

GMV AEROSPACE AND DEFENCE

EWISA INDUSTRY DAY

Athens, November 2016

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A GLOBAL TECHNOLOGY GROUP

Multinational
technology
group



Headquarters in
Spain (Madrid)

Over **1.300**
employees



Aeronautics, Space, Defence,
Security, Transportation, Healthcare,
Banking & finances, and ICT
industries

125 M€
turnover

Subsidiaries in 10
countries



Commitment with
quality: CMMI5,
AQAP2110/2210,
ISO9001, EN9100

Engineering,
development and
integration of systems,
software, hardware,
specialized products
and services

Founded in

1984

Private
Capital

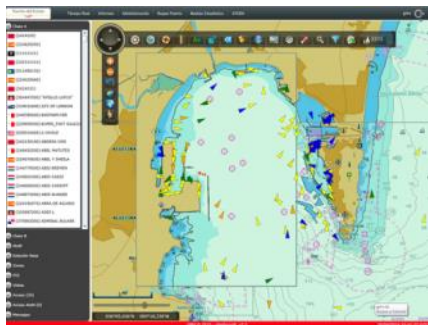
Roots tied
to the
Space and
Defence
industry



Reliable provider of Spanish MoD,
Portuguese MoD and international
organization such as NATO and
European Defence Agency



BORDERS AND MARITIME SECURITY



Supplier of **AIS coastal networks, VTS and tracking systems** for fishing vessels. **Shiplocus suite.**

Services for **EMSA**

Development and maintenance of **EUROSUR** Network for FRONTEX

Development of C4ISR systems. **Socrates Suite.**

MARSUR study
Fishery surveillance system

SIVE Programme
for Guardia Civil.
CLOSEYE Project.
SIGO System for **SASEMAR.**

Major provider of EO Services and Applications.
LIMES, MARISS, NEREIDS, SAGRES, LOBOS, CAPSAT.

SIMONS Ship Monitoring System – SAR/AIS data fusion processor.

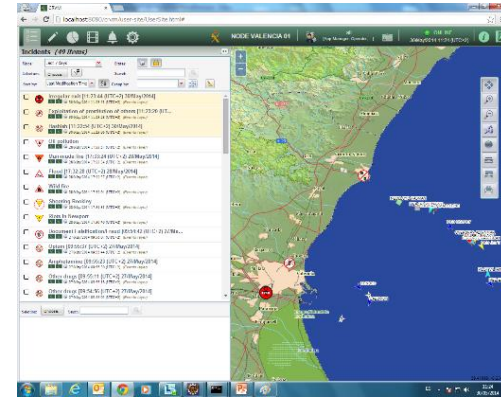
GMV's SOCRATES SUITE

- The **Socrates suite** is composed by
 - Socrates **OC - Operation Center**
 - Socrates **TSK – Tasking & Resource Management**
 - Socrates **FR – First Responder**
 - Socrates **SET – Sensor Exploitation Tools**
 - Socrates **BI – Business Intelligence**
 - Socrates **CSS – Collaboration Services**
- Used by GMV in:
 - **SIVE Programme** (Spanish Border Surveillance). CRVM node in Valencia
 - **FP7 DRIVER Project**. *Driving Innovation in Crisis Management for European Resilience*. Crisis Management System-of-Systems Demonstration Programme
 - **FP7 CLOSEYE Project**. *Collaborative evaluation Of border Surveillance technologies in maritime Environment bY pre-operational validation of innovative Solutions*.
 - **CAPSAT Project**. Guardia Civil Satellite Based Surveillance Platform. Integration with GMV's **SIMONS** Ship Monitoring System.

SOCRATES SUITE

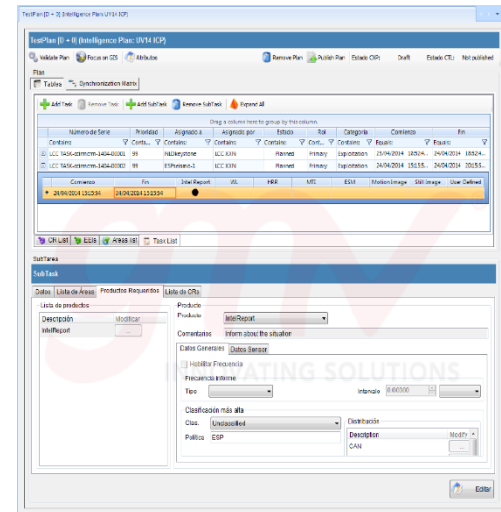
– Socrates **OC**

- Shared Situational Awareness tool that depicts the Common Shared Picture
- Supports data exchange providing SOA (Web Services) interfaces to interact with external systems
- Process tracks data (AIS, AVL, Radar (ASTERIX), GMTI, Link16/JREAP...)



– Socrates **TSK**

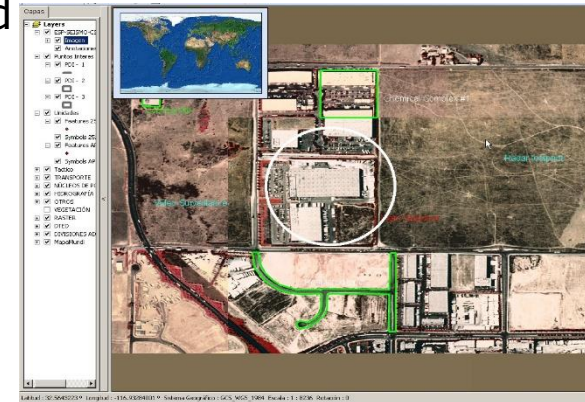
- Manages tasks, the assignment of resources and monitoring of response actions on a GIS
- Distributed and cooperative planning. Improves the coordination of multinational /multiagency Missions through assets and tasking requests.



SOCRATES SUITE

– Socrates **SET**

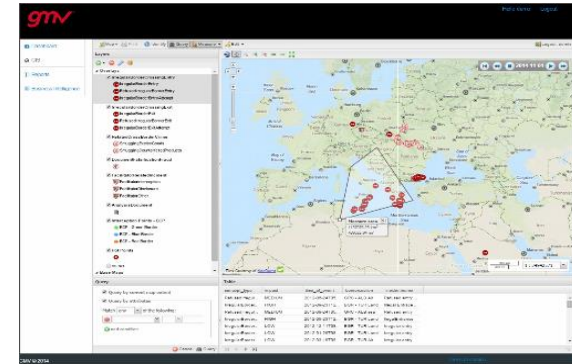
- **Exploitation** of sensor data stored in CSS or provided by CSS streaming services
- Sensor sources include : Imagery, Video (files and streaming) and Tracks (AIS, ASTERIX, GMTI...)
- Exploitation of metadata (query, subscription..)
- Presentation of images and video on a GIS
- **Image exploitation**: Visualization of images, Image chipping, Georeferencing, Image correction, Image annotation
- **Video exploitation**: video player with simultaneous reproduction of several videos, presentation of KLV metadata, recording of video clips, generation of Screenshots
- **Fusion** of the tracks provided by the different sensors
- Tracking (Multiple Hypothesis Tracking algos)



SOCRATES SUITE

– Socrates **BI**

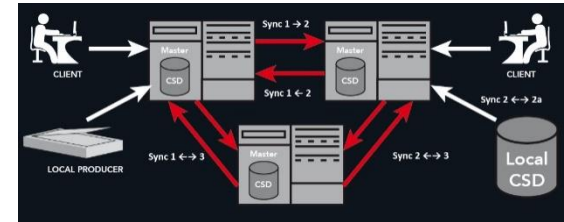
- **Retrieve** information from operational database and storage in a data warehouse
- Advanced **search and filtering** features in different views.
- Provision of advanced **reporting**: Preloaded reports, Dynamic reports, Georeporting
- Descriptive models based on **statistics**



SOCRATES SUITE

– Socrates **CSS**

- Persistent **storage and dissemination** of
 - Structured data: Events, incidents
 - Files: Imagery, reports, video files
 - Video streaming services with metadata
 - Track streaming services
- Metadata automatic **synchronization** among nodes
- SOA architecture (Publication services, Subscription and notification services)
- Web administration console
- Web client applications (thin clients)
- Web services for integration with other tools
- Security accreditation



Conclusions

- **Proven** solution based on specific EU border surveillance needs.
- Capable of accommodating all type of innovative sensors.
- Focus on **video analysis** for continuous detection and tracking.
- Business intelligence module for **intelligence reports** generation
- Validated in **operational** environment.
- Proven **interoperability** with national systems.



Thanks

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