



VANTAGE SENSOR MANAGEMENT AND TACTICAL SITUATIONAL AWARENESS SOFTWARE

VANTAGE is a Sensor Management and Tactical Situational Awareness application that is based on today's state-of-the-art Geographical Information Systems, Commercial off-the-Shelf (COTS) Information Technology and SELEX Galileo's flexible software framework. The use of open standards allows rapid development of new applications and integration of third party sensors.

VANTAGE is designed to integrate single or multiple sensors into a common, easy to use environment for rapid assessment of events, decision making and response. VANTAGE is future proof through the extended use of commercial technology and is designed to be scaled upwards as more security layers are added to an overall system to counter future threats and developing requirements.

Tactical Situational Awareness is provided by high resolution displays of video images from daylight and infrared sensors and by overlaying tactical information on a digital map. Radar information and cues/ alerts from other sensors are also displayed on the digital map. Video and event recording allow analysis, debriefing and training to be carried out using real data.

VANTAGE supports single or multiple operators and can be run on a simple netbook through to a full server based network.

SUPPORTED TECHNOLOGIES

VANTAGE currently supports the following technologies, others can be easily added as and when required by either SELEX Galileo or third party developers:

- Radar
- Daylight Cameras
- InfraRed Cameras
- Unattended Ground Sensors
- Laser Range Finders (LRF)
- Passive InfraRed 'Tripwires'
- Seismic
- Acoustic
- Magnetic
- Pan & Tilt Mechanisms
- Chemical Sensors
- ESM
- Personal Role Radio
- Soldier System Radio
- Sniper Detection
- UAV and UGV
- Effectors (Slew to Cue).



VANTAGE combines a range of sensor outputs to provide a complete situational awareness picture to the user.

FEATURES

- Intuitive HMI provides ease of use and is easily tailored to user requirements
- Scalable, networked architecture suitable for portable, mobile and fixed surveillance
- Full sensor configuration and management
- All sensor/ resource information is integrated into a single tactical view overlaid on a digital map of the area under surveillance. Tactical information includes:
 - Sensor Location
 - Sensor Line of Sight
 - Radar Tracks or detections
 - Alarms
 - Location of Targets
 - Sensor Metadata.
- High quality video imagery, simple video source selection
- Manual controls for tactile man-in-the-loop tasks such as pan, tilt, zoom and focus
- Single or Multiple Operators depending upon the scale of the application
- Robust and Secure Network
- Advanced three-dimensional digital mapping that can be panned and zoomed with simple mouse actions. Zooming in allows maps of increasing resolution to be displayed
- Situational Awareness and sensor management integrated into a single common operating picture
- Targets and resources may be displayed on the map
- Sensor status is displayed in a window
- Sensors may be controlled from the map HMI by mouse controls (click and drag) and may be configured from a pop-up window. Alternatively sensors may be controlled by a joystick and keypad
- Flexible control of video displays
- Event management is provided allowing an operator to classify an alert and initiate appropriate action
- Network video recording option
- Layered access controls determine user privileges
- Third party software can be integrated, e.g. motion detection and other scene assessment tools.

VANTAGE CORE COMPONENTS

VANTAGE Point – Map based visualisation

- ENVITIA Mapping Engine
- Presents Geo-Located items of interest (e.g. Sensors, Detections, Tracks, Alerts & Events)
- Displays sensor view cones
- Manual or automatic cueing of surveillance assets
- 3D mapping allows terrain intervisibility calculation
- Large range of map formats and imagery including Google
- Rule based alert management from multiple sensors
- Zoning (Enable/Disable Alerts in Regions of Interest).

VANTAGE View – Video Management

- Common compression formats
- Integrated camera controls
- Integrated record/playback
- Flexible video tiling.

VANTAGE Framework

- Based on Microsoft .NET remoting standard
- Allows customers to connect to multiple sensor services
- Allows sensors to deliver data streams to multiple clients
- Simple interface allows rapid integration of new sensors
- Flexible interface allows novel features of new sensors to be accommodated
- Sensor data can be held in a local dataset for non-realtime, saving to SQL database
- Role based access controls
- Service Oriented Architecture
- Thin client for smart phone services.

THIRD PARTY DEVELOPERS

External interfaces are implemented through software 'plug-ins' which allow sensors and systems to be managed from the VANTAGE HMI and enable visualisation of information through the addition of graphical layers to the VANTAGE core mapping capability.

SELEX Galileo is able to offer software development services to adapt VANTAGE to any particular requirement and is also able to offer a VANTAGE development environment to third parties who wish to manage their application directly. A VANTAGE development environment comprises licensed developer seats, training, deployment licenses plus support and maintenance options.