# ACS
## ADVANCED CENTRIC SYSTEMS B.V

# COMPREHENSIVE INTEGRATED BASE / INSTALLATION SECURITY SOLUTION
## Product brochure

# THE PROBLEM

Perimeter security is required in every locality or installation where access is restricted, prohibited and/or strictly controlled.

Perimeter security systems normally consist of physical access-denying barriers, like fences, walls and gates; surveillance systems that provide the security personnel with a real-time picture of the perimeter and the areas surrounding the installation, and active early-warning systems that generate alerts of potential threats.

The information provided by the surveillance systems is used to assemble the situational awareness picture that forms the basis for the installation security activity. This status picture enables the security personnel to monitor the installation perimeter and surrounding areas as well as the internal area, respond to any incident and manage it in accordance with the relevant operating procedures.

In sensitive and high-value installations, the surveillance setup may be augmented by active early-warning sensors of various types that generate alerts of potential threats approaching the perimeter (Lidar devices, electronic fences, motion sensors, seismic sensors, tripwire sensors, magnetic and thermal sensors, etc.).

The surveillance sensor categories used most extensively in perimeter security systems are the Radar and electro-optical surveillance payload categories.

Secured installations will benefit from a comprehensive system that integrates various surveillance sensors with an advanced C4I system.

# THE SOLUTION

ACS presents CIBISS – Comprehensive Integrated Base / Installation Security Solution.

CIBISS is a day/night/all-weather security solution that incorporates proven electro-optical, Radar and other sensors with the SAVAS video analytics system and the TRTC4IS tactical C4I system to provide a comprehensive security solution for military bases, strategic installations and infrastructure facilities.

Designed to minimize human operator involvement in the on-going security activity, CIBISS assembles and displays a detailed visual view of the installation or base and its security perimeter, along with indications of alerts, actual intrusions and other incidents. In the event of an intrusion or any other incident necessitating a response, CIBISS will alert the relevant responding elements and then enable effective management of all subsequent activities.

The various sensors linked to CIBISS detect any threat and incident according to preprogrammed parameters and transmit the data to the C4I system. The C4I system processes the data, classifies

the threat and determines its severity. Based on these definitions, the system will initiate the applicable response.

CIBISS utilizes such sensors as electro-optical surveillance payloads, Radars, Lidar (Laser) devices and electronic fences.

The Radars and electro-optical payloads included in CIBISS are all proven devices/systems from the extensive range offered by ACS.

The C4I system used to command and control CIBISS is TRTC4IS (Tactical Real-Time C4I System) – a cutting-edge C4I system offering full mission support, including mission planning, preparation, execution and AAR (After-Action Review). It features an extensive range of capabilities such as mapping & graphics, navigation & orientation as well as mission, data, communication, video and sensor management.

The video analytics system incorporated in CIBISS is SAVAS (Situational Awareness Video Analytics System) – a video object analytics system that observes a specific area cell or scene and studies the behavior of the various moving objects within that area cell or scene. The system establishes the behavior patterns of the various moving objects and determines the dynamic visual routine of the area cell. Based on these reference definitions, the system can then detect and identify any deviations from the standard behavior patterns and the established visual routine.

SAVAS assembles a 3D situational awareness picture of densely-populated urban area cells & scenes, then automatically detects & identifies any deviations from the established visual routine within the area cells or scenes being monitored and alerts the user of such irregularities.

In the context of CIBISS, SAVAS detects motion and carries out pattern analysis for specific areas, so as to generate alerts of suspicious behavior by elements identified as human targets. This system, along with other elements of CIBISS, actually minimize the involvement of human operators in the on-going security activity.

CIBISS is fully customizable. It may be tailored to the client's specific needs and optimally adapted to the specific circumstances and conditions of the site being protected.

# KEY FEATURES & MAJOR ADVANTAGES

**Key Features & Major Advantages:**
- Day/night/all-weather installation security system based on multiple sensors
- System consists of Radar sensors, electro-optical sensors, a video analytics system and a central C4I system
- System minimizes human operator involvement in the on-going security activity
- Radar highlights:
  - Automatic, continuous detection & tracking of multiple targets

- o Solid-state Radar – high MTBF
  - o No moving parts
  - o Low false alarm rate
  - o Range accuracy: less than 10 m
  - o Azimuth accuracy: less than 2°
  - o Interoperability with electro-optical sensors
- Electro-optical payload highlights:
  - o Compact, lightweight, versatile surveillance payload
  - o Gyro stabilized or pan/tilt
  - o Advanced image processing
  - o Optional Laser rangefinder
  - o Target tracking capability
  - o Day/night/all-weather operation
  - o Effective stabilization – excellent image quality
- TRTC4IS a tactical C4I system highlights:
  - o Cutting-edge tactical Command, Control, Communication, Computers & Intelligence (C4I) system running on any PC platform
  - o Full support for the entire mission cycle: planning, preparation, execution & After-Action Review (AAR)
  - o Detailed situational awareness products
  - o Modular design
  - o Extensive data collection, processing & dissemination capabilities
  - o Unique system architecture, excellent flexibility & scalability
  - o State-of-the-art management modules (mission, data, video, communication & sensors)
  - o Mapping, charting & graphic capabilities
  - o Navigation & orientation support
  - o Data recording & storage for AAR & debriefing
- SAVAS a video analytics system highlights:

- Cutting-edge video analytics system studies the dynamic visual routine of a given area cell or scene and assembles a 3D situational awareness picture of that area cell or scene

- Reference definitions enable automatic detection of visual irregularities & generation of alerts

- Automated process eliminates the need for continuous monitoring of multiple displays by numerous human operators

- The number of displays being monitored is significantly reduced

- Occlusions, shadows & high density scenes processed & resolved

- Accurate estimate of objects' spatial positions, velocity & heading

- Recording & storage of video input for After-Action Review (AAR) & analysis