense's technologies—layered with EWA Warrior Services' proven success with TROC—are uniquely positioned to enhance these changes. The NSTTC's expansion into advanced multi-domain operational environments requires a robust, secure, and adaptable infrastructure. Sigma Defense's DevSecOps approach provides the critical framework to support this transformation, ensuring software development, security, and operations are seamlessly integrated, enabling rapid deployment and continuous improvement of mission-critical systems.

Sigma Defense's agility and DevSecOps approach distinguish us from larger, less agile competitors. Our end-to-end solutions in C5ISR and SATCOM, combined with expertise in AI and predictive analytics, ensure we can meet both current and future demands.

One of the key challenges in modernizing the NSTTC is the need for a unified architecture that supports new technology integration while maintaining security and operational efficiency. Sigma Defense's DevSecOps capabilities address this challenge by facilitating the development of secure, scalable software solutions that can be quickly adapted to meet new requirements. For instance, Sigma Software Studio, a foundation for software factory solutions, offers a modular and flexible architecture that integrates new systems and technologies into the NSTTC. This ensures the Space Force can continuously evolve its training and testing capabilities without compromising security or performance.

Additionally, our DCO-S expertise is crucial for protecting the integrity of the NSTTC's expanded capabilities. The potential for cyber threats increases as the NSTTC integrates more complex and interconnected systems. Sigma Defense's DevSecOps practices ensure cybersecurity is embedded throughout the software development lifecycle, providing robust protection against evolving threats. This is particularly important as the NSTTC supports multi-domain operations, where there is a higher risk of cyber-attacks on critical infrastructure.

Together, Sigma Defense's DevSecOps approach and EWA's electronic warfare capabilities are essential for the successful modernization of the NSTTC. By providing a secure, adaptable and scalable framework, Sigma Defense enables the Space Force to enhance its testing and training capabilities, ensuring it remains at the forefront of space defense. Integrating advanced software solutions, flexible communications technologies and robust cybersecurity measures positions the NSTTC to more effectively meet the demands of future space operations.