PANOPTES

An extra eye on the ground for surveillance and protection

SENTIENT

Panoptes is a ground-based software solution that automatically detects moving objects in electro-optical (EO) and infrared (IR) video. It is a solution to the global need to improve situational awareness for the security of critical infrastructure.

The system processes real-time video from static PTZ or fixed cameras, automatically detecting and tracking small, slow moving objects in a long-range field of view. It is capable of enabling a 20x increase in surveillance area.

In real-time or forensic operations from fixed masts or towers and vehicle-mounted cameras, it assists:

☐ Border protection

☐ Military base security

☐ Stop and stare border patrol

☐ Tactical battlefield surveillance

☐ Critical infrastructure surveillance

☐ Perimeter protection

☐ Very Very Important Person (VVIP) protective services

Panoptes has a technology readiness level of 9 and is proven in security and surveillance operations on 4 continents.

The challenge

Continuous observation of multiple screens in a security operation is time-consuming for operators and leaves a large margin for human error. Operators tire easily trying to monitor the camera feeds and incursions can easily be missed.

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Specifications

- ☐ Technology readiness level (TRL) 9
- ☐ Small moving object detection down to a few pixels in size
- ☐ Extractable data including size, speed and direction of detected objects
- ☐ Moving object tracking with a visible history of movements and predicted future path
- ☐ Geolocation meta-data compliant with STANAG 4609 and MISB 0601 in MGRS and Lat/Long
- ☐ Easy integration options include Windows application, APIs for Windows, Linux and embedded processors

The Solution

This proactive technology provides real-time surveillance over wide areas and long distances beyond the capability of the human eye.

It alerts the operator to potential threats with audio and visual cues, avoiding long periods of screen watching. Alerts can be picked up for immediate tactical response, improving security and preventing site breaches in commercial and military applications.

Sentient develops and deploys computer vision technology with a focus on the development of automated detection software for EO/IR imagery. With over 2,000 systems deployed, Sentient's solutions enhance the performance of EO/IR operations for many agencies and forces worldwide. Sentient is a trusted partner of the Australian Department of Defence.

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