SPARROW

**Airport Situational Awareness
against UAV threats**

Detect

Assess

Collaborate

Sparrow is a multisensor situational awareness solution that assesses drone incursions and helps mitigate their disrupting effects on operations at airports, military airfields and other critical infrastructures. Sparrow is a modular environment that serves all stakeholders by offering them the information to respond instantly to disruptions generated by non-cooperative UAV/UAS. Sparrow assesses threats using configured sensitive areas and UTM and ATM data. The system then shares this real-time situational awareness with all stakeholders including ATC, law enforcement and security forces. Sparrow is also a unique testbed for sensor suppliers or operators wishing to evaluate and validate their Counter- UAS solution.

Detect

Sparrow uses information from multiple sources to detect UAV traffic in the vicinity of the airport. The system has an open architecture and can be integrated with a variety of sensors. By combining sensors using different technologies with a variety of classification methods (electro-optical, radio-frequency, doppler signatures), Sparrow maximises the probability of detection. The scalable architecture allows for easy integration of additional sensors.

Sparrow uses ATC data, UAV sensor data and UTM data to build a comprehensive situational awareness. Pre-defined sensitive areas are actively monitored by the system.

Assess

Sparrow also collects available UTM clearances, ATC traffic, published AIP information and restrictions in place at critical infrastructures. UAV traffic that is in violation of rules and regulations and/or UAV traffic that is compromising safety will trigger an alert on the Sparrow Command & Control (C2) position based on the threat levels and alerting rules defined by the C2 operator. The C2 operator also controls information dissemination to all involved stakeholders to facilitate collaborative decision making.

Sparrow also offers a unique user-definable test and validation environment for technology partners, such as sensor manufacturers and systems integrators, or for clients that wish to field-test their airport drone protection concept.

Collaborate

An essential element in threat mitigation and resolution is real-time shared situational awareness that enables agile collaboration. Sharing of information can be done thanks to human-controlled and automatic modes.

An ATM Gateway offers a safe way to inform Air Traffic Controllers about confirmed UAV threats. A Security Forces Gateway enables collaborative decision making with dedicated Sparrow Apps. Information dissemination to security forces can be automated so that the threat can be assessed and the situation defused even before the threat to ATC becomes critical.

The system offers an information feedback loop to keep all stakeholders up-to-date. Shared information includes threat information, classification, alerting, logging of collaborative actions, feedback on the results of actions and a shared view on the actual air traffic situation.

Key features

- Fully customizable high-resolution situation display
- Multi-sensor fusion and presentation
- Programmable Command & Control software
- Integrated classification and decision support tools
- Communication gateways to ATM and UTM services
- Integration with public safety alerting systems
- Supports Sapient protocol
- Deployable version available
- Android and iOS mobile apps
- Available as a test and validation platform
- In-house maintained Linux-based OS

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