Progresses on SeaDataNet, JERICO-NEXT and Eurofleets projects

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SWE is used in 2 perspectives
1. a **unified conceptual model** for observations whatever their origin: streamline the integration of data from observation platform operators (manage provenance, speak the same language)
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2. same **SOS protocol** to disseminate well known, qualified and homogeneous observation collections for download and advanced visualization.

Comply with the INSPIRE directive.
1. A **unified conceptual model** for observations whatever their origin: streamline the integration of data from observation platform operators (manage provenance, speak the same language).

2. **SOS protocol** to disseminate well known, qualified and homogeneous observation collections for download and advanced visualization.

Comply with the INSPIRE directive.
Data dissemination, oceanotron/SOS

- Collections of profiles, time series and trajectories (up to 100 thousands features) for SeaDataNet, EMODNET and Copernicus, native data format are netCDF, ODV binary collection or local SGBD.
- \(x, y, z, t, \text{phenomenon}\) subsetting criteria
- Results in O&M JSON, XML and netCDF4, synchronous or asynchronous for big volumes
- Issues:
  - GetCapabilities made lighter (solved)
  - DescribeSensor: lists of platforms providing observation in dataset (solved)
  - GetFeatureOfInterest: lists a summary of the observations (coordinates, …) (solved)
  - GetFeatureOfInterest + extension parameter to only get unique sampling features per platform for “readable” map (to be done)
- Front-end clients to be developed:
  - OceanBrowser (to be done)
  - Sextant (to be done)
Data dissemination

- NcSOS and 52North are also looked at.

- REST-Ful API from 52North is a serious competitor to provide a unified back-end for observation (at least time series):

  https://wiki.52north.org/bin/view/SensorWeb/SensorWebClientRESTInterface
Unified language for observation

- SensorML Editors (IFREMER):
  - Traditional web-forms for 'standard' templated systems (development ongoing for JERICO moorings)
  - “Draw my observation system” for complex experimental systems, e.g. MOMAR (demo with student)
Editor (IFREMER)
R/V to on-shore database real time link (CSIC, IFREMER)

- Shared development and API on-board vessel (Eurofleets) for:
  - Events management
  - CSR and CDI automated creation
  - Real time data flow to on-shore databases
1: create system configuration

2: Start Observation

3: Start data collection

4: request data

5: send data

loop

[u]ntil observation ends

6: End observation

7: end data collection
Monitoring stations management (OGS)

- 52° North - SOS version 4.2 tested
- Rest service tested for system description: get sensorML v1.0.1 XML
- 52North front-end deployed (on SOS 4.1.0): http://nodc.ogs.trieste.it/SOSclient/

- RestFul service to be tested with SOS4.2.0 system and dedicated JS 52North client
Monitoring station management (OGS)
SWE Demo for SeaDataNet

- With partners CSIC, OGS, IFREMER, MARIS, federates:
  - Research Vessel navigation and thermosalinometers
  - ARGO floats
  - Mooring (poseidon/pylos, E2M3A, MAMBO1) and deep sea observatory (MOMAR).

- Done:
  - SDN Profiles documentation including cross-references with vocabularies, edios, ...
  - SensorML and O&M are at least templated, sometimes generated
  - Results are in separate services (http, ftp, netcdf or ascii), not in O&M or getResult request.

- To Be Done (by Septembre 2015!):
  - Publish the SOS services (OGS, CSIC, IFREMER)
  - Set up a portal (likely to be based on 52North client).
  - Cross-link to and from SeaDataNet/CDI portal.
Thanks, any questions?