PUZZLE™

AI-Based Multi-Domain Intelligence Suite at Scale

PUZZLE
— INTELLIGENCE
SOLUTIONS AT SCALE

AI-Based Decision Support System

In today's battlespaces, successful campaigns depend on the effective use of high-volume, accurate fire power in the timely engagement of relevant targets. This requires the collection and exploitation of high-quality, target-oriented intelligence based on vast amounts of data, and the creation of actionable insights and target identification – while operating in arenas containing countless targets and RF networks with thousands of transmissions per second.

The PUZZLE Suite addresses this complex reality, providing a comprehensive, AI-based Decision Support System that exploits immense quantities of data to create fused multidisciplinary intelligence. Operating nationally or regionally, the modular system of systems easily integrates with customers' operational and network ecosystems and is fully compatible with RAFAEL's sensors and effectors.

Benefits

- Increased identification and prioritisation of high-value targets
- Fast sensor-to-effector cycle
- Significantly increases manpower output
- Transforms hard-working experts into decision-makers
- Efficient use of munitions and platforms
- Supports large arenas and mission constraints
- Open architecture, processing any vectored data
- Operational from national or regional centers, deployable vehicles, or in combination
- Available as an all-inclusive modular solution or stand-alone applications

End-to-End Modular Intelligence

The PUZZLE Suite comprises these highly-sophisticated web applications, operated either as a unit or independently.

SIGNAL.AI – AI-Based Exploitation System

Based on cutting-edge AI and ML, and designed for use by SIGINT analysts operating in environments covering tens of thousands of networks, the system uses the full range of RF input for in-depth exploration of RF communication to identify and classify enemy networks and locate their positions.

IMILITE – AI-Based System for Unified IMINT Centers

This is the first-of-its-kind, combat-proven, national level IMINT & GEOINT system that provides advanced visual and geospatial data collection and exploitation. It enables the production of high-volume, multi-sensor, multi-mission intelligence products, and integrates all assets to create a unified intelligence picture.

TARGETS – Multi-Domain Target Solution

This is a Target Center that enables Targeteers to submit multidisciplinary queries over large amounts of data, defined by expert analysts using an advanced visual exploitation tool. Supporting rapid adjustment of potential targets, the Center logs all target-related activities, provides all relevant indications for every target over time, and identifies bottlenecks preventing mission success.
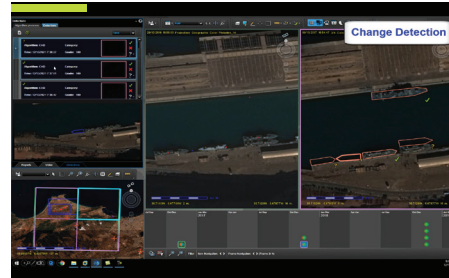
FORCE – Many-to-Many Effector Hub

This net-centric, national-level hub – connected to all units across all fronts and arenas – receives, evaluates, and prioritizes attack requests from Targeteers, creating dynamic, weighted lists. The system then matches requests with available, suitable effectors and creates an end-to-end plan. A simulated outcome preview and analysis supports decision-making, enabling plan updates.
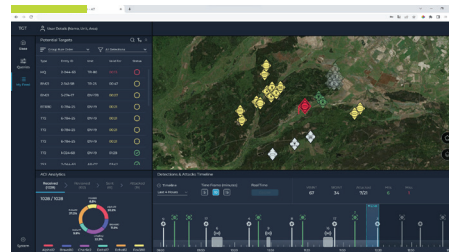
For decades, RAFAEL has developed, battlefield tested, fine-tuned and improved end-to-end solutions. They include sensors, exploitation and fusion solutions, Command & Control systems, effectors and munitions.
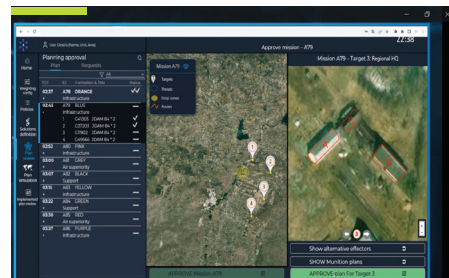

SIGNAL.AI

IMILITE

TARGETS

FORCE

Main Capabilities

- Collects data across multiple domains including IMINT, SIGINT, Cyber, and Public Sources
- Exploits a vast amount of data in real time
- Provides multi-domain exploitation using AI-based algorithms
- Creates accurate enemy picture
- Matches and distributes targets to effectors
- Creates optimized attack plans at scale
- Supports large arenas and mission constraints