SWE Metadata Editors and SeaDataCloud SWE Ingestion Service

ODIP II – Prototype 3+

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Sensor Nanny

- Auto-completion from SKOS configuration (not from BODC yet, but soon)
- Applies for: outputs, identifier terms, classifier terms, contact roles

smle

- Already presented at the Hobart meeting
- Since then:
  - Evaluate the tasking of sensing by editing SensorML-based descriptions of sensor parameters
  - Improve usability and stability
  - Login mechanism to control write access (as part of the FixO^3 project)
- Planned activities:
  - Allow the description of sensor interfaces (commands, parameters, outputs) ➜ part of SeaDataCloud
  - Improve the integration of vocabularies
- Work performed as part of NeXOS and FixO^3

smle

SeaDataCloud SWE Ingestion Service

- Two main results:

→ Online service to describe observatories (or networks of observatories)

  - Resulting descriptions will be encoded as SensorML metadata
  - Will be based on smle

→ Ingestion Service

  - Receive, to decode and to check data
  - Will be operated under the supervision of the PI of the observatories
  - Will make use of the SensorML descriptions of the observatories and will rely on SWE-based observation data streams

- Whenever possible rely on enhancing existing (open source) software components

SeaDataCloud SWE Ingestion Service
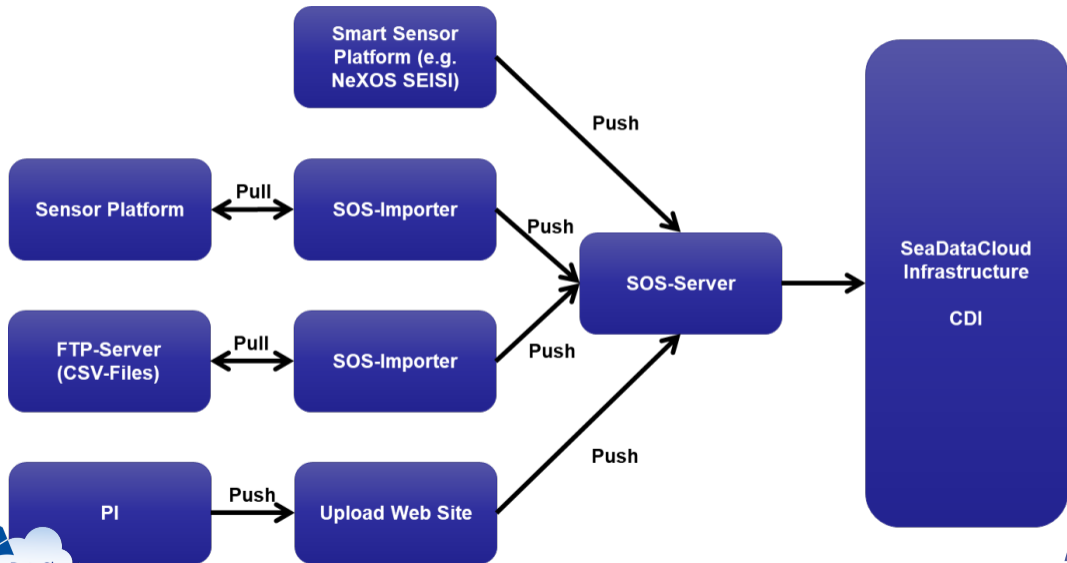
SeaDataCloud SWE Ingestion Service

- Ingestion Service - Interface Specification
- Will be based on the OGC Sensor Observation Service (SOS) 2.0-Standard
- Two approaches:
  - Regular Transactional Operations
    - Complete XML representation
    - Very easy to handle
  - ResultHandling Operations
    - More compact data representation
    - Requires slightly more business logic

SeaDataCloud SWE Ingestion Service

- How to describe data streams?
  - How to retrieve an input data stream from a platform?
    - commands
    - structure of outputs
    - → Use SensorML 2.0 for describing sensor interfaces
  - Processing of incoming data requires knowledge about
    - content
    - structure
    - encoding
    - → Provide descriptions of data structures as result templates
  - Use vocabularies for semantic interoperability in sensor interface and data stream descriptions

SeaDataCloud SWE Ingestion Service

- Specification of the SWE Ingestion Service is nearly complete

- Will be published as a SeaDataCloud deliverable

- Currently doing: Development of software components

  - Enhancing smle

  - Develop Ingestion Service based on an interpreter for SensorML based sensor and data stream descriptions

Thanks. *Questions?*