

TEKEVER +

 **CRFS**
a Motorola Solutions Company

EXTRAORDINARY
RF TECHNOLOGY



CR-006346-GD-01

PERSISTENT ISR & EMSO THROUGH UAV-BASED RF SENSING

TEKEVER + CRFS = (Persistent ISR in Grey Zones +
Modernized EMSO + Faster targeting cycles)

NATO members and partners can no longer take spectrum dominance or control of the operational initiative for granted. Radically different military doctrines embrace electronic warfare (EW) across all operational levels, the use of deception, and subthreshold warfare to achieve their strategic goals.

These challenges have exposed allied forces' acute capability gaps in several areas:

- Incomplete ISR coverage
- Insufficient integration of Electromagnetic Spectrum Operations (EMSO) across all operational levels
- The need to create a faster, more resilient targeting cycle

One model to solve these challenges and close these gaps is for electromagnetic intelligence to be delivered directly to militaries via passive RF sensors integrated into UAVs—this can be provided through a Surveillance-as-a-Service (SaaS) model to allow a cost effective way of achieving decisive effect.

This technologically advanced solution increases the efficiency and continuity of military operations.

- Scalable
- Cost-effective
- Rapidly deployable
- Reduced operator training requirements
- Persistent monitoring
- No lengthy procurement or training cycles

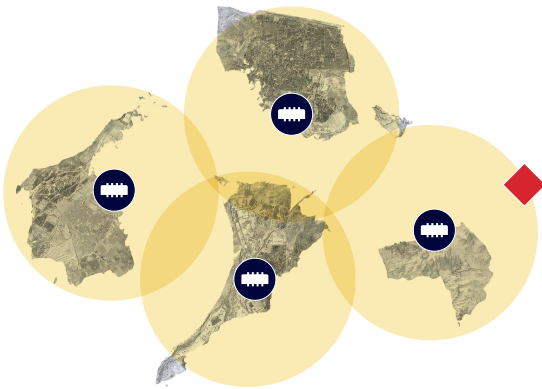
The capability is non-escalatory yet operationally decisive, enabling NATO members and partners to control the initiative through highly accurate data collection while creating uncertainty for adversaries.

Extending the ISR coverage of fixed sensors

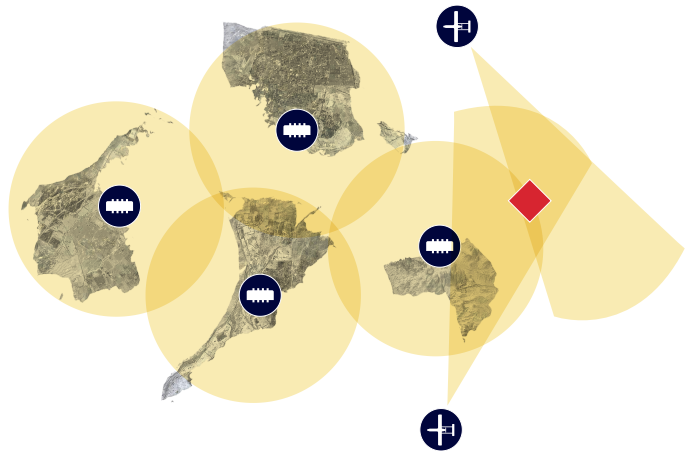
Launched from a remote island, two UAVs + RF sensors are tasked with extending the ISR coverage of fixed RF sensors. They are sent towards a vessel suspected of conducting subthreshold warfare and fills ISR gaps over disputed islands in the South China Sea.

The UAVs fly for 18 hours beyond line-of-sight of the vessel, monitoring the spectrum and detecting the ships' onboard communications, which are analysed in near-real-time by SIGINT analysts who can gather intelligence without provoking a direct confrontation.

NETWORK WITHOUT UAV SUPPORT



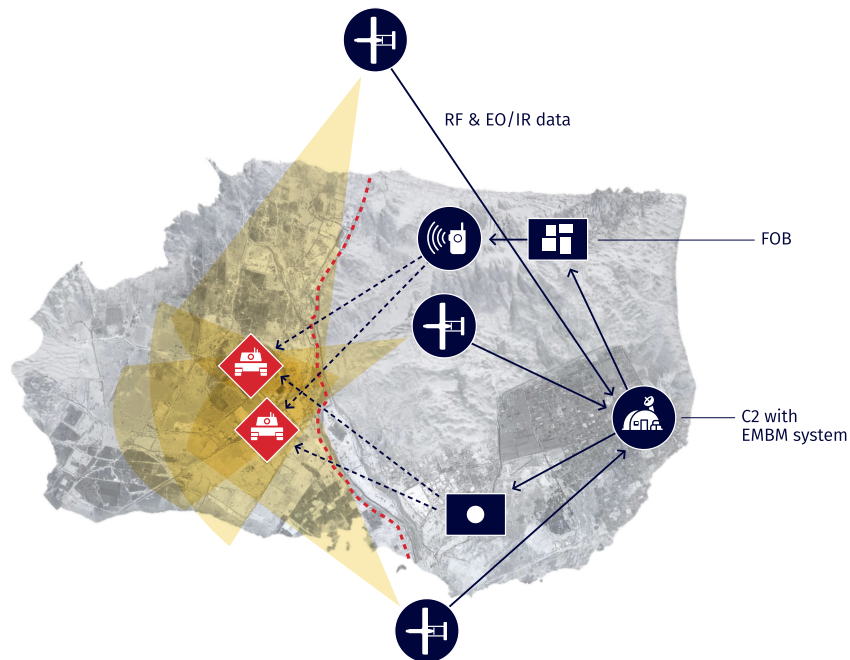
NETWORK WITH UAV SUPPORT



Accelerating the targeting cycle

Russian EW units use UAVs on NATO's eastern flank to cue rapid artillery strikes. In response, NATO deploys multiple UAVs + RF sensors as the distributed sensor element of a kill web.

The UAVs detect and geolocate hostile fire-control links, streaming RF data directly into the Electromagnetic Battle Management (EMBM) system. This AI-enabled data is fused with data from EO/IR sensors for positive identification of the targets, which are rapidly relayed to artillery units in real time. Meanwhile, EW teams jam UAV control links using the same data. Even after one UAV is lost, the network remains resilient with continuity of fires.



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