WP9.4

Developing integrated online services for ingesting autonomous observatory data

SeaDataCloud - Kick-Off Meeting - Riga (Latvia), 1st December 2016

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- Autonomous in-situ observatories are now widely used
- Managing data from these observatories is often complex
  - Multiple sensors
  - Different data transmission systems
  - Need for a data centre to receive, to decode and to check the measured data
- SeaDataCloud will provide services to facilitate the daily data management work
- Services will be based on the “Sensor Web Enablement” (SWE) family of standards developed by the OGC
What is Sensor Web?

- GIS
- Web Client
- Desktop System

Observation Network 1
Observation Network 2
Observation Network 3
What is Sensor Web?

- GIS
- Web Client
- Desktop System

OGC/ISO Observations & Measurements

- OGC SensorML
- OGC Sensor Observation Service

- SOS
  - Observation Network 1
- SOS
  - Observation Network 2
- SOS
  - Observation Network 3
WP9.4.1

- Web-based graphical interface for describing observatories (platforms and sensors)
  - Based on SensorML 2.0 Profile for Marine Sensors and W3C Semantic Sensor Network ontology
  - Will rely on SeaDataNet vocabulary service
  - User friendly design
  - Link (transmission systems) to the ingestion service
  - Generate the corresponding SensorML metadata which will be recorded in a sensor and system registry
  - Feed into the EDIOS Directory
  - Metadata will also be made accessible through technical services (OGC/SOS, SPARQL).
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• Facilitate the linking of sensor platforms to the SeaDataCloud infrastructure
• Definition of a transactional Web service interface based on the OGC O&M and SOS standards
• Allows the registration of operational sensor platforms and uploading of observation data
• Core elements
  - The development of a server component able to handle incoming data streams and to add them into a data repository
  - Definition of feedback to data providers as results of the data stream ingestion process (e.g. detected errors or data transfer issues)
Next Steps

• Requirements analysis
• Document capabilities of existing solutions
  - SensorML editors
  - SOS servers
  - Upload tools for SOS servers
• Determine gaps to requirements
• Start with the implementation
Thank you very much for your attention!

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