KESTREL LAND MTI
AUTOMATED MOVING OBJECT DETECTION FOR FULL MOTION VIDEO

As new risks and threats emerge, military forces are calling for higher levels of situational awareness. The ability to detect moving objects, monitor their activities and disseminate the information fast to the right sources is critical to ISR operations.

Kestrel Land MTI is a software solution that automatically detects movement in electro-optical (EO) and infrared (IR) full motion video (FMV) from manned and unmanned aerial vehicles.

The software enhances airborne ISR missions by:

- *Automatic detecting and cueing of small moving objects such as vehicles or dismounts*

- *Enabling wide area surveillance*

- *Reducing operator fatigue through reliable detection over long missions.*

Proven in theatre and with a wide range of air platforms, Kestrel Land MTI is plug and play software at TRL 9.

DETECT

- Automated Small Object Detection

- Moving Object Tracking

- Real-Time Detection

- Proven In Theatre Performance

"Kestrel detects any small movements in the field of view and alerts our operators to objects that are easily missed – camouflaged vehicles in tough terrains, dismounts or squirters leaving houses. This gives our commanders a complete understanding of the situation on the ground."

WGCDR David Riddel,
RAAF Deputy Director – Air Combat Capability

KESTREL Land MTI

☐ **Small Object Detection**
Automatic detection and indication of small moving objects, down to a few pixel in size, often too small for fatigued human eyes to see.

☐ **Moving Object Tracking**
Visible history of object movements with breadcrumbs indicating where each detected object has previously been in the image area. Maintain consistent breadcrumb trail by predicting the object's path based on velocity and direction.

☐ **Increased Surveillance Area**
Greater mission coverage, increasing the area that can be simultaneously analysed by as much as 20 times over existing operations.

☐ **Real-time and Forensic Operation**
Ability to detect, track, record, visualise, review and disseminate information about object movements.

☐ **Geo-location Data**
Meta-data compliant with STANAG 4609 and MISB 0601, disseminating detection locations to downstream application.

☐ **Plug and Play**
Standard Windows, off-the-shelf software, available also as APIs for Windows and Linux.

Sentient develops and deploys computer vision technology for defense and civil projects. Since 1999 we have been specializing in video analytics with a strong focus on the development of automated object detection software.

Sentient is a trusted partner of the Australian Department of Defence.

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