LEONIDAS IBS & MS:
Protecting Homeland...

ONEX

A Partner. Forever.

MAIN TARGET

- Support the country in reaching full situational awareness at their external borders
- Increase the reaction capability of country's law enforcement authorities
- Reduce the number of illegal immigrants entering the country undetected
- Provide complete security to the internal entry points of the country
- Reduce the threat of terrorism, including preventing cross-border movement of persons, weapons and funds connected with terrorist and other criminal activity;

MAIN TARGET

- Promote high standards in border services
- Promote free and secure movement of persons, goods, services and investments;
- Prevent and repress transnational organized crime, corruption and trafficking in weapons, drugs and human beings
- Promote dignified treatment of all individuals wanting to cross borders
- Create beneficial conditions for social, economic and cultural development
- Foster common spaces of freedom, security and justice in the area
- Ensure security of the international transport circuit for supply of commodities

KEY CONCEPT

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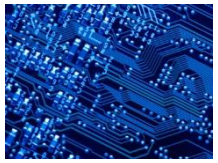
SYSTEM DESCRIPTION



ONEX

DATA RECOLLECTION

COMMUNICATIONS INFRASTRUCTURE

IHM. PRESENTATION AND HELP TOOLS

RADAR TRACKS

VIDEO

COMINT

UGS

PROCESSES:
FUSION
IMAGE PROCESSING

Σ

RAW DATA
FUSION OBJECTS
RECORDING
REPRODUCTION

DB

STORAGE

COORDINATION

CONFIGURATION

TACTICAL COMMUNICATIONS

SYSTEM DESCRIPTION

Air Surveillance Systems

Ground Surveillance Systems

Maritime Surveillance Systems

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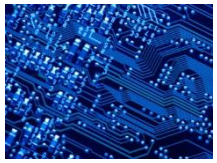
Complete Border Surveillance Solution

SYSTEM DESCRIPTION



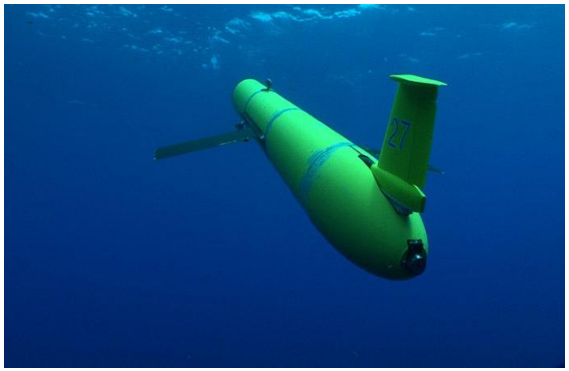
- Fixed and mobile command & control systems which incorporate specialized centralized data fusion & management software (indigenously developed by ONEX)
- Sophisticated fixed-based and mobile surveillance systems with motion detection, object tracking, threat classification, information fusion capabilities and integration with various sensors:
  - Short range electro-optical (EO) systems (Day/night TV camera, Thermal Imaging, Laser Range Finder, North Finder)
  - Long range systems (Radar)
- Unattended Ground Sensors (UGS) systems
- Perimeter intrusion detection systems
- Secure terrestrial wireless, wired and satellite communications systems

SENSORS

Aerial Surveillance Systems

- ❑ Unmanned Aerial Systems (UASs)
  - Micro & Mini UAVs
  - Hexacopters
  - Tactical UAVs
  - MALE UAVs

SENSORS

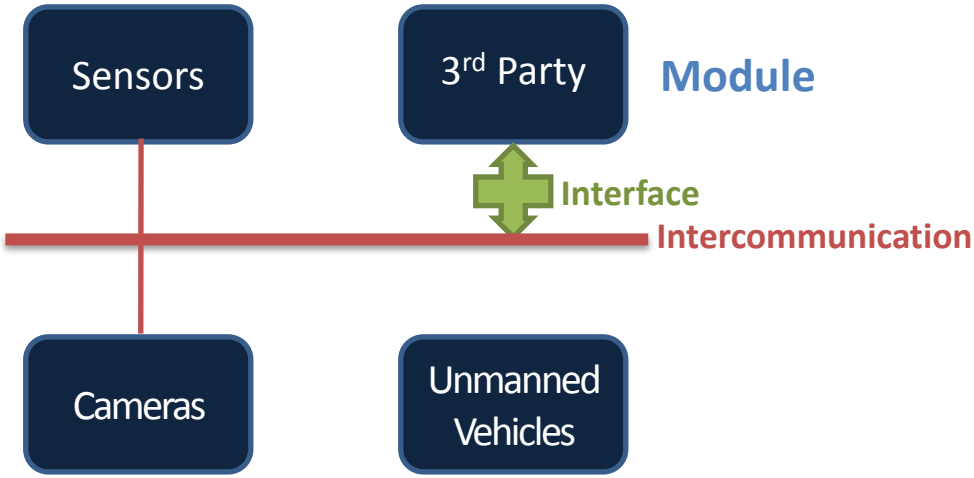


Naval Surveillance Systems

- ❑ Vessel Control (Underwater Inspection System)
- ❑ Coastal Surveillance Radars
- ❑ Unmanned Underwater Vehicles

C2 SOFTWARE

Software



C2 SOFTWARE

- **The whole software is divided in separate functional modules**
- **3rd party modules can be added through the use of Interfaces (special software)**
- **Key Characteristics:**
  - Modular
  - Multi-tier Client/Server
  - Open Architecture

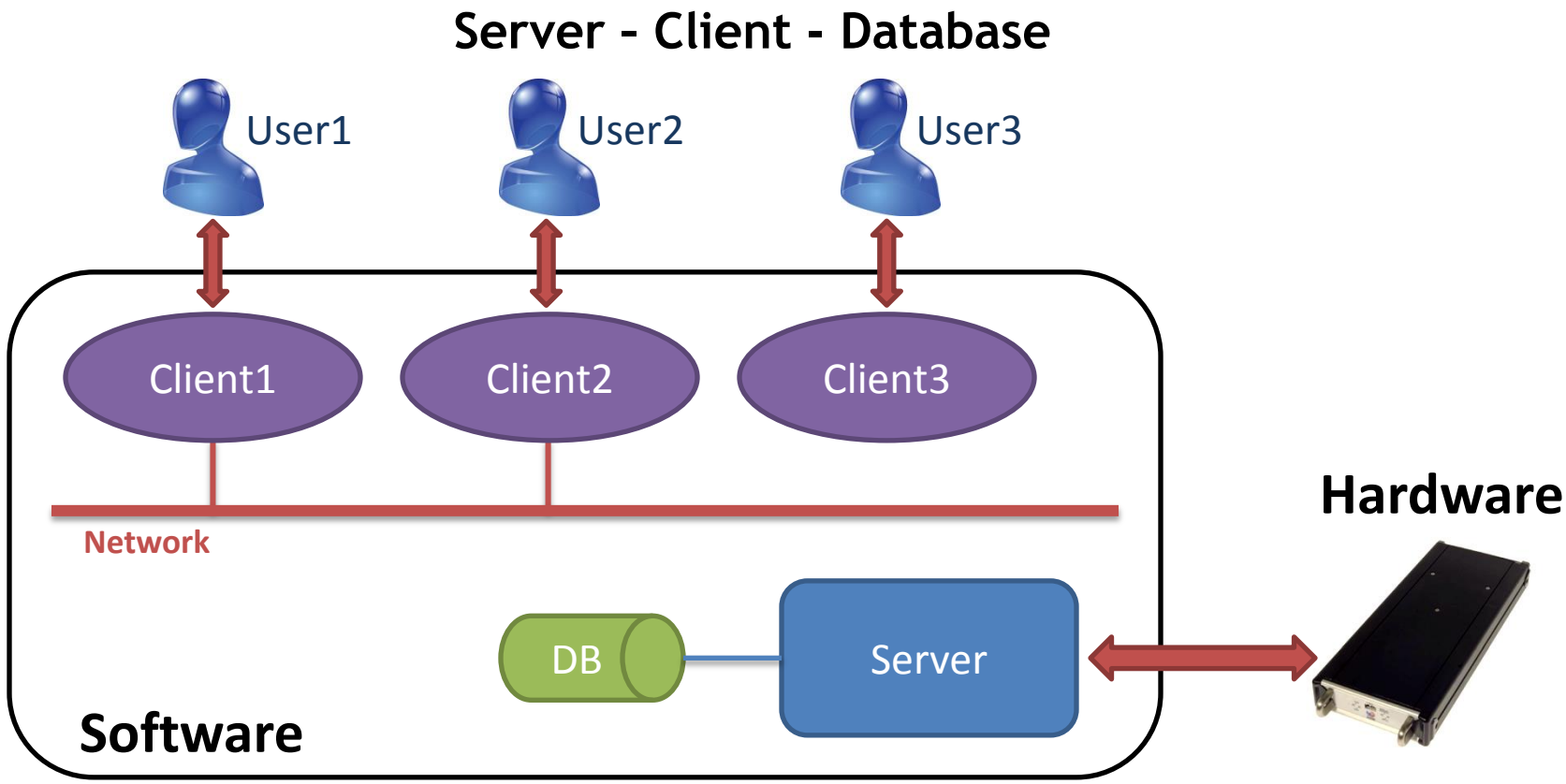
C2 SOFTWARE

ADVANTAGES

- Provides easier maintainability, because each module is simpler than a single application
- Modules can be modified, upgraded, removed, added without affecting the availability or operability of the rest of the system
- Allows the system to support different kinds of sub-systems
- All system components operate as one single system

C2 SOFTWARE

The whole software system is divided into three levels:



C2 SOFTWARE

ONEX

1. Server

- Handles transactions between the clients and the database
- Controls user rights
- Distributes working load evenly
- Controls back-ups
- Communicates with hardware

2. Client

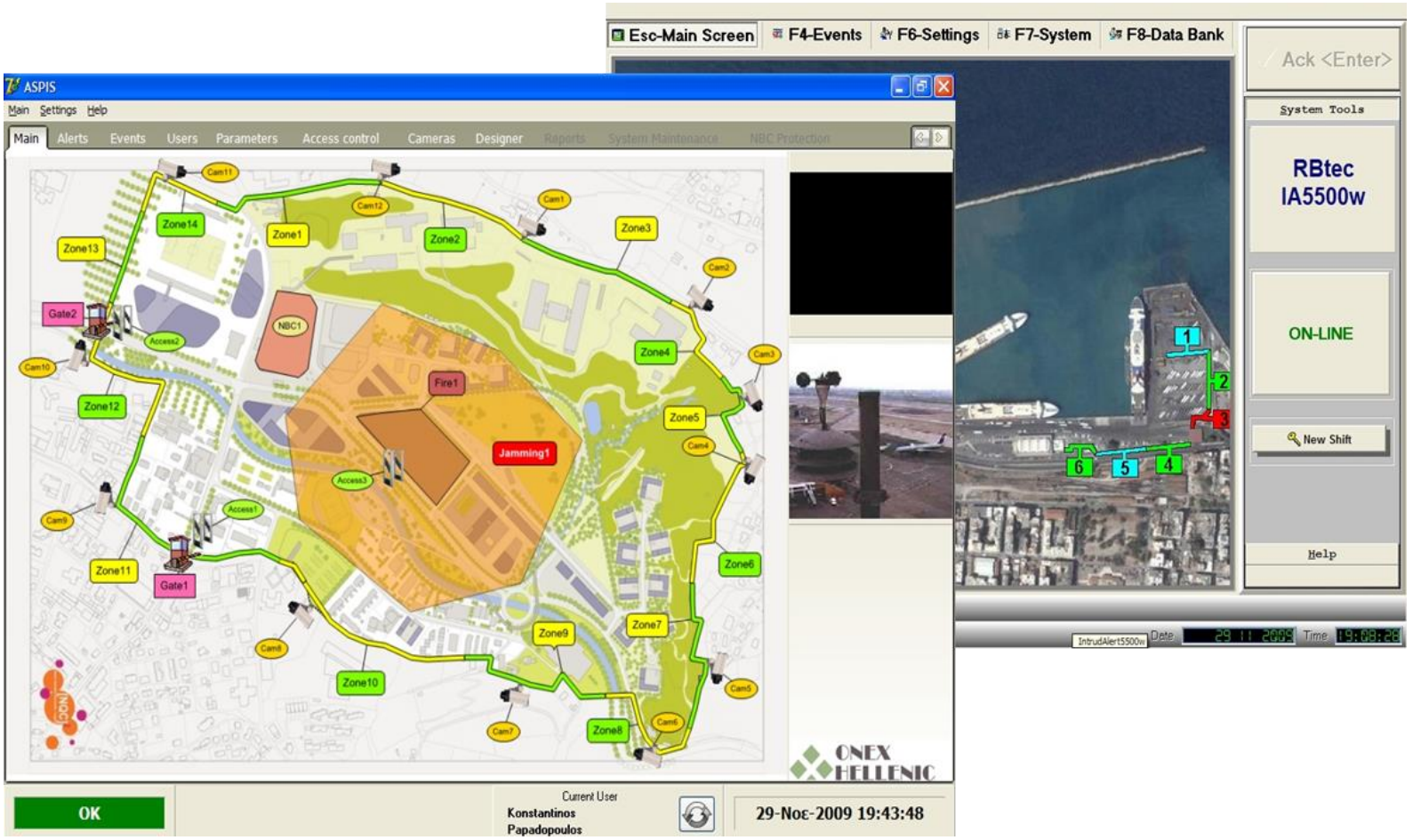
- Handles all interaction with the users
- Adjusts functionality according to user rights
- Many clients can operate simultaneously

3. Database

- Relational database system
- Stores all data from subsystems
- Stores user information

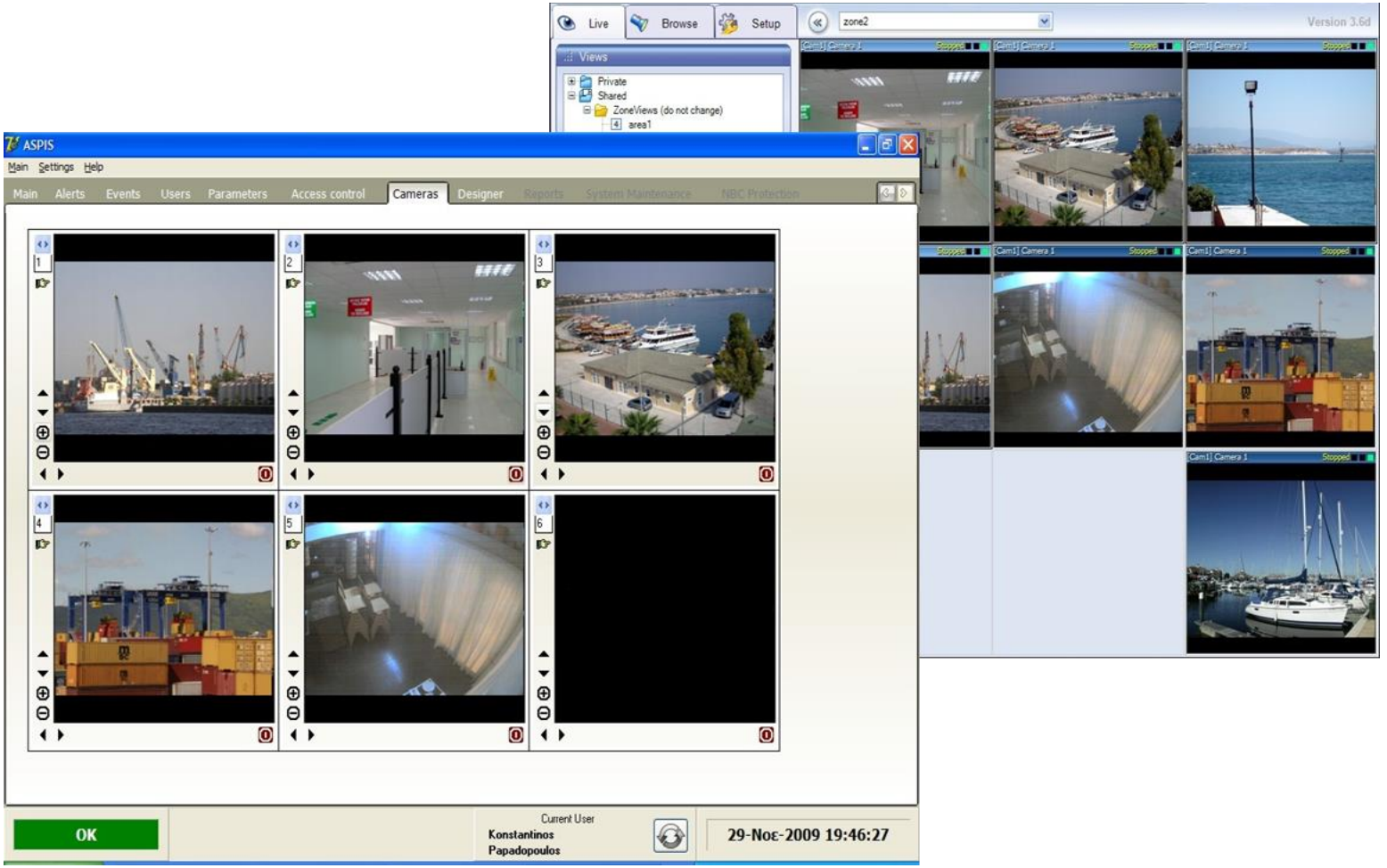
C2 SOFTWARE System Snapshot

1



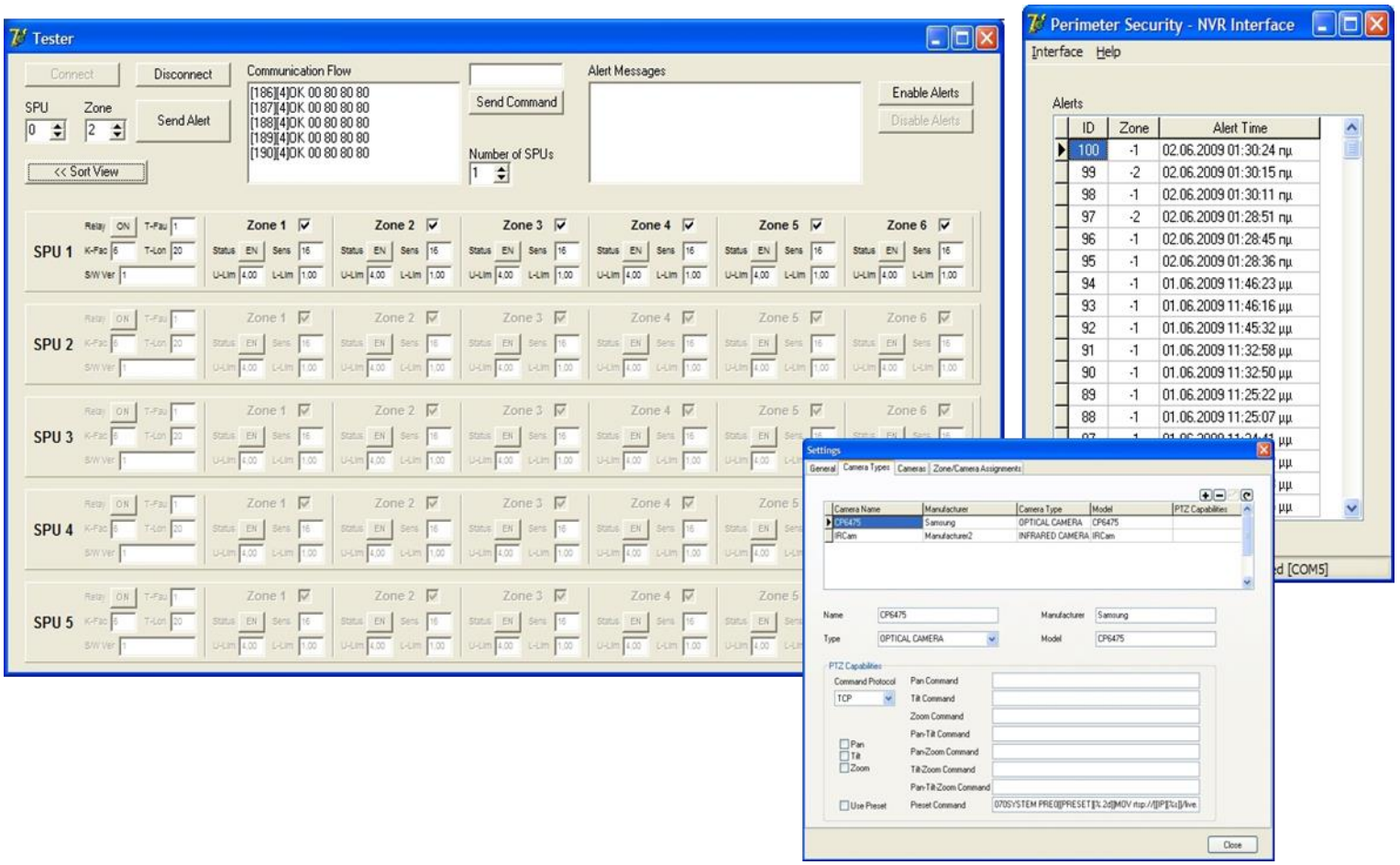
C2 SOFTWARE System Snapshot

2

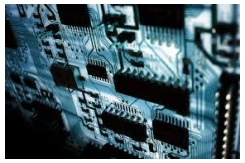


C2 SOFTWARE System Snapshot

3



SYSTEM OPTIONS



- Long Range Acoustic Devices (LRAD)
- X-Ray inspection systems, including personnel & parcel screening systems
- Human presence detection systems
- Container inspection systems
- Hazardous material detection systems
- Spectrum monitoring systems
- RF jamming systems
- Mobile telephony interception systems
- Access control systems (entrance, gates, buildings)
- Video & data recording systems
- License Plate Recognition and undercarriage inspection systems
- Biometric control systems
- Face recognition systems
- Passport control systems

REFERENCES - MILESTONES

ONEX

2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018

Border Control for Patras Port Authority

Biometric Systems - Passports (Hellenic Police)

Human Presence Detection Systems for Illegal Immigrants in Greek - Turkish borders

Border Control System for Evros Region

Human Presence Detection Systems for Illegal Immigrants in Greek borders with Italy

Mobile X-Ray Detection for Border Control

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This was the LEONIDAS IBS & MS presentation

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