Sensor Observation Service (SOS) SWG

81st OGC Technical Committee
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Organizational

- Sign observer agreement if you have not done so already.
Agenda

• Result Filter Extension – Overview, Current Status & Next Steps

• Get Data Availability Extension - Overview, Current Status & Next Steps
RESULT FILTER EXTENSION

OVERVIEW, CURRENT STATUS & NEXT STEPS
Result Filter Extension – Why?

• SOS 1.0: quite a lot of confusion on what filtering observation results encoded in SWE Common really means
  – Filtering for identifying matching observations, NOT also projecting/subsetting observation results

• (Still) no Filter Encoding (v1 & v2) extension / requirements class that defines filtering of SWE Common encoded data
  – There are prototypes that do it - somehow:
    • usually for simple SWE Common components (Quantity, Time etc)
    • What about block components (DataArray, DataStream, etc), choices (DataChoice), or components that use specific encodings (like binary)?
  – How to do it in an interoperable, well defined way – that is what is missing
Result Filter Extension – Why?

• SWG decided to avoid result filtering issues in core requirements class by not supporting result filtering there.
Result Filter Extension – How does it work?

SOS 2.0 Core

SOS 2.0 XML Encoding

SOS internal dependencies

SOS Result Filter - Conceptual Model

SOS Result Filter - XML Encoding

SOS Result Filter

SOS external dependencies

Filter Encoding 2.0
Result Filter Extension – How does it work?

- Indicate which operations support result filtering via OperationsMetadata (at least GetObservation)

- include fes:Filter_Capabilities in service metadata

- Include result filter in request extension
Result Filter Extension – How does it work?

- No more than one ResultFilter value per request – otherwise InvalidParameterValue exception with locator value “ResultFilter”
Result Filter Extension – How does it work?

• context node of value references within result filter is the OM_Observation.result property

• service shall apply result filter to identify observations that match the request criteria; result filter and other observation filter parameters combined via implicit AND
Result Filter Extension – Current Status

• SWG review done (Dec 2011 – Jan 2012)
  – Feedback (outside of mailinglist) from USGS, National Resources Canada, 52North
  – Feedback needs to be reviewed again in detail, and integrated
    • E.g. requirement for minimum (set of) FES conformance class(es) supported by SOS

• RFC can be started (if latest feedback is integrated and reviewed by SWG)
Result Filter Extension – Next Steps

• Review feedback, update specification

• Volunteers to implement extension as POC?

• Initiate RFC or publish as Discussion Paper?
GET DATA AVAILABILITY (GDA) EXTENSION

OVERVIEW, CURRENT STATUS & NEXT STEPS
Get Data Availability – What for?

- Incorporate functionality of SOS 1.0 GetFeatureOfInterestTime

- Provide observation metadata (see examples in following slides)
Get Data Availability – What for?

• discover for which times observations with certain property values are available at the service

• discover which procedures observed which properties at which times

• discover which procedures observed which features of interest at which times

• discover which properties of which features of interest were observed at which times
Get Data Availability – What for?

• narrow down the temporal scope for which these relationships are to be discovered to a certain period of time

• restrict the scope of observed properties, features of interest and procedures that are to be included in the result

• restrict the set of observations which are considered for the discovery to those from certain offerings

• generalize the information about temporal relationships to decrease the response size
GDA – How does it work?

- Current model
- Not included in latest draft sent to SWG
- Needs to be updated based upon latest feedback
GDA – Current Status

• First draft made available Aug 2010
• RFC together with SOS 2.0
  – Comments were addressed

• In the meantime, further feedback from 52North, USGS (mid 2011 – Jan 2012)
• Model updated based upon feedback, but need to double-check all emails
• Update document based upon latest model
• Review by SWG
• Integrate SWG feedback
GDA – Next Steps

• Volunteers to implement extension as POC?
  – USGS had draft implementation, maybe they can update it

• Go for approval vote or publish as Discussion Paper?