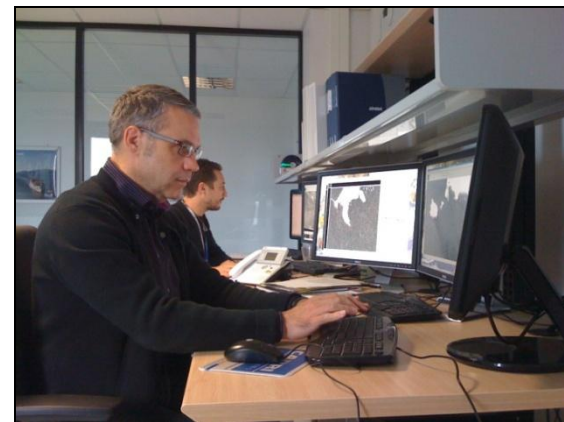


BRETEL Scientific Interest Group and the VIGISAT projet René Garello – GIS Bretel Vincent Kerbaol - CLS

First BreTel Workshop

May 31 - June 1st 2012

Palais du Grand Large, Saint-Malo, FRANCE



BRETEL Scientific Interest Group and the VITISAT project

THE VIGISAT INFRASTRUCTURE AND THE SERVICES OPERATED FOR THE GIS BRETEL

VIGISAT: CLS ground receiving station

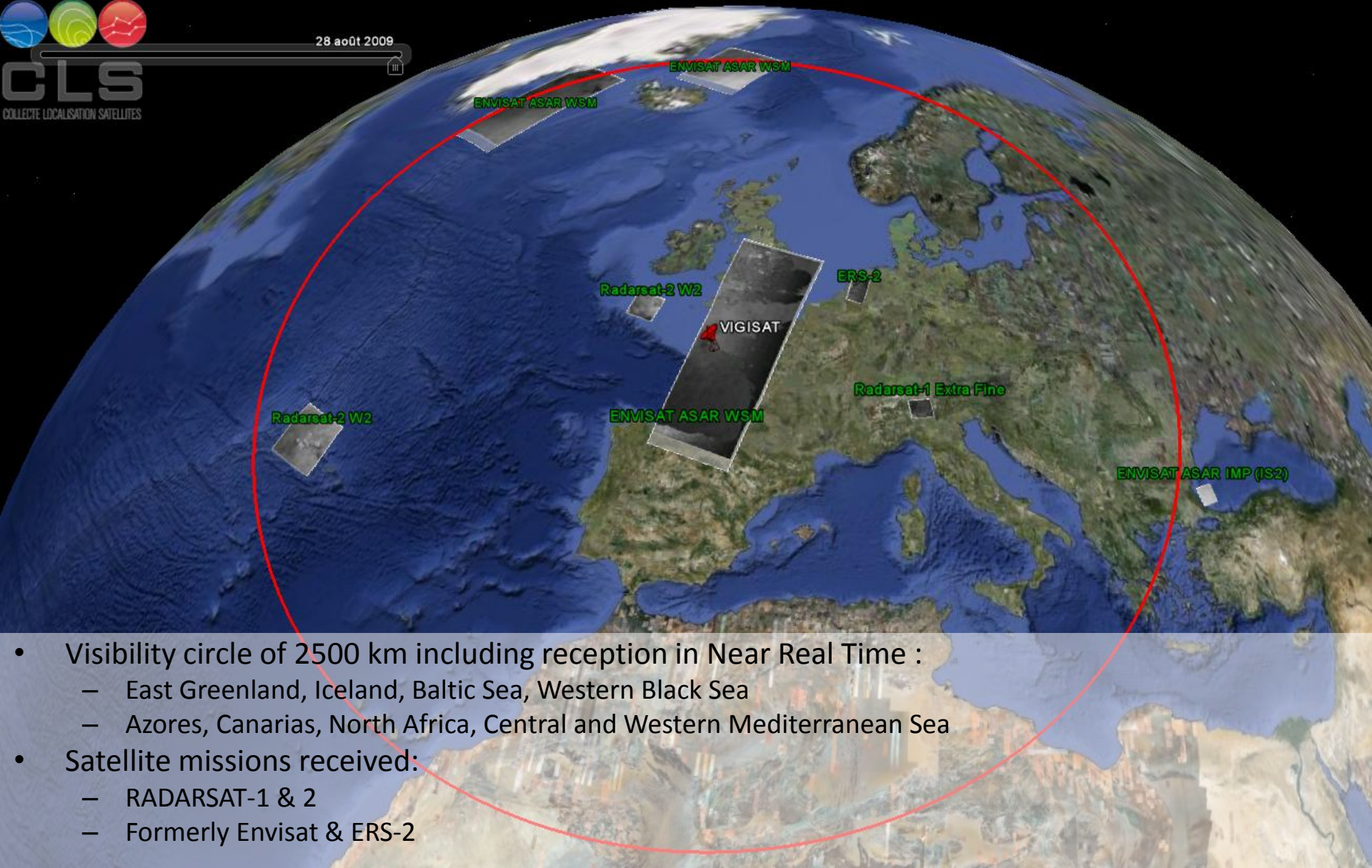


Operational since September 2009

Satellite missions received:

- RADARSAT-1 & 2
- Formerly ENVISAT, ERS-2

Visibility circle of VIGISAT



- Visibility circle of 2500 km including reception in Near Real Time :
 - East Greenland, Iceland, Baltic Sea, Western Black Sea
 - Azores, Canarias, North Africa, Central and Western Mediterranean Sea
- Satellite missions received:
 - RADARSAT-1 & 2
 - Formerly Envisat & ERS-2

Other Radarsat ground stations



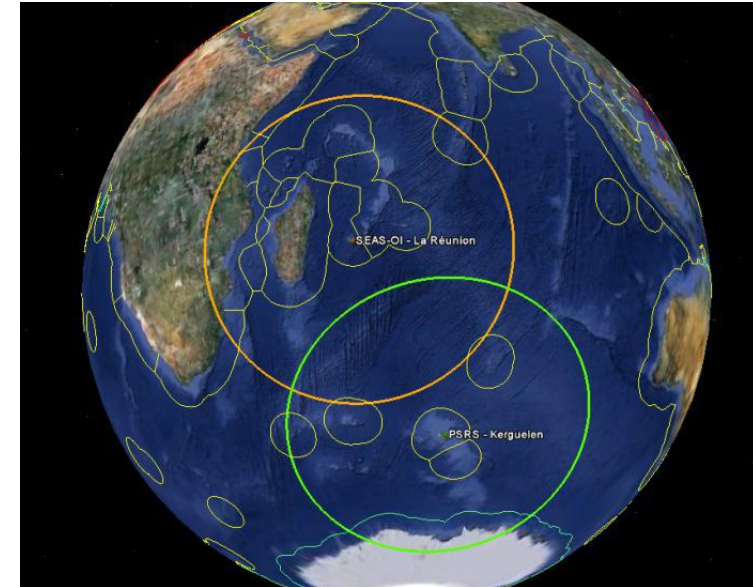
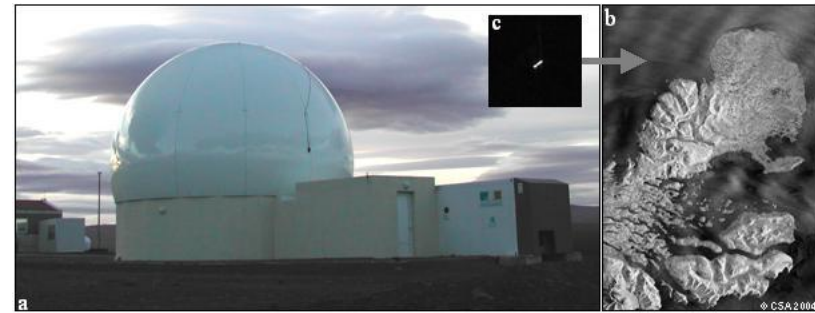
- CLS has privileged access to two other RADARSAT-2 Ground Stations:

- Kerguelen Islands:

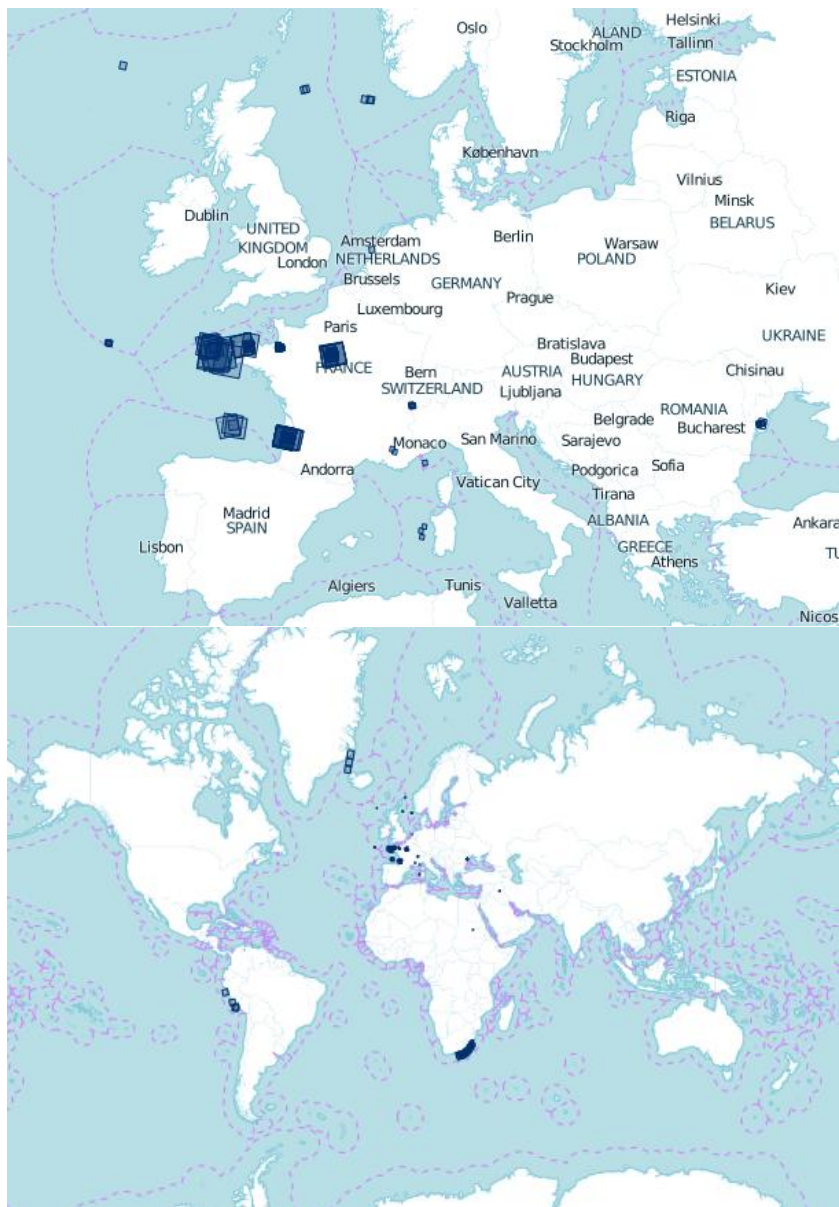
- Installed and operated by CLS
- Operational since Feb. 2004
- Detection of illegal fishing activities
- ENVISAT, RSAT-1 → RSAT-2 (2008)

- La Réunion Island:

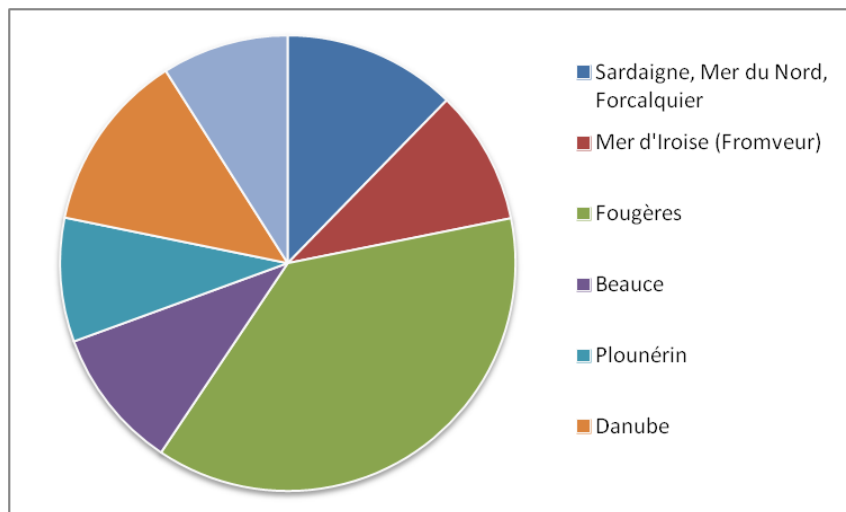
- Installed by CLS
- ENVISAT, RSAT-2, SPOT 4/5



VIGISAT & BRETEL: data provision for GIS Bretel

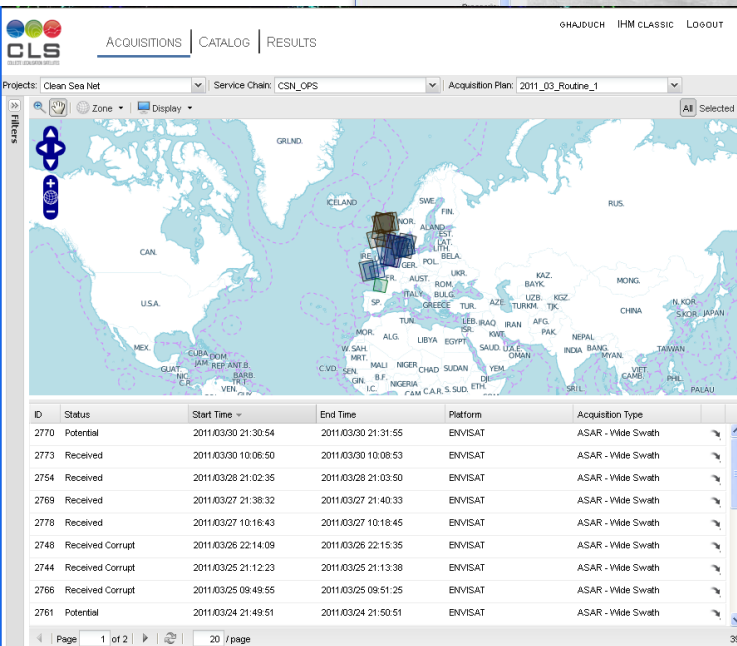
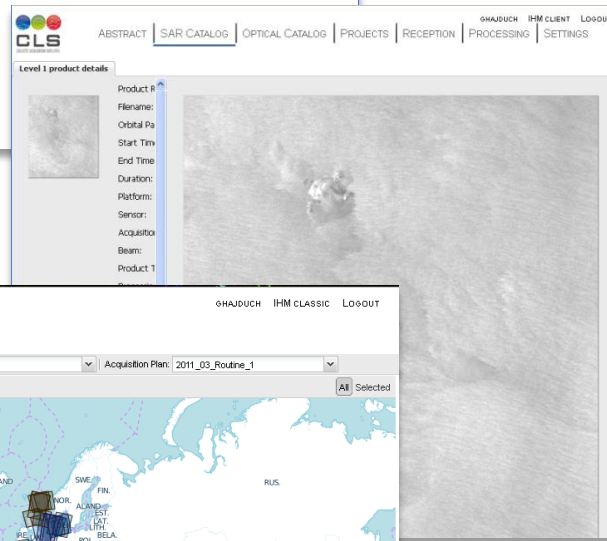
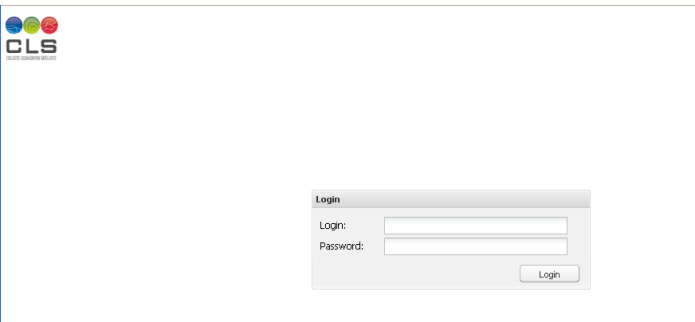


- CLS provides SAR data for the projects of the GIS Bretel
- ERS-2, ENVISAT, Radarsat-1 and Radarsat-2 data
- Single, dual and quad pol data
- At all processing levels requested by users (SLC, detected)
- New acquisitions and archives
- Worldwide



- In 2011
 - Equivalent of 200 scenes
 - Covering the globe
- Various topics
 - Land applications
 - Coastal management
 - Oceanographic measurement

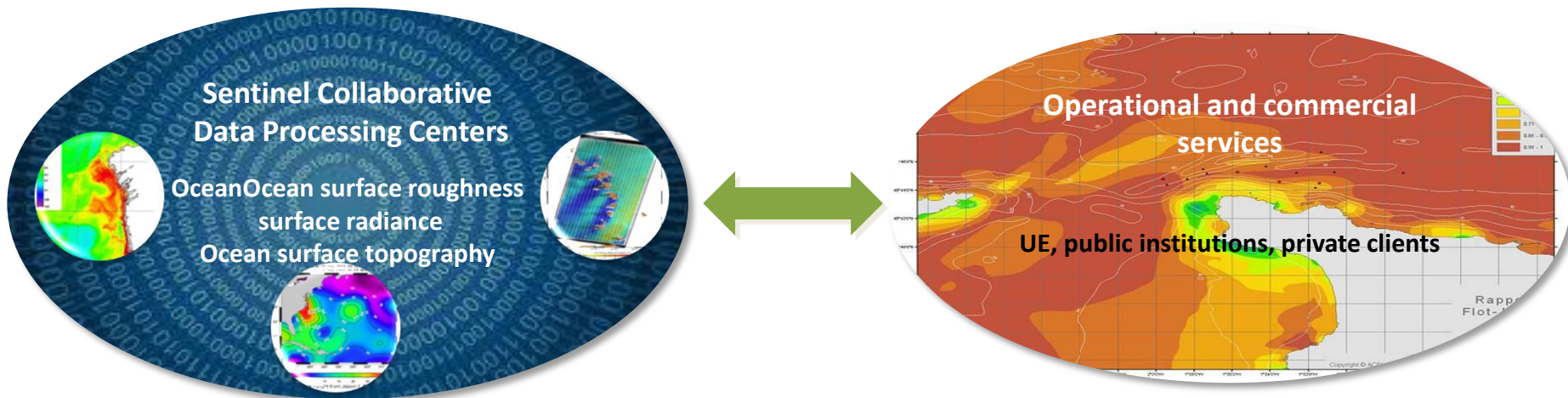
VIGISAT & BRETEL: other services



- Access to secured programming interface
- Access to secured catalogue interface
- SARTool licenses (tool for processing of SAR data)
- Technical support on
 - products selection,
 - tasking of the acquisition plans,
 - quality control

- CLS is kindly invited to the scientific committee and the executive committee of the GIS BRETEL
 - Guest with consultative role only
- Objective:
 - Provide an update status of the data and service provision to the GIS BRETEL
 - Propose and share topics or R&D (Market pull approach)
 - Initiate further collaborations between GIS BRETEL and CLS

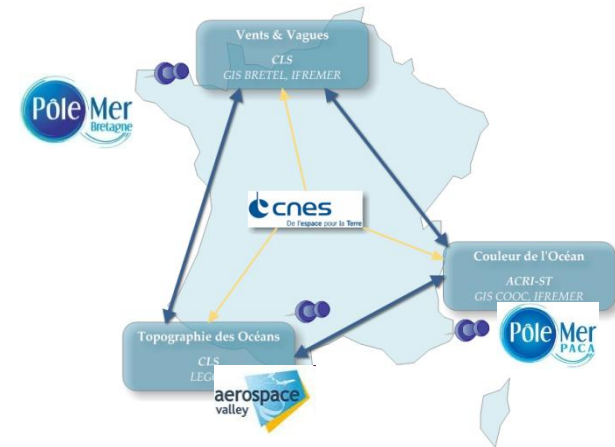
- Objectives:
 - Develop satellite-based ocean products and services through dedicated processing centres, complementary to the **core products** of the future European **Sentinel** missions
 - Build a competitive business for marine/coastal markets driven by industry

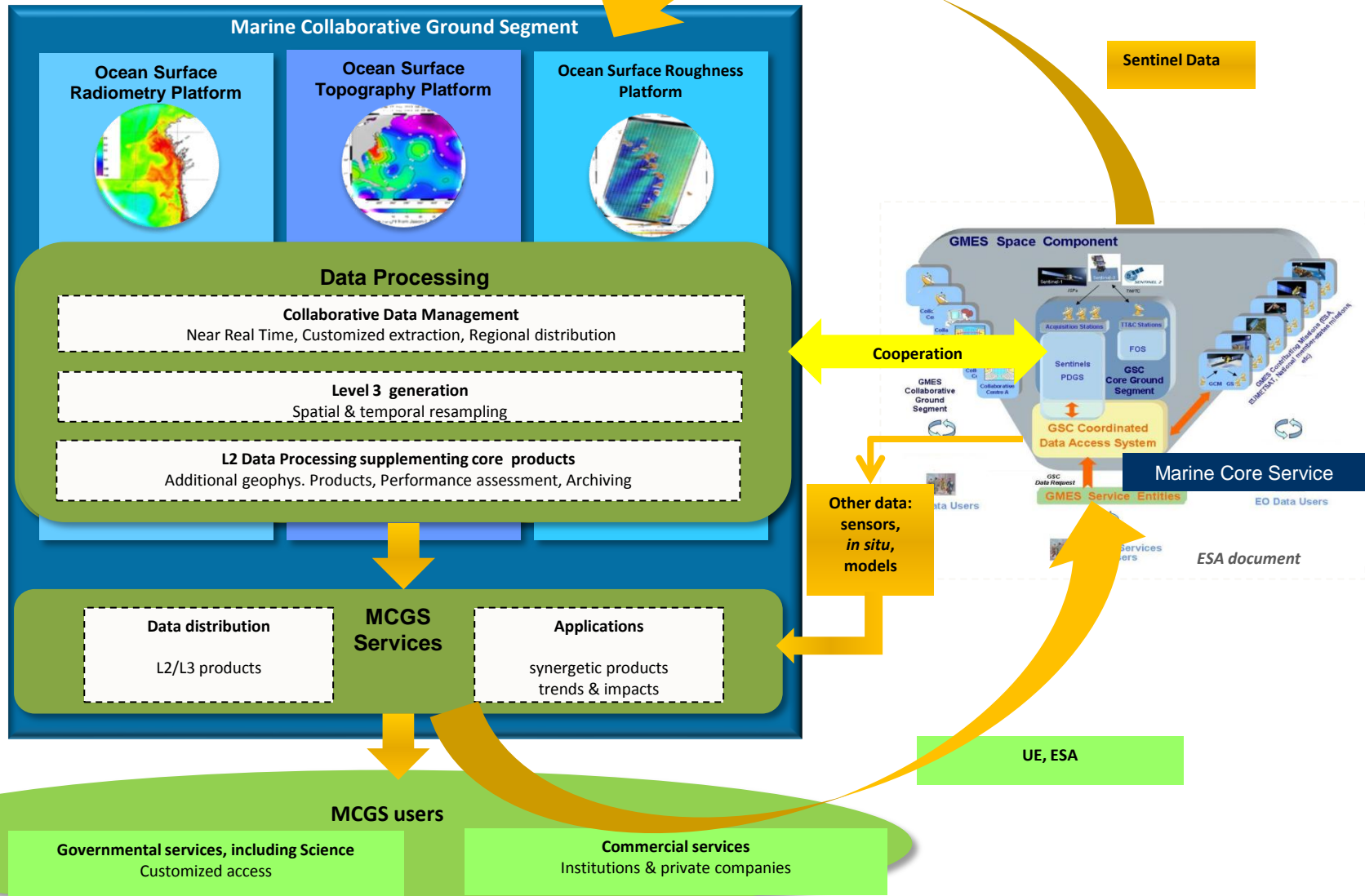


Consortium



- First European initiative of a collaborative ground segment
- Partnership of 8 actors in space oceanography covering **surface roughness**, ocean radiometry, surface topography and surface roughness
- Support by 3 French “Pôles de compétitivité” (regional economic competitiveness clusters)
- Strong implication of the CNES for optimal national structuration and interface with ESA/EUMETSAT
- Strong collaboration with ESA to be initiated (data flow, processing functions) in order to be part of the “ESA Collaborative Ground Segment” network

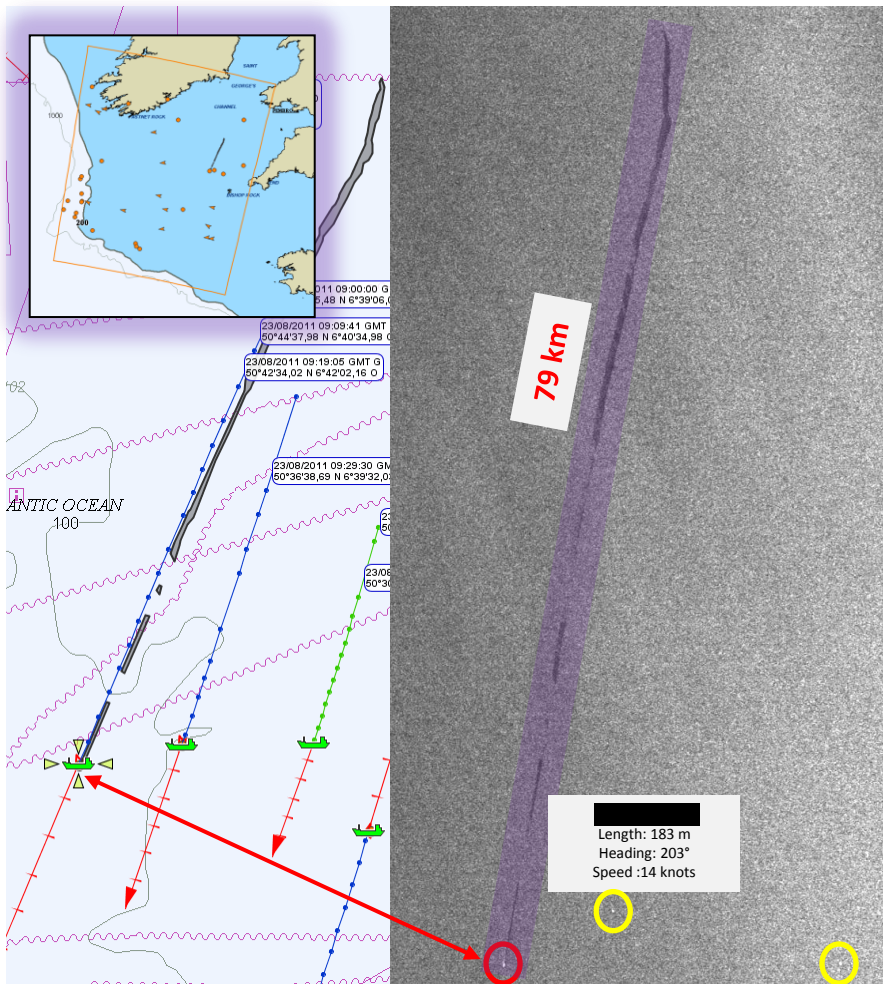




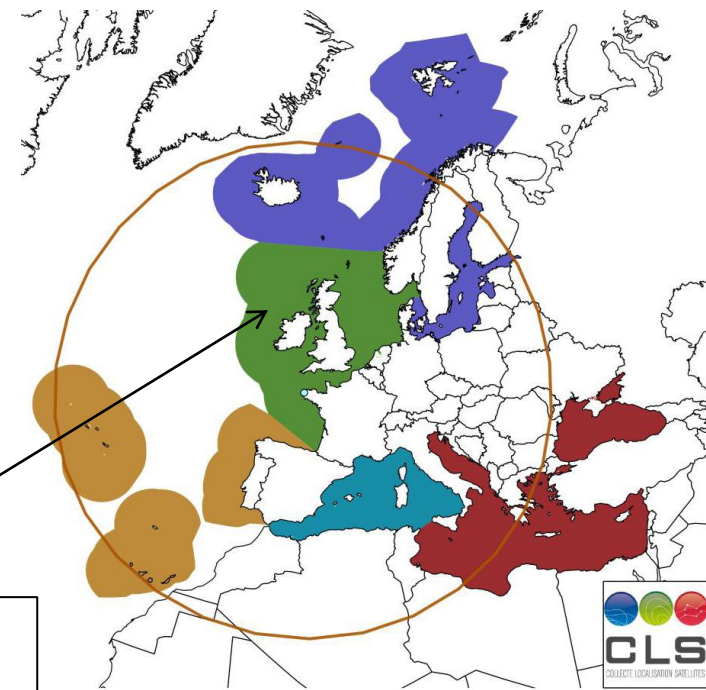
2011: The paneuropean CleanSeaNet service v2

A near real-time detection service of oil spills and ships at sea using SAR imagery

- Delivered by EMSA since 17 April 2007
- To apply the European directive 2005/35/EC :
 - Detect from space oil spills at sea
 - To identify the source of pollution



23/08/2011 10:57UTC – ENVISAT
79 km long discontinuous discharge



Service area covered by VIGISAT

Conclusions



- Approximately 400 unit scenes have been delivered to the scientists of the GIS BreTel, thus greatly simplifying access to data
- GIS BreTel has paved the way to new R&D projects (eg MCGS-12). Other opportunities are foreseen (GMES, Sentinel core ground segment)
- Development of NRT operational services:
 - Successful introduction of VIGISAT in the paneuropean **CleanSeaNet** service operated by **EMSA**
 - but...the delivery of satellite monitoring services to French maritime administrations has been delayed until then
- 2 of the initial SAR missions (ERS-2 and ENVISAT) have been lost
 - **Absolute need to upgrade the VIGISAT ground station to acquire/process the future Sentinel-1 mission**