



FACT SHEET

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Date of issue: 23 Sep 2021

Ex Forging Sabre 2021 – “Sense More, Smarter, Strike as One”

Ex Forging Sabre 2021 (XFS21) is a Singapore Armed Forces (SAF) integrated strike exercise involving around 600 personnel from the Republic of Singapore Air Force (RSAF) and 200 personnel from the Singapore Army, and a suite of sense and strike assets from the SAF. Conducted from 14 to 25 September at Mountain Home Air Force Base, Idaho, US, the SAF is able to train in a vast training area with an airspace more than 20 times the size of Singapore, allowing the SAF to conduct larger-scale and realistic training to maintain high-levels of readiness for Singapore’s defence.

Conducted biennially, this year’s exercise is the eighth instalment in a series that began in 2005 and features the inaugural participation of the Army’s Headquarters Sense and Strike (HQ SS). This will allow the Army to test and validate the Next-Generation Army’s tactical intelligence and fires capabilities, and harness operational synergies between the air and land forces.

Exercise participants are fully vaccinated and stringent COVID-19 Safe Management Measures (SMMs) have been enforced to ensure the safety and well-being of all servicemen and women. A health bubble has been enforced around exercise participants to avoid community transmission. Some of the SMMs in place include pre- and post-deployment swab tests, adhering to US’ health and safety guidelines, cohorting personnel by functional groups, mask-on policy, staggering activities to minimise crowding, self-administered Antigen Rapid Tests and restricted movement. Upon their return to Singapore, all the participants will also be subjected to Ministry of Health protocols.

Sense More

The suite of aerial and ground sensors from the RSAF and the Army scan the battlefield to collect timely and accurate intelligence of potential threats to provide the integrated command post (CP) with a comprehensive real-time picture of the battlefield. This year, the SAF will heighten our sensing capabilities through the simultaneous deployment of the Heron 1 UAV and a smaller drone to scan the battlefield from different altitudes. From a higher

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altitude, the Heron 1 UAV provides a bird's eye view of the battlefield, while the smaller drone operates at a lower altitude to conduct in-depth surveillance of specific areas.

The Army's TPQ-53 Weapon Locating Radar (WLR) and the VELOCE 15 mini-UAV (V15 mUAV) will also be involved in the integrated exercise. Together, these aerial and ground sensors will allow the SAF to sense more pervasively, providing the CP with real-time and accurate information.

Smarter

The SAF continues to harness technology, as a force multiplier, to fight "smarter" as a networked and technologically advanced fighting force. Together with the Defence Science and Technology Agency (DSTA), the SAF has developed and equipped the CP with a Command and Control Information System (CCIS). Leveraging fourth industrial revolution technologies, such as data analytics and artificial intelligence, and weapon-to-target matching algorithms, the CCIS sense-makes information gathered by aerial and ground sensors and generates warfighting solutions, allowing commanders to make informed and prompt decisions to neutralise would-be aggressors quickly and accurately.

To support the SAF's operational requirements, DSTA created a digital twin of the XFS CP in their lab, with the use of modelling and simulation technologies to recreate the CP set-up during XFS21. This allows DSTA engineers to mirror the SAF's assets deployed at XFS21 in a virtual 3D environment and allows them to test and validate the effectiveness of the CCIS in enabling the SAF to execute integrated sense and strike missions proficiently. The digital twin also enables the SAF and DSTA to rapidly experiment the integration of new features and advanced technologies in the CCIS to ensure the CP remains agile in a dynamic battlefield.

Strike as One

XFS21 will see increased levels of integration between the sense and strike assets across the SAF. Enabled by the CCIS, the SAF can deploy a full range of assets and weapons from air and land forces to defend against different types of targets. The F-15SG and F-16C/D fighters, as well as the AH-64D Apache attack helicopters, will be conducting live-firing on static and moving targets at XFS21. Working seamlessly together with the commando lasing teams and STRike ObserveRs Mission (STORM) teams, the fighter aircraft will employ precision guided munitions to swiftly destroy multiple targets in a single pass. Live GBU-56 Laser Joint Direct Attack Munitions will also be dropped at XFS21 by the F-15SG fighters. In the air, the RSAF's A330 Multi-Role Tanker Transport (MRTT) extends the endurance of fighters, allowing them to stay airborne for longer, maintaining the SAF's operational edge on the battlefield. The AH-64D and the High Mobility Artillery Rocket System (HIMARS) will also engage in a joint live-firing exercise. Employing missiles, the AH-64D can eliminate multiple moving targets simultaneously across different areas of operations and the HIMARS can fire rockets to successfully guard against adversaries.

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