AGIL® Counter Unmanned Aerial System Simulation System

Protect Airspace, Critical Infrastructure and Public Safety with Realistic Simulation Training

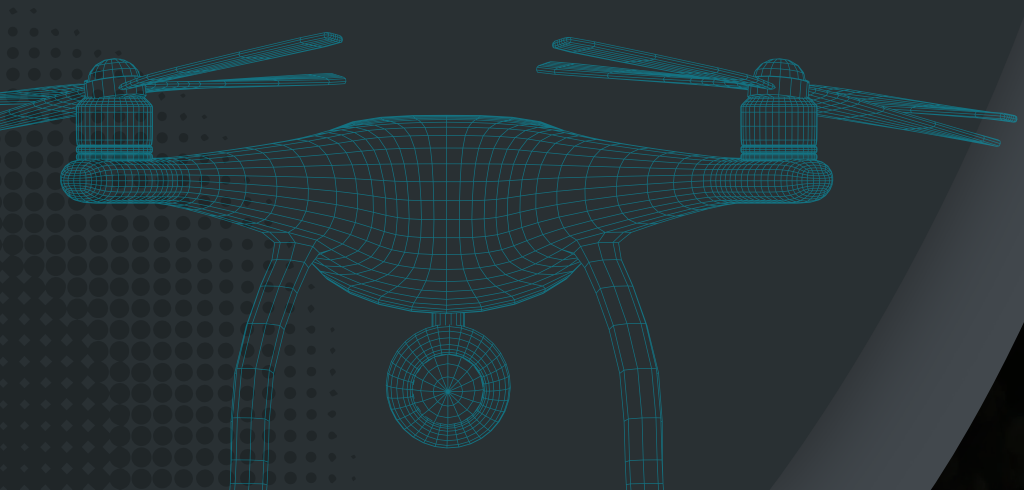
ST Engineering

In today's rapidly evolving threat landscape, effective Counter Unmanned Aerial System (C-UAS) operations are critical. At ST Engineering, we leverage advanced technologies and innovative solutions to empower our customers in addressing these increasingly complex challenges.

The AI-enabled AGIL® Counter Unmanned Aerial System (C-UAS) Simulation System offers an advanced, integrated training solution designed to prepare teams for real-world challenges. The AI-assisted simulation system provides realistic training in decision-making, tactical employment and rules of engagement in both known and uncertain threat scenarios.

The system seamlessly integrates all critical elements of C-UAS operations, providing a holistic and immersive training experience. From tactical decision-making and drone pilotage to detection, targeting and neutralisation, we build crucial skills and enhance operational readiness across the entire spectrum of C-UAS engagement.

This system also facilitates scenario-based experimentation of C-UAS concepts and tactics in dynamic, high-threat environments. This will enable rapid iterations of defence strategies and countermeasures against various UAS threats.



The C-UAS simulation system includes several key components that work together to provide comprehensive training, facilitate scenario-based experimentation and / or strategies development:

COMMAND AND CONTROL (C2) STATION

- Tactical Overview: Provides a comprehensive tactical overview of the protected airspace and critical infrastructure.
- Strategic Decision-Making: Supports threat analysis and decision-making on appropriate countermeasures, mirroring real-world command responsibilities.

INSTRUCTOR STATION / PLANNING STATION

- Scenarios for training: The Instructor designs and plans the training scenarios of various UAS threats, not restricted to types, formations and intended targets.
- Planning tools for Training and Experimentation: Allows testing and optimisation of sensor-effector deployment for area of operations.

DRONE CONTROLLER AND C-UAS EFFECTOR

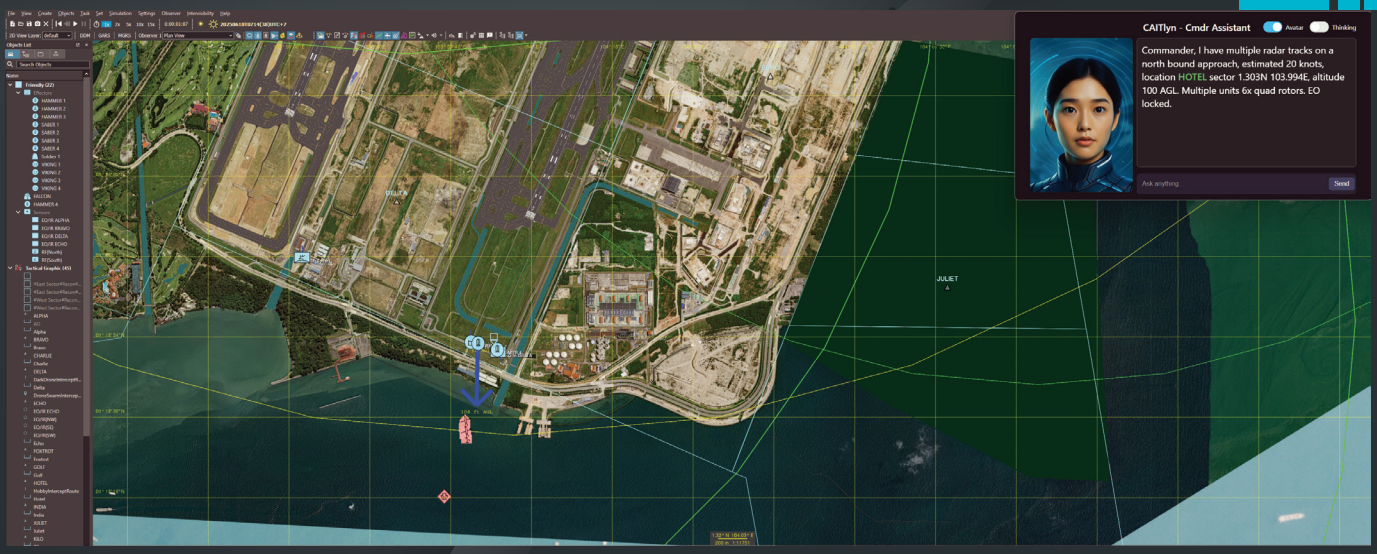
- Drone Controller Station: The trainee operator learns piloting skills and interception tactics to neutralise incoming threats mid-air.
- VR Effector Station: The trainee learns to operate various effector, e.g. drone gun, through immersive Virtual Reality (VR) technology to engage hostile UAS, allowing for skill building in targeting and neutralisation with jammers, e.g. RF-based jammers.

AI-ASSISTED OPERATIONS

- Offline large language model (LLM) and Retrieval-Augmented Generation (RAG): Provides decision assistance and support in tactical employment of effectors.

TRAINING ANALYTICS

- Comprehensive simulation data: Provides insights in effectiveness of strategies, operations and tactical employment.



The AI-enabled C-UAS simulation system serves as a powerful tool for integrated command team training, development of CONOPS, planning tools to optimise sensor-effector deployment, ensuring that your teams are always ready to defend the airspace against evolving UAS threats.

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