SWE Metadata Editors and SeaDataCloud SWE Ingestion Service

ODIP II – Prototype 3+

Christian Autermann, Simon Jirka
{c.autermann,jirka}@52north.org

52n

October 5, 2017
Sensor Nanny

- Auto-completion from SKOS configuration (not from BODC yet, but soon)
- Applies for: outputs, identifier terms, classifier terms, contact roles
• 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 FixO³ 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 FixO³
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

- 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?