WaterML2, Part 2

Ratings, Gaugings and Sections

Interoperability Experiment planning

NSW GOVERNMENT Office of Water | Australian Government | MURRAY–DARLING BASIN AUTHORITY | Tasmania DEPARTMENT of PRIMARY INDUSTRIES, PARKS, WATER and ENVIRONMENT | CEH Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL | CSIRO

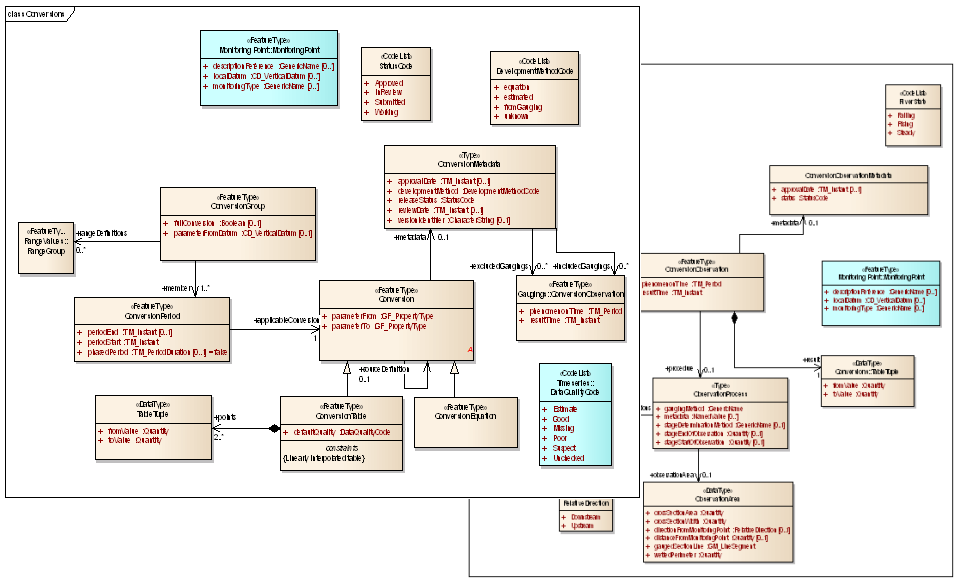
USGS science for a changing world | KISTERS | AQUATIC INFORMATICS | Australian Government Bureau of Meteorology

Overview

- RGS Work to date
- OGC standards process - brief overview
- Interoperability experiment
  - Scenarios
  - Data flows
  - Technology
  - Methodology
  - Admin
- What next
  - Activity plan
  - Being involved

Summary of activity to date

- RGS - Reading and post Reading work
- WIRADA
- Domain and information modelling
- WaterML2.0 - part 2: Ratings, Gaugings and Sections Discussion Paper



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WaterML2.0 - part 2: Ratings, Gaugings and Sections Discussion Paper

https://portal.opengeospatial.org/files/?artifact_id=54423

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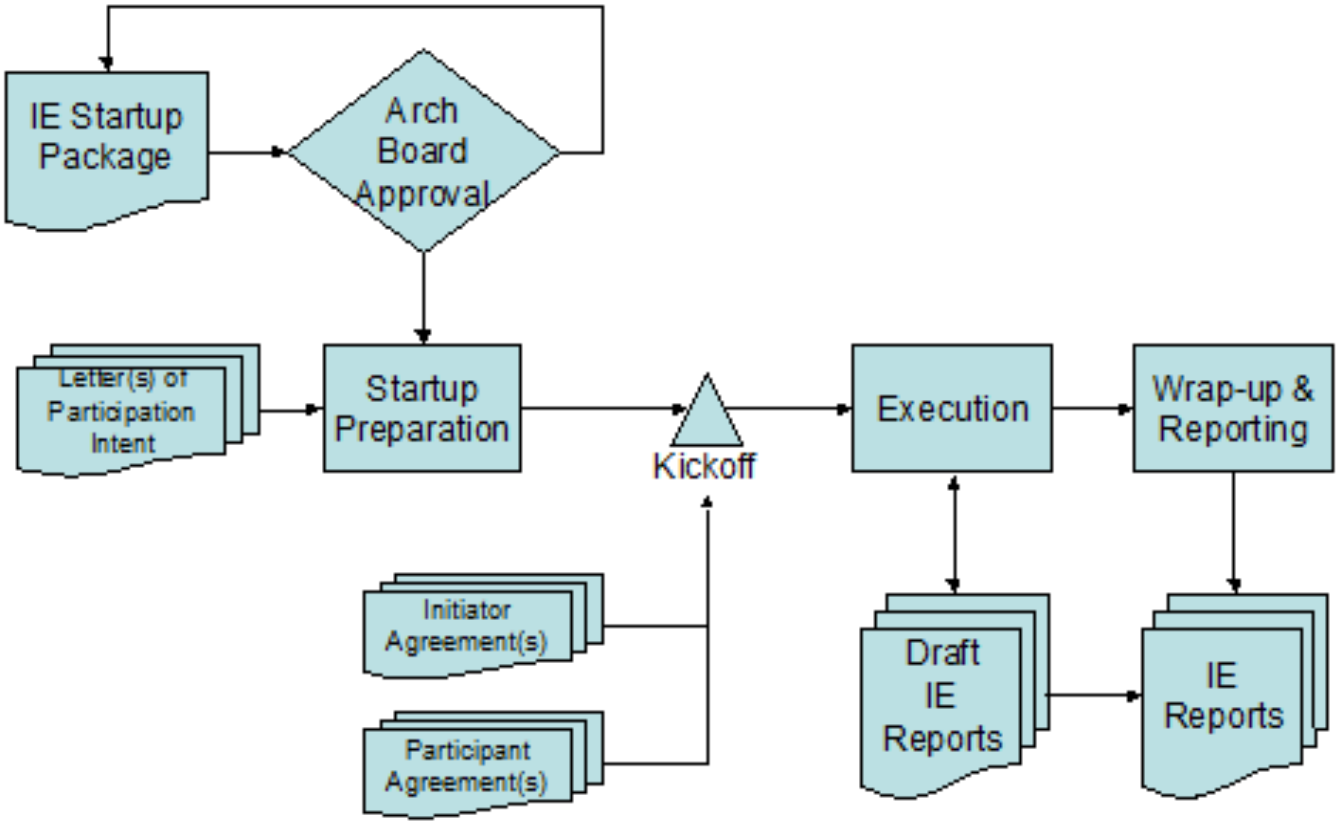
OGC standards process

1. Interoperability experiment
2. SWIG formation
3. Standard development
4. Submit RFC for OAB review
5. Public RFC
6. Adoption vote

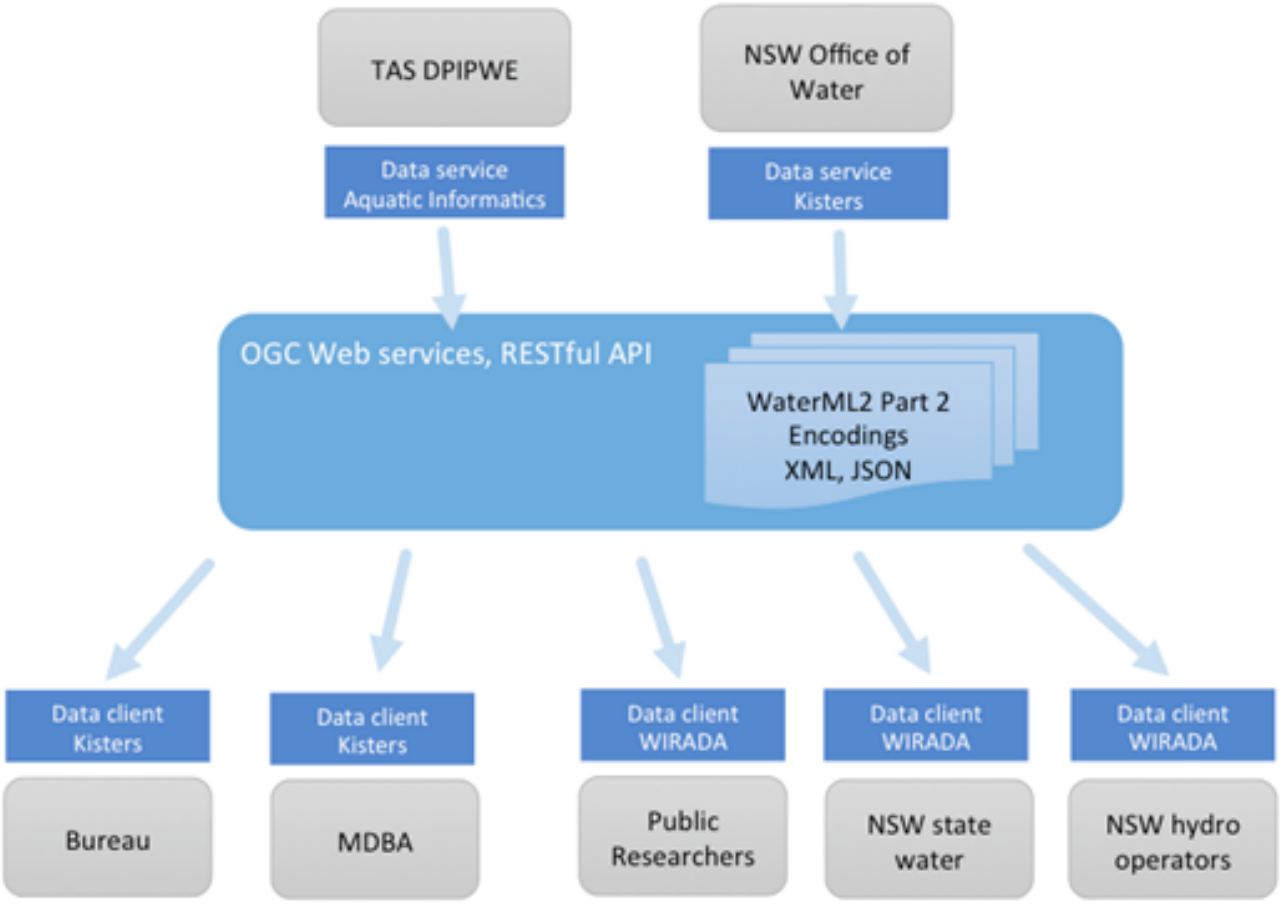
IE process


IE Startup Package
Arch Board Approval
Letter(s) of Participation Intent
Startup Preparation
Kickoff
Execution
Wrap-up & Reporting
Initiator Agreement(s)
Participant Agreement(s)
Draft IE Reports
IE Reports

Interoperability Experiment - Scenarios

1. Bureau retrieving data from
   a. DPIPWE
   b. New South Wales Office of Water
2. MDBA accessing the latest rating from NOW
3. Web analysis tool accessing all ratings
   a. DPIPWE
   b. New South Wales Office of Water
4. Role of cross sections and gaugings?

Interoperability Experiment - Data flows



Interoperability Experiment - Technology

RGS model components

Model component	Service interface	Comments
Rating tables	WFS and/or RESTful API. JSON and XML.	Query support needs investigation
Gaugings/Conversion Observations	SOS and/or RESTful API. JSON and XML.	
Cross sections	WFS. XML.	
Monitoring Points	WFS and/or SOS. JSON and XML.	
Catalog	CS/W?	
Web client	Consumer of APIs	Prototype available.

Example basic API

- Walkthrough example implementation

Interoperability Experiment - Technology RESTful API for RGS

Returns	URL	Description
MonitoringPoints	/monitoring-point/	Returns a list of all monitoring points. Current returns fully encoded descriptions rather than simple references.
MonitoringPoints	/monitoring-point/<mp-id>	Returns description of a specific monitoring point by ID.
ConversionGroup	/conversion-group/	Returns a list of all available conversion groups (combinations of monitoring-points/paramFrom/paramTo
ConversionGroup	/conversion-group/<cg-id>	Returns a specific conversion group description.
Conversion	/conversion/	Returns a list of all available conversions.
Conversion	/conversion/<conv-id>	Returns a specific conversion by its identifier.
ConversionPeriod	/conversion-period/	Returns a list of all available conversion periods.
ConversionPeriod	/conversion-period/<conv-period-id>	Returns a specific conversion period.
Gauging	/gauging/	Returns all available gauging observations.
Gauging	/gauging/<gauging-id>	Returns a specific gauging observation by its identifier.

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Interoperability Experiment - Methodology

Software vendor deployment vs. deployment at an agency

- Vendor can serve an agencies data
- Versioning lifecycle - production vs development

How to support short development cycles?

Tools:

- Hydro DWG wiki
- JIRA

Freeze a version of draft model & schema

Interoperability Experiment - Admin

- Timeline
  - September 2013 – IE kickoff
  - November 2013 – General design and agreement of schema and services
  - November-April 2013 – Iterative development
  - May 2014 – Demonstration of IE
  - June 2014 - Delivery of draft engineering report
- RGS mailing list: https://lists.opengeospatial.org/mailman/listinfo/hydro-rgs
- Activity plan
  - To the OGC OAB - in 2 weeks
  - letter from initiators
  - Observer agreement

IE Deliverables

- Running software
- OGC Engineering Report
- Demo to HydroDWG meeting in 2014

What next?

- Activity plan
- We are here to help
  - Technical assistance is available
  - Hosting options can be discussed
  - IEs are flexible
  - We are wary that you all have jobs
- Test data: Namoi from NOW