

Cascading Sensor Observation Service GEOSS Sensor Web Workshop 2008-05-15, Geneva Copyright © S

Copyright © SANY Consortium



SANY is an Integrated Project (contract number 0033564)

co-funded by the Information Society and Media DG of the European Commission within the RTD activities of the Thematic Priority Information Society Technologies"











A service with a SOS interface

Data source: also SOS services







Plans for implementation

Current status







Combine data from different sources

- For easier processing
- To provide a uniform view to client applications
- To select viewpoints that are relevant for a specific application scenario

"Rearranging Data"





Translate between different SOS implementations

- SOS specification versions
- Implementation of optional parts of the
 - specification
- Different result models, response modes, etc.

"Protocol Transducer"





Publish a subset of internally available data

- Data may/will be available via SOS inhouse
- Not everything is for the public
- Provides a restricted "view" to the data
- No copying/replication necessary







Cache data from remote locations

- For processing, analyzing, modeling, etc
- For faster access
- To improve fault-tolerance

"In-house Cache"





Application scenario:

– Each sensor (group) has a SOS interface

Central sensor data store for a sensor network

- Replicates and "caches" / stores data from sensors
- Provides reliable, managed data store (backup, availability, performance, etc)

"Central data store"





- Extension of the first UC ("Rearranging data")
- Not only rearranging, but also processing
 - Aggregating, calculating derived data, etc.
 - Using an algebra on time series
 - On the fly processing (no ETL cycles)

"Value-added SOS"





- Step-by-step approach
- Start with a simple cascading SOS with basic SOS implementation and no additional functionality, add pieces one-by-one
 - Caching
 - SOS protocol details
- Development based on 52° North SOS service (Java 2 EE)





First prototype nearly finished

- Available at <u>http://enviro5.arcs.ac.at/SOSsrv/sos</u>
- For testing purposes only!



