or the past three years and as directed in the FY 23 National Defense Authorization Act, XVIII Airborne Corps has been working closely with the joint force, industry partners and intelligence agencies to enhance doctrinal targeting processes and leverage artificial intelligence within multinational and multiservice systems and workflows. These

technologies have come to aid targeting officers and intelligence analysts with the identification, development and prosecution of targets, reducing that target lifecycle from days The minutes. to advancements are also increasing staff efficiency and decreasing bandwidth consumption. This has led the Corps adopt innovative to technologies such as the Broad Area Surveillance-Targeting (BAS-T), part of the National Geospatial Agency's (NGA) Maven program. Broad Area Surveillance-Targeting has given XVIII Airborne Corps' Fusion Cell the ability to leverage artificial intelligence within deliberate and dynamic targeting processes by detecting objects within an image at scale, operating in one easy to use single user interface on a low bandwidth tactical network. When compared to the time it would take trained analysts to search



XVIII AIRBORNE CORPS BAS-T EMPLOYMENT

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an entire image, the difference is significant. Broad Area Surveillance-Targeting is not a replacement for geospatial intelligence analysts, but rather an augmenting tool saving time, allowing the commander to make timely and informed decisions and staff concurrently stays focused on targets by priority. BAS-T algorithms fuse data from multiple sensors and platforms to bring analysts and operators a priority based, indepth assessment of the enemy systems present within the commander's area of responsibility (AOR).

Fighting with algorithms, however, is not simply a consumer's game where you receive output of targets. XVIII Airborne Corps routinely employs commercial and national space based

electro-optical (EO) and synthetic-aperture radar (SAR) imagery to help identify gaps between the identification of object classes within the BAS-T models (algorithms). This <u>refinement is done by</u> rejecting or accepting the detections that the model has identified within any specific image. The feedback provided by the analysts helps the model understand where it is falling short, as well as where it got the detection right. During Joint All-Domain Command and Control (JADC2) exercises such as the Corps quarterly Scarlet Dragon series and "1000 Decisions an hour," XVIII Airborne Corps tests new models and their performance against object classes of common military equipment such as transporter rector launchers (TELs), towed artillery pieces, radars and surface vessels. These classes are just a few among the many that BAS-T algorithms can detect within EO or SAR

imagery. These exercises also allow XVIII Airborne Corps to refine battle rhythms and processes. The detections within the image can also help in the development of named areas of interest (NAIs), as well as confirm or deny any perceived or suspected enemy activity within the AOR. Once a pass is made by space-based assets and any one of many computer vision algorithms processed the image, the live layer associated with BAS-T

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within Maven Smart System (MSS) publishes to everyone within the staff in real time. Both the Field Artillery Intelligence Officer (FAIO) on the floor and the GEOINT analysts all see these detections on MSS, thereby enabling all to work collectively at scale and speed. From there, they conduct target vetting and validation based on the high payoff target list (HPTL), target selection standards (TSS) and attack guidance matrix (AGM), previously approved by the commander.

Detects are sent to target workbench (TWB) within MSS, where they are prioritized and sent to any of the following for prosecution: Advanced Field Artillery Tactical Data System (AFATDS), or published as a J series 3.X track via Joint Range Extension Applications Protocol or JREAP-C or JREAP-A. Maven Smart System can talk to Joint Automated Deep Operations Coordination System (JADOCS), but is not a system utilized by the XVIII Airborne Corps due to JADOCS inability to process increased data streams. The artificial intelligence within BAS-T digests hundreds of kilometers at once, allowing us to hold enemy forces at risk and enabling staff efficiency and timely engagement of targets; both kinetically and non-kinetically.

Scarlet Dragon - Oasis, an exercise held January 2023, allowed XVIII Airborne Corps and U.S. Central Command (CENTCOM) to jointly employ BAS-T successfully while being geographically separated. XVIII Airborne Corps successfully used BAS-T and MSS to prosecute deliberate and dynamic targets and nominate targets using TWB and for both organizations to see information in real time. Additionally, we highlighted the ability to conduct the Sensitive Target Approval and Review (STAR) Process within two hours by using TWB and BAS-T. XVIII Airborne Corps used BAS-T to detect enemy equipment (training) in Fort Liberty, North Carolina and Nellis AFB, Nevada. From the fusion cell, we sent targets to 18th Field Artillery Brigade AFATDS in Nellis, AFB, where they successfully did a live fire, as well as publishing a track on JREAP-A thru an Air Operations Center, where a B-52 Bomber dropped live ordnance on Fort Liberty. Scarlet Dragon VII will be a joint effort with U.S. Indo-Pacific Command (INDOPACOM) from July through August 2023.

At our last 1,000 Decisions an hour exercise in June 2023 – an exercise to assure data readiness of the Corps – BAS–T algorithms were processed in various areas within different combatant commands AORs. They included CENTCOM, INDOPACOM and U.S. European Command (EUCOM). The exercise is designed to stress the analysts by injecting thousands of detections within a given area. The result is then captured by Army Research Lab and the NGA, to improve future models and aid in national collection strategy development and modifications.

BAS-T is not a new way to conduct targeting. It is a tool that allows targeteers, the fusion cell and the commander's staff to leverage artificial intelligence and help identify gaps, while saving time and resources. It has been successfully employed on operational deployments and XVIII Airborne Corps has found it useful in streamlining processes and systems. We will continue to refine it by working alongside industry partners and government agencies. It is not a "XVIII Airborne Corps thing", but rather a helpful experimental joint tool based on currently available technology that augments our works flows to allow us to move faster and at a greater scale than ever before. It is a tool being made to work for any joint or Army Headquarters, regardless of echelon, based on assigned mission set and operational variables.

CW2 Christopher A. Chabrier-Montijo has been a Targeting Officer at XVIII Airborne Corps for two years. For these past two years, he has worked closely with NGA and industry partners like Palantir, MAXAR, Royce GEO, among others, to enhance the tactical employment of national and commercial assets. This includes the development and refinement of artificial intelligence models throughout the fiscal years and testing them during exercises such as Scarlet Dragon and 1K Decisions series every quarter. He deployed last year as part of Operation Assure and Deter and used these capabilities for real world operations. What is now known as the SAG-U began as the Fusion Cell for XVIII Airborne Corps, which he was a member of and this capability was utilized. He has demonstrated this capability to Multinational Partners like Canada, UK, Australia, Joint HQs like CENTCOM, INDOPACOM, as well as Army units that include USARPAC, USAREUR-AF, Army Futures Command, III Corps, the 10th Mountain Division and the 82nd Airborne Division.