Maritime Awareness System

The maritime intelligence digital platform for assisting Authorities by detecting illegal activities at sea (people and goods trafficking, illegal immigration, border control, IUU fishing, pollution detection & investigation)
MAS – Operational applications

Maritime surveillance for law enforcement, Intelligence and screening activities

- Illegal fishing
- Smuggling, drugs & goods trafficking
- Border control
- Area monitoring
- Fleet or vessel of interest
#BIG DATA
Massive amount of data processed, stored, queried, correlated
Real-time and historical basis

#MULTISOURCES DATA
AIS, SAT-AIS, LRIT, VMS, SAR & Optical imagery, RF, ship database, metocean data, etc.

#MACHINE LEARNING
Innovative approaches to enhance automated data processing towards actionable intelligence

#BEHAVIOURAL ANALYSIS
Detect any abnormality and suspicious behavior
Raise alerts upon specific behavior or events

#MACHINE LEARNING
Innovative approaches to enhance automated data processing towards actionable intelligence

#SERVICES
Web-based interface for remote access
24/7 analysis & support team

#ON-DEMAND ANALYSIS
Multiple EO & RF tasking capacity
Added-value intelligence analysis and ad-hoc reports
Maritime Awareness System – Overview

Data Fusion & in-depth Analysis to build the most complete Maritime Picture and deliver Actionable Intelligence

SYSTEM ARCHITECTURE

GEO-POSITIONING DATA
AIS/LRIT/VMS

EARTH OBSERVATION & RF DATA
Optical and radar satellite imagery
Video SAR
Satellite RF acquisitions

COASTAL RADAR
Integration of user's coastal radar data

ENVIRONMENTAL DATA
Metocean data
Marine areas with specific status (EEZ, MSP...)
Geometric data

ADDITIONAL DATA
Vessel databases
Sanction lists (UN, MoU,...)
OSINT

DATA FUSION
BEHAVIOURAL ANALYSIS

USER-FRIENDLY WEB-BASED INTERFACE

ARTIFICIAL INTELLIGENCE

BIG DATA TECHNOLOGIES

LIVE MONITORING
REAL-TIME SURVEILLANCE ALERT
HISTORICAL SCREENING
REPORTS AND DATA EXPORT
ON-DEMAND EO & RF TASKING PORTAL
# Maritime Awareness System

# fight against illegal trafficking

MAS: an integration, fusion, and data analysis tool (Big Data dimension)

#1 global overview of the sea surface situation

#2 Appointment search and detection, optical image confirmation

#3 Identity change search and detection, cargo identification

#4 Detection of false declarations, real route tracking
An operational tool built upon CLS’ experience

#Large service scope
- Access to more than 200 imaging satellites
- Optic and radar satellite imagery from medium to very high resolution
- Automated processing of Sentinel images on areas of interest
- Access to main AIS data providers
- Integration of vessel information and insights from different commercial databases

#Enhanced capabilities
- Millions of AIS message processed every day
- +25,000 satellite images processed every year
- Availability rate above 99.9%
- 24/7 analysis capacity
- Data recovery centre hosted in CNES facilities
Thank you

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