

Alraware

AI-Assisted Drone Detection in go2MONITOR

Case Study | Datacept.ai & PROCITEC GmbH

INTRODUCTION

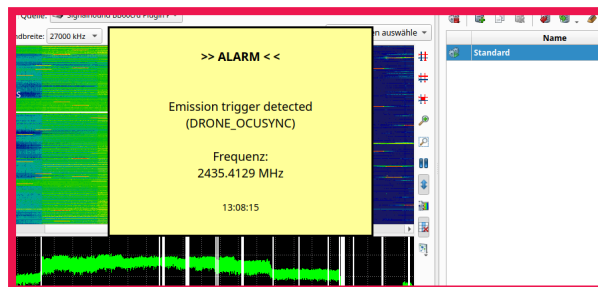
This case study describes a prototype integration of datacept.ai drone-detection results into go2MONITOR. The objective is to assess whether AI-generated drone indications can be incorporated into an established spectrum-monitoring workflow and used to deliver automatic audio-visual alerts upon detection of drone signal activations

OPERATIONAL NEED

Commercial and customized drones can create new challenges for spectrum monitoring. Their radio signals may be intermittent, short-lived, or embedded in heavily occupied frequency bands. It is mandatory to identify signals and label them as drone emitters in the threat assessment.

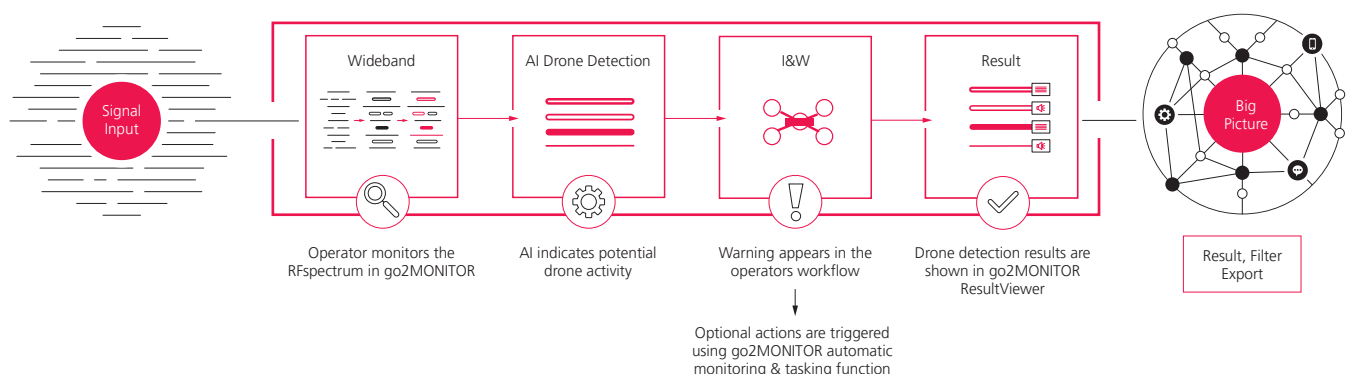
While conducting routine spectrum monitoring, operators may also require timely warning of potential drone activity in their area of interest. An AI-assisted detection and identification process can bring relevant indications directly to their attention without disrupting other ongoing monitoring tasks.

By integrating these indications into go2MONITOR, drone-related events become part of the established visualization, alerting, and recording workflow—without requiring a separate operating picture or additional operator interface.



Auto-alerting upon detection of a drone activation (go2MONITOR)

An AI based approach provides further the possibility to easily adapt to new drone signals by labeling the IQ data and training the model.



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PROTOTYPE CAPABILITIES

- Display of datacept.ai DroneDetector results in go2MONITOR ResultViewer.
- Display of corresponding results in the WB Input Spectrogram when the event frequency falls within the current WB input range.
- Triggering of alarms and channel actions based on the drone name supplied by datacept.ai.
- Use of a detection event as a trigger for go2MONITOR automatic Monitoring and Tasking follow-up actions.

POSSIBLE USE CASES

Drone Activity Warning

Display of datacept.ai DroneDetector results in go2MONITOR ResultViewer.

Drone Signal Collection

Detected drone signals can trigger narrowband or wideband recordings for subsequent manual analysis.

Extended Situational Awareness

ResultViewer displays detections across the full bandwidth monitored by the datacept.ai hardware, including frequencies outside the connected go2MONITOR receiver bandwidth.

The presented integration is a proof of concept. Available functions, detection performance, and operational workflows may change during further development and validation.

FURTHER INFORMATION

For further information relating to Alraware AI-based Drone Detection in go2MONITOR, please contact sales@procitec.com

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