The EU-GDAC and related SST activities at Ifremer
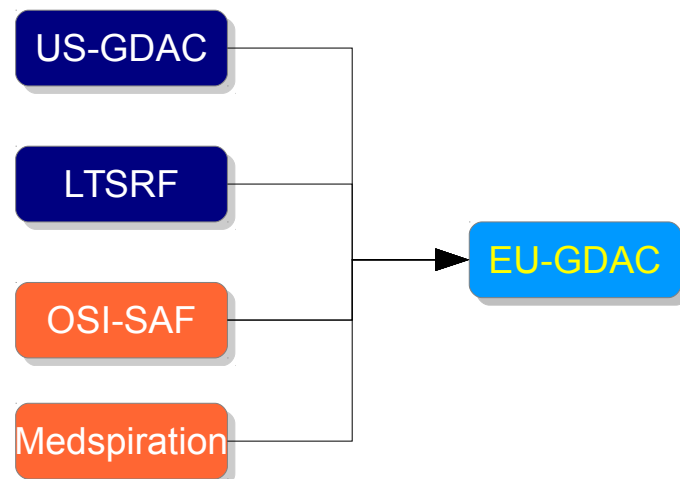
Jean-François Piollé, Cédric Prevost, Emmanuelle Autret (Ifremer)

Review of activities | GHRSST XVII | Whasington DC | 5th June 2016

Ifremer RDAC / EU-GDAC

- Ifremer Satellite Data Center (CERSAT) operates a RDAC/GDAC center since Medspiration (2005)

- Operates as RDAC for O&SI SAF, push to US-GDAC mirror

- Additional products from ESA funded Medspiration project (ODYSSEA)

  – Regional analysis : Global analysis, Mediterranean Sea, South Africa

- Mersea *aka* MyOcean *aka* MyOcean2 *aka* CMEMS, under Copernicus (ex-GMES)

  – multi-sensor global L3 and North Western Shelves regional annalysis

  – Ifremer is no more operating as a dissemination unit for CMEMS products since beginning of this year

  – Role transferred to CNR (Italy) in feb.2016 – will become a new RDAC

- Mirror some datasets from other RDACs/GDAC

  – support projects requiring combination of multiple sources of data, microwave data, etc…

  – Multi-sensor match-ups

EU-GDAC Dataflow

- Combines both short-term and long-term data storage

  - Complete data archives

  - No tape back-up for data accessible at other distribution points (but replication)

  - Critical datasets are backed-up and alternative redundant storage and distribution is set-up (latest day of data)

- Restricted access to datasets not authorised for third party distribution (internal usage or for projects)

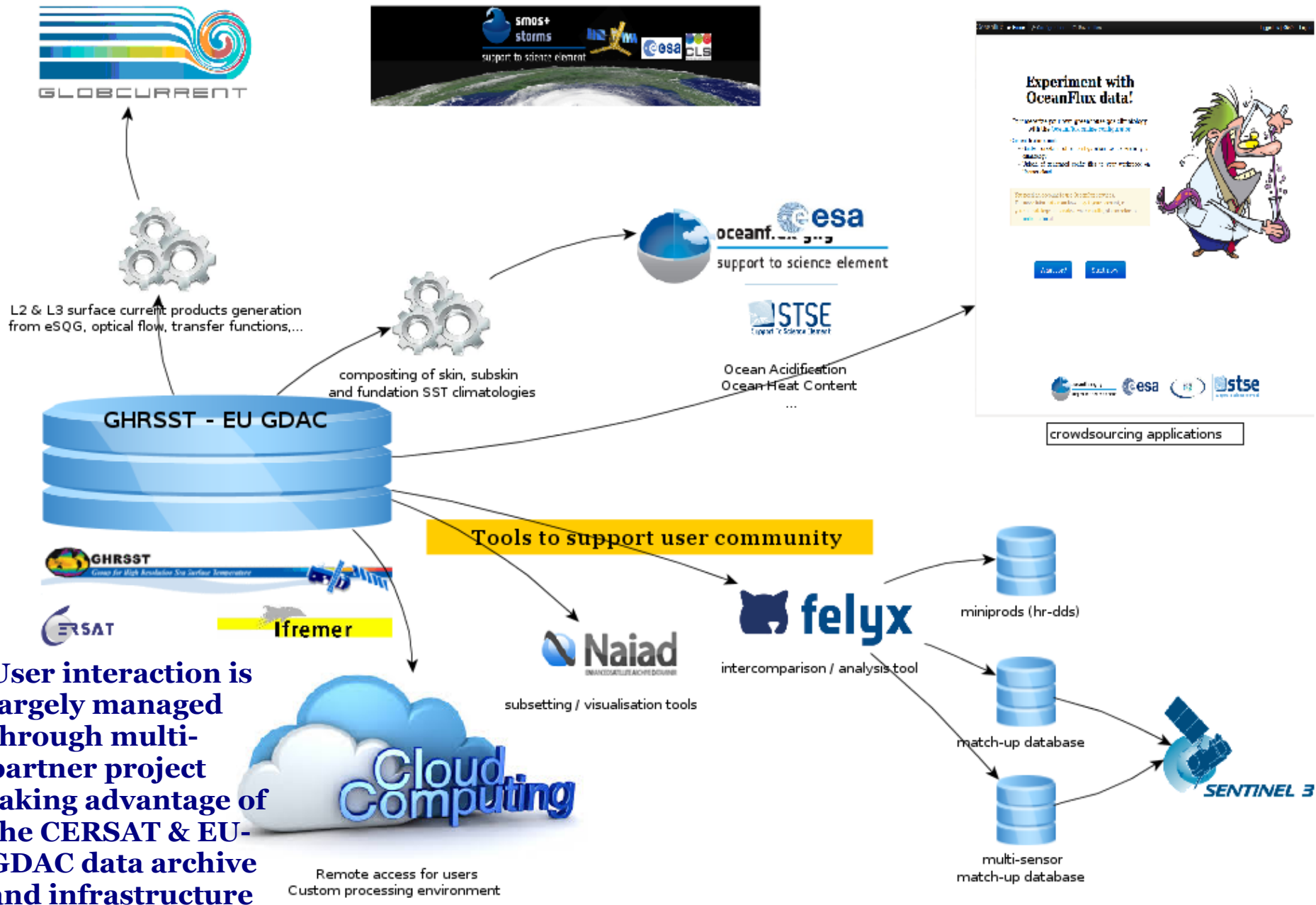- Provides access to data that are not available in other DACs

US-GDAC

LTSRF

OSI-SAF

Medspiration

EU-GDAC

Currently available products at GDAC	Producer	Status
MODIS L2P Aqua	NASA/JPL	
AMSR-2 L2P	REMSS	
AVHRR 19 LP2 GAC	NAVO	
AVHRR 19 L2P LAC	NAVO	
VIIRS L2P	NAVO NOAA/OSPO	
METOP-A AVHRR L2P	OSI SAF	Soon discarded
METOP-B AVHRR L2P	OSI SAF	Since 19 Jan.2016
METOP-A IASI L2P	OSI SAF	Discarded since 23 Feb.2016
METOP-B IASI L2P	OSI SAF	Since 19 Jan.2016
VIIRS L3P Near Atlantic Regional	OSI SAF	
MSG3 SEVIRI L3P	OSI SAF	
METOP-A L3P Near Atlantic Regional	OSI SAF	
METOP-B L3P Near Atlantic Regional	OSI SAF	
METOP-A L3P Global	OSI SAF	
METOP-B L3P Global	OSI SAF	
GOES13 L3P	OSI SAF	
Medspiration/ODYSSEA L4 Global 0.1 deg daily	Ifremer	
Medspiration/ODYSSEA L4 Mediterranean 0.02 deg daily	Ifremer	
Medspiration/ODYSSEA L4 South Africa 0.02 deg daily	Ifremer	
Medspiration/ODYSSEA L4 Brazil 0.02 deg daily	Ifremer	
CMEMS/ODYSSEA L3 Global 0.1 deg daily	Ifremer	Transferred to CNR since feb 2016
CMEMS/ODYSSEA L4 Global L4 North Western Shelves 0.02 deg daily	Ifremer	
CMEMS / L4 Baltic 0.02 deg daily	DMI	
CMEMS / L4 Artic 0.02 deg daily	Met No	
CMEMS / L3 North-East Atlantic single & multi-sensor	Meteo-France	

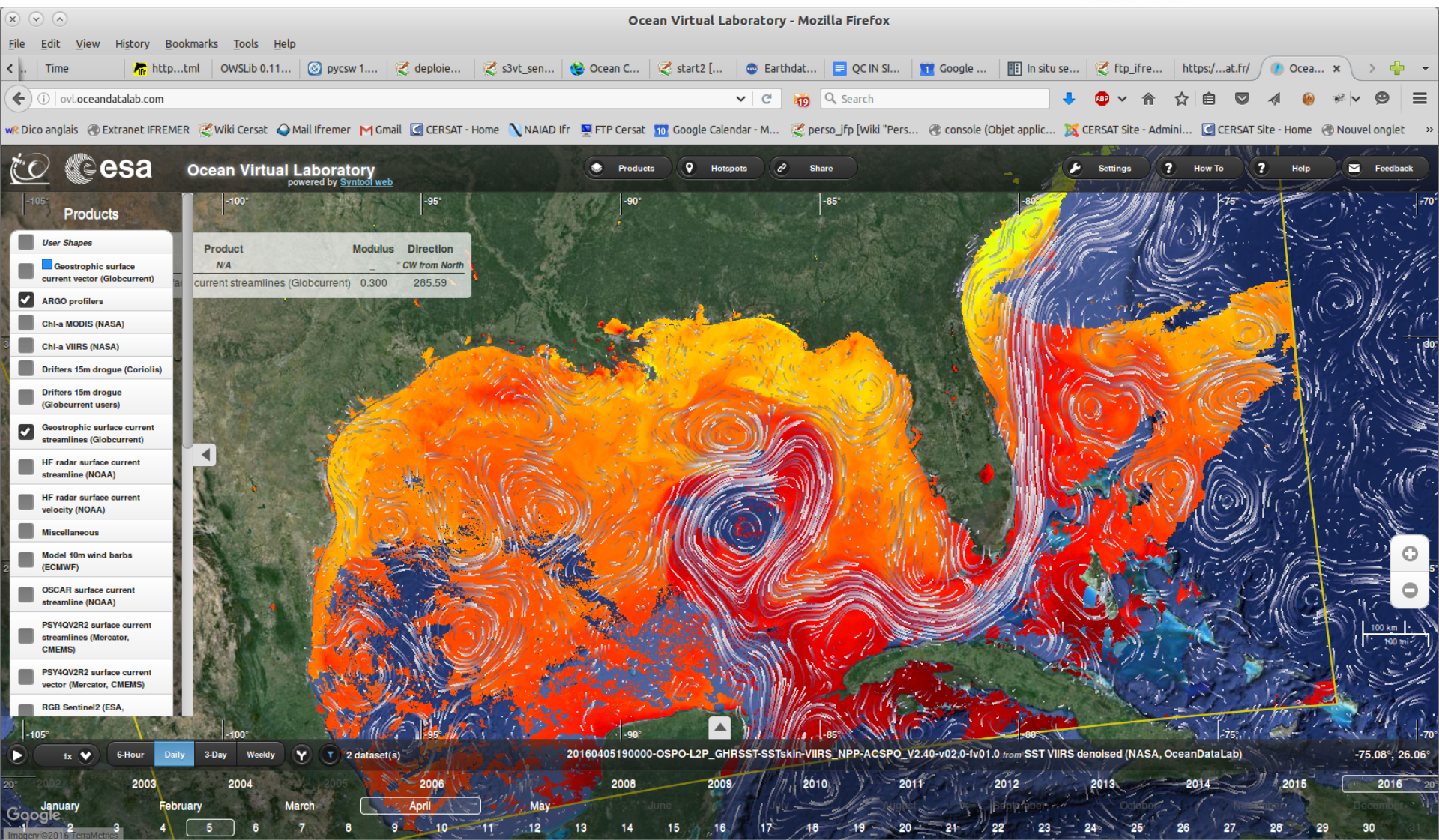- http://cersat.ifremer.fr/data/collections/ghrsst

- Single login/password can be obtained on the main page

- Online catalogue

- Access through :

  - FTP & OpenDAP

    - Complete archive on Nephelae cloud
    - Duplicated FTP server for the latest data of critical datasets (O&SI SAF, ...)
    - Naiad on some specific datasets (http://tinyurl.com/z9nf9z7)

  - Complete collection of datasets when accessing through a cloud virtual server

- 5.46 TB / month

- 1 690 000 files /month

- 163 users registered (excluding OSI-SAF products users)

- In April 2016, this represented **50% of overall recorded FTP data transfers at Ifremer** (including other sat data, Argo GDAC, ...)

Support to synergy project

GLOBCURRENT

smos+ storms
support to science element
esa CLS

Experiment with OceanFlux data!

L2 & L3 surface current products generation from eSQG, optical flow, transfer functions,...

compositing of skin, subskin and fundation SST climatologies

oceanf....g esa
support to science element

STSE

Ocean Acidification
Ocean Heat Content
...

esa STSE

crowdsourcing applications

GHRSST - EU GDAC

GHRSST
Group for High Resolution Sea Surface Temperature

CERSAT

Ifremer

Tools to support user community

miniprods (hr-dds)

Naiad
ENHANCED SATELLITE ARCHIVE DOMAIN

subsetting / visualisation tools

felyx

intercomparison / analysis tool

match-up database

SENTINEL 3

User interaction is largely managed through multi-partner project taking advantage of the CERSAT & EU-GDAC data archive and infrastructure

Cloud Computing

Remote access for users
Custom processing environment

multi-sensor match-up database

Upcoming high resolution visualization

http://ovl.oceandatalab.com

- Implementation of new R/GTS interfaces will be done

- (EU-)GDAC concept may become obsolete

  – But aggregation of different GHRSST datasets "of interest" will remain => duplication of some datasets (or subsets of datasets) with different services associated, data location does not matter, authorship does

  – Improve visibility of GHRSST dataset (re)distribution policy is needed

  – Difficult to maintain a GDAC structure with different datasets status (some can/can't be redistributed, registration/no registration, ...)

- Distributed data access is OK but not for processing : a "GHRSST cloud" would be of interest

  – remote processing capabilities, validation data, tools, ... as a way to improve uptake by users – could be a shared investment.