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Closing Plenary

The 122nd OGC Member Meeting

Scott Simmons + WG Chairs
3 March 2022

Meeting sponsor



Agenda

- Welcome
- Quorum confirmation
- TC Presentations and Motions
 - OGC API – Features – Part 3 + CQL
 - OGC API – Features – Parts 1 & 2 Corrigenda
 - 3D Tiles Next
 - OGC API – EDR Corrigendum
- TC Chair announcements and motions
- Working Group reports with motions: 3 to Z
- “Important Things” discussion

TC Presentations and Motions





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OGC API – Features – Part 3: Filtering and Common Query Language (CQL2) The 122nd OGC Member Meeting

Clemens Portele, interactive instruments
Panagiotis (Peter) A. Vretanos, CubeWerx Inc.
03-MAR-2022

Meeting sponsor





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Features API SWG

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Clemens Portele, interactive instruments
3 March 2022



3D Tiles Next





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EDR API SWG Plenary Report

The 122nd OGC Member Meeting

Chris Little, Met Office
Dave Blodgett, USGS
Peng Yue, Wuhan University
02 Mar 2022

Meeting sponsor



TC Chair Announcements and Motions

Upcoming OGC Member Meetings

Date	Location	Host/Sponsor
Feb/March 2022	Virtual	AWS
June 2022	Europe (location TBD)	
October 2022	Singapore	Singapore Land Authority
December 2022 Innovation Meeting	Virtual	

We are looking for sponsors for future meetings

New GoTo client coming



Testbed-18 Call for Participation

- Deadline for submission: March 17th, 2022
- Call is online: <https://www.ogc.org/testbed18>
- 7 Tasks

11

*3D+ Data Standards
and Streaming*

*Machine Learning
Training Datasets*

*Secure, Asynchronous
Catalogs*

*Moving Features and
Sensor Integration*

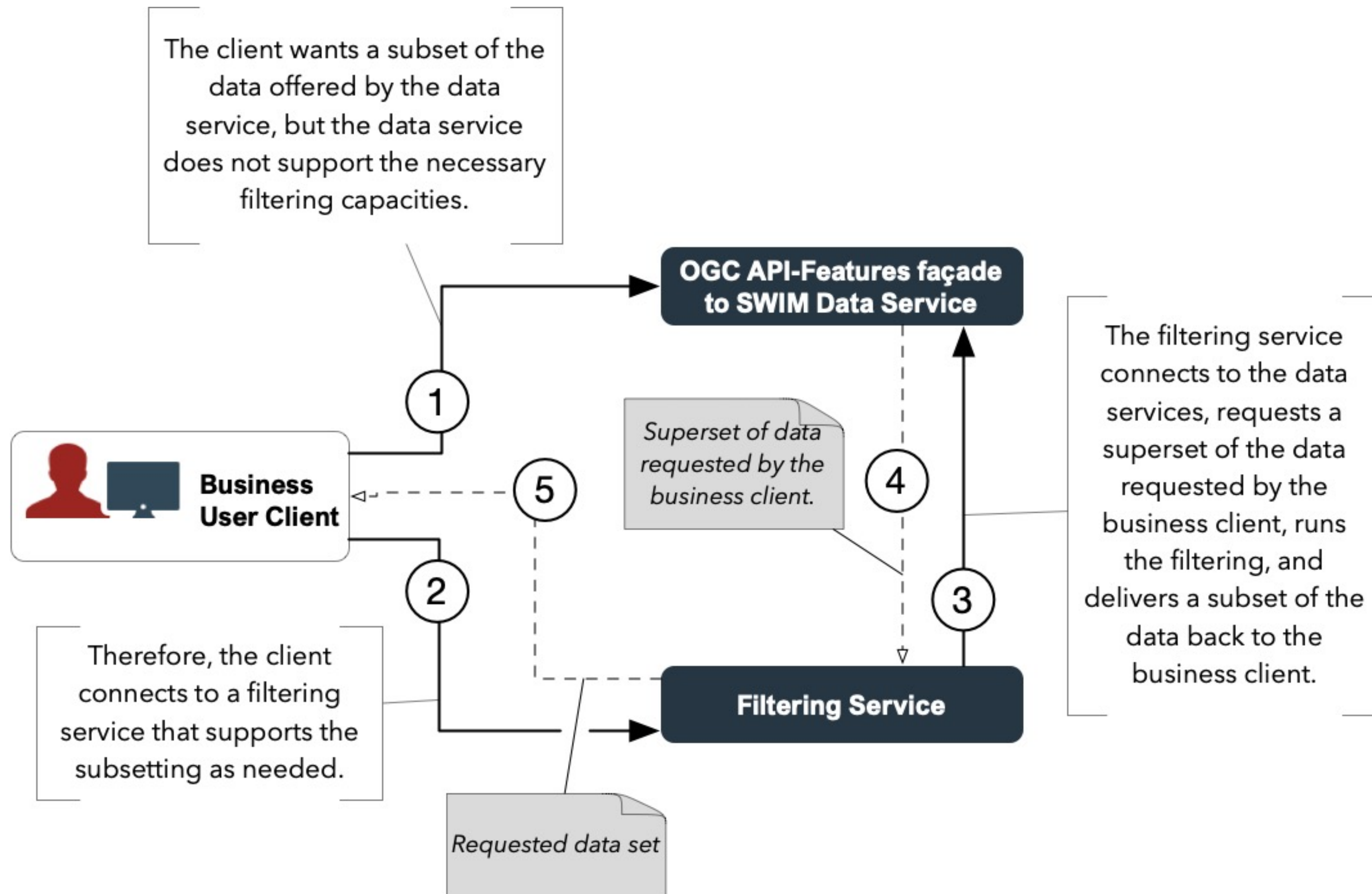
*Identifiers for
Reproducible Science*

*Building Energy Spatial
Data Interoperability*

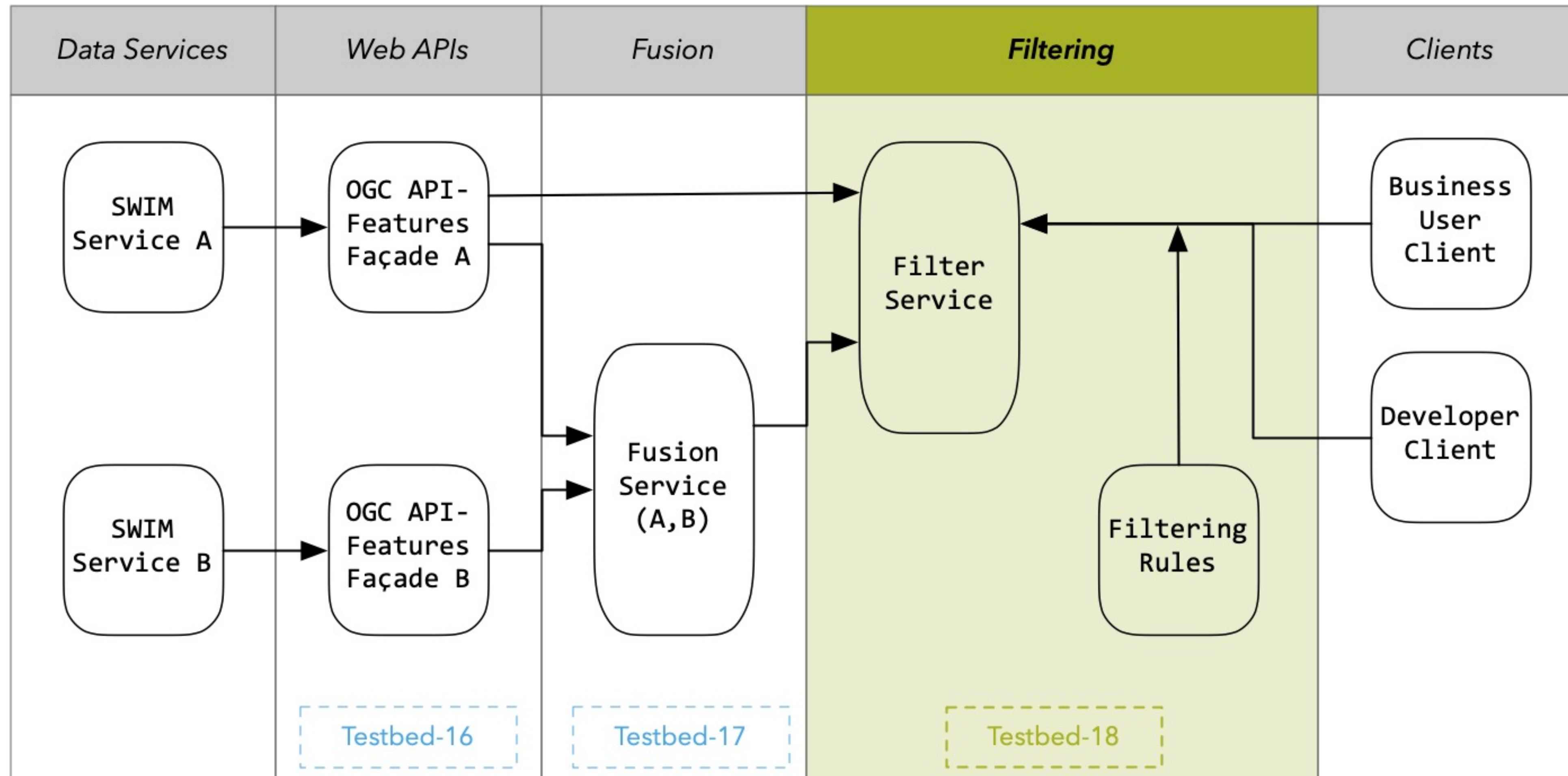
*Advanced Filtering of
SWIM Feature Data*

NEW!

Decoupled Filtering of Feature Data



Filtering is Part of SWIM Enhanced Data Handling



An aerial photograph of a vast, snow-covered mountain range. The terrain is rugged with deep valleys and ridges, all blanketed in white snow. Puffy white clouds are scattered across the landscape, particularly in the lower right and middle sections. The sky above is a clear, deep blue. The overall scene conveys a sense of scale and isolation.

WG Reports not to be briefed

Not being briefed today, saving you 142 slides

- 3DIM DWG
- Agriculture DWG
- Big Data DWG
- CDB SWG
- CityGML SWG
- Coverages SWG
- Coordinate Reference System DWG
- Data Quality DWG
- Defense & Intelligence DWG
- DGGS DWG
- Energy and Utilities DWG
- Features and Geometries JSON SWG
- GeoPose SWG
- Hydro DWG
- Interoperable Simulation & Gaming DWG
- JAG (Joint Advisory Group, OGC-ISO/TC211)
- Met Ocean DWG
- Moving Features SWG
- MUDDI SWG
- Observations & Measurements SWG
- OGC API – Records SWG
- Planetary DWG
- Point Cloud DWG
- Points of Interest SWG
- Portrayal DWG
- Security DWG
- Smart Cities DWG
- Sensor Web Enablement DWG
- Temporal DWG
- TimeseriesML SWG
- TrainingDML-AI SWG
- Uninhabited Systems DWG

WG Reports with TC Motions

3 to Z



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Architecture DWG

The 122nd OGC Member Meeting

Joan Maso (UAB-CREAF), Gobe Hobona (OGC)
3 March 2022

Meeting sponsor



The most important thing for this WG is...

PIM-to-PSM: When translating concepts into implementations (RDF, HTML and OpenAPI), how detailed or specific should we get?

PIM: Platform Independent Model
PSM: Platform Specific Model

Session Agenda

- **Testbed-17 D022 Model Driven Standards Engineering Report - Ron Tse (Ribose)**
- **Improving SEO and discoverability of OGC API implementations in Search Engines - Gobe Hobona (OGC)**
- **Describing re-usable OGC API building blocks with OpenAPI - Jérôme Jacovella-St-Louis(Ecere), Joan Maso Pau (UAB-CREAF)**

Activity Summary

- Discussion Topics

- Testbed-17 identified some inconsistencies with the ModSpec.
- The testbed implemented an approach that generates an OGC document by converting a Platform Independent Model (PIM) to a Platform Specific Model (PSM) in one step.
- There may be a need to provide additional guidance to implementers of OGC API Standards about how to tailor HTML pages returned servers in line with Search Engine Optimization (SEO) approaches.
- There are a number of challenges in and solutions for describing reusable OGC API building blocks

- Coordination (ongoing and planned)

- All SWGs
- OGC Naming Authority SC

- Upcoming deliverables

- Testbed-17 Model Driven Standards ER

- Future meetings

- Next Member Meeting

Key activities

- OGC API cross-SWG forum
- Conceptual Modeling sub-group

Applying the Model Driven Approach to CityGML 3.0

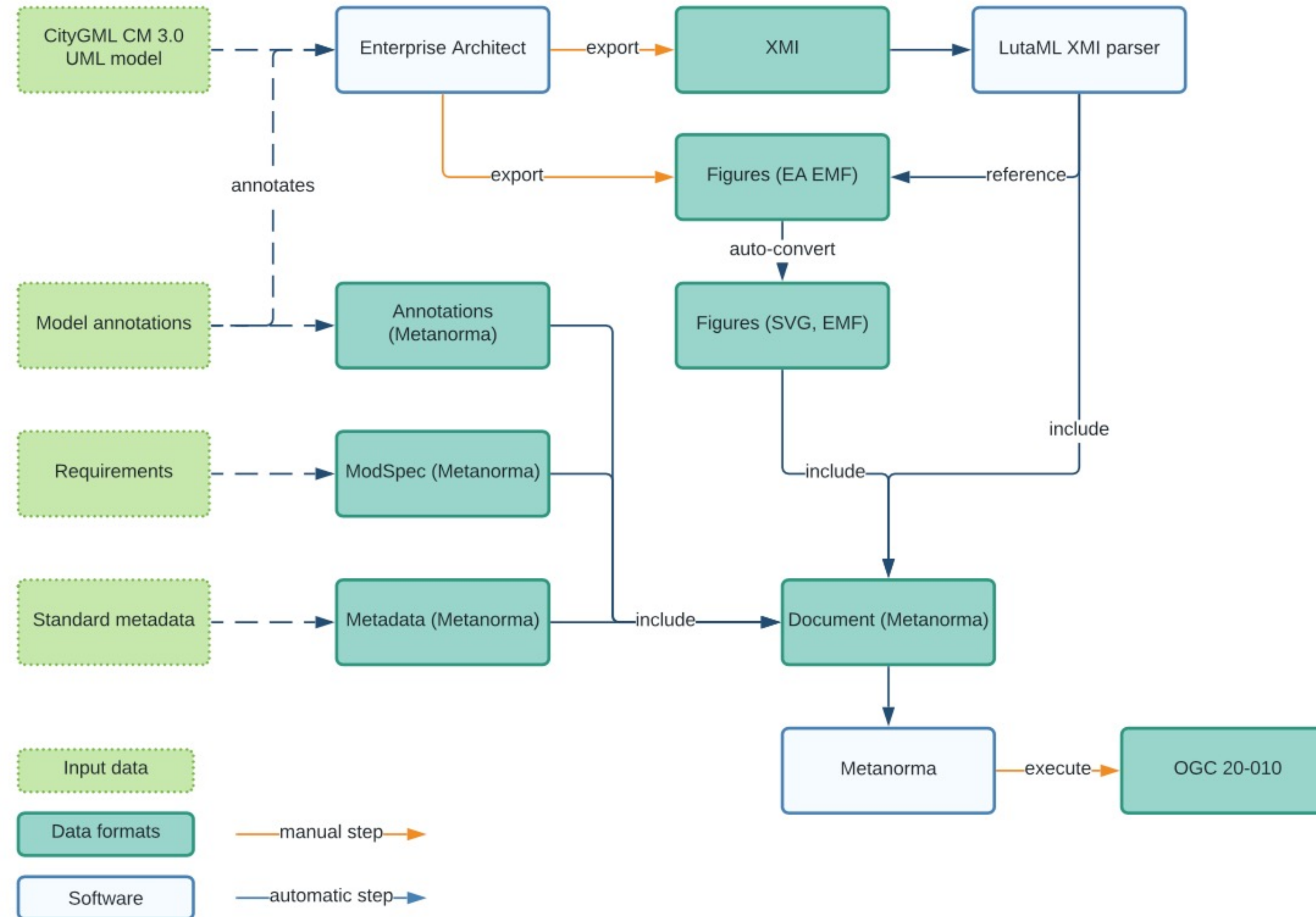


Figure 91 – CityGML 3.0 MDS information model flow

Applying the Model Driven Approach to the DGGS Conceptual Model

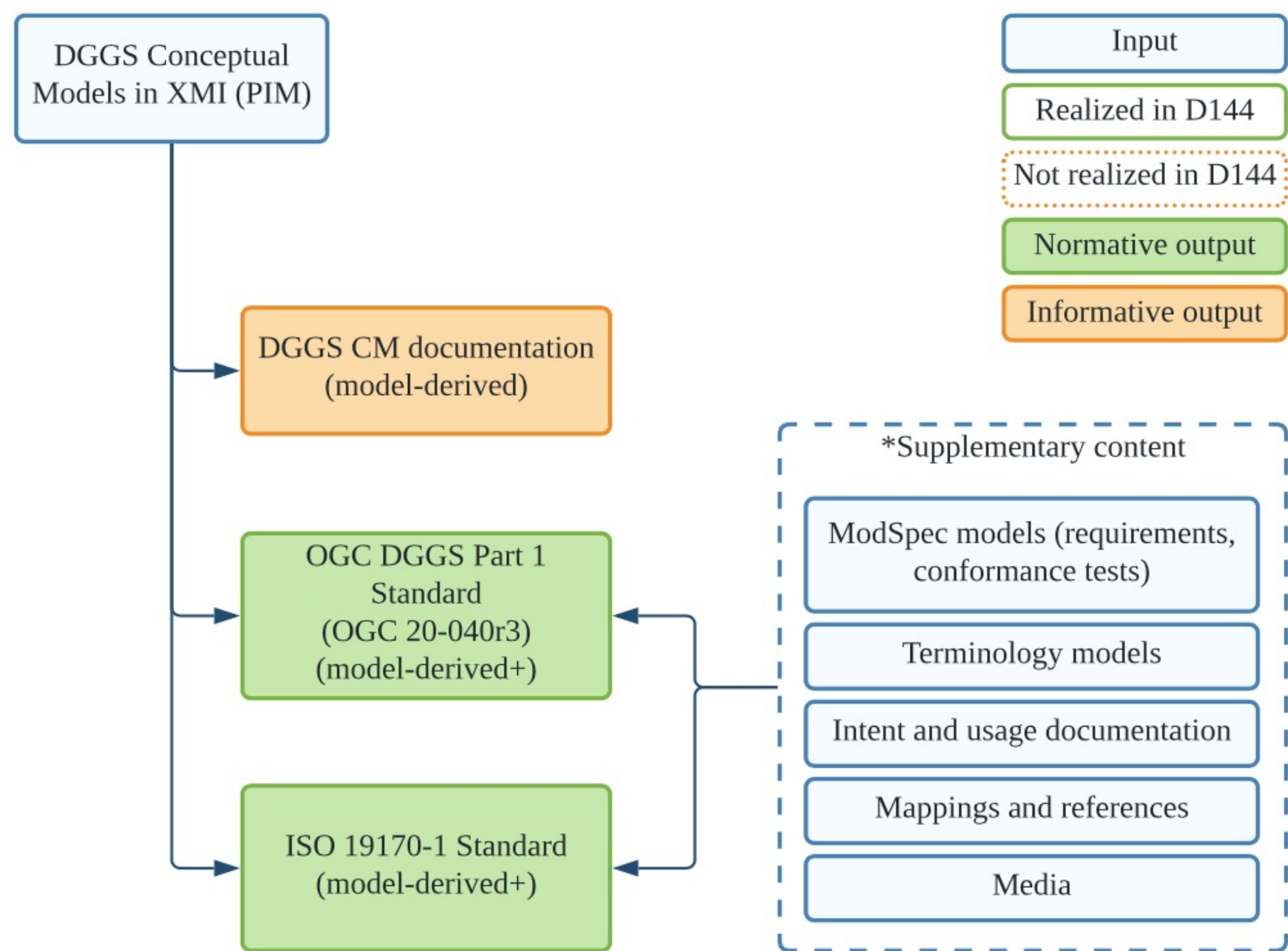


Figure 103 — Standards and deliverables derived from the DGGS conceptual models

Challenges and solutions for describing reusable OGC API building blocks

- Re-using OpenAPI building blocks in OGC API definitions:
 - **paths**, parameters, responses, and schemas
 - <https://petstore.swagger.io/?url=https://raw.githubusercontent.com/opengeospatial/ogcapi-tiles/master/openapi/ogcapi-tiles-1.bundled.json>
- Listing path parameter values with JSON Schema enumerations facilitating **direct re-use** of an example OpenAPI definition
- Taking this a step further and returning these enumerations **dynamically**
- Standardizing that capability so that OpenAPI definitions can be used to build pre-compiled **generic** clients
- Defining **operationIDs** suffixes for associating transportable resource paths with requirements conformance classes
- OpenAPI's lack of **templated path parameters** – cannot enumerate based on context

Approval of OGC 21-035r1 “OGC Testbed-17: Model-Driven Standards Engineering Report” for publication

- The Architecture DWG recommends that the OGC Technical Committee approve release of OGC 21-035r1 “OGC Testbed-17: Model-Driven Standards Engineering Report” as an OGC Public Engineering Report.
- Result: NOTUC
- Abstract: The engineering report details state-of-the-art analyses of existing Model Driven Architecture (MDA) tools with their capabilities and limits; and provides clear recommendations on how model-driven design can be fully exploited in the context of rich data model and API design efforts.



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DocTeam

The 122nd OGC Member Meeting

Scott Simmons, OGC
3 March 2022

Meeting sponsor



The most important thing for this WG is...

Finalize OGC Document templates for the Metanorma content management system.

Activity Summary

- Discussion Topics

- Review Metanorma templates
- Identify improvements to template documentation
- Improve ease of authoring
- Modernize requirements labeling

- Upcoming deliverables

- Revised templates per meeting
- Revised template documentation

- Coordination (ongoing and planned)

- Metanorma project
- ISO / TC 211

- Future meetings

- None planned for now

Document Approval Motion

- The Document Subcommittee (DocTeam) recommends that the OGC Technical Committee approve release of the revised document templates on the GitHub repository under the Metanorma branch (<https://github.com/opengeospatial/templates/tree/metanorma>) as approved OGC Document Templates.
- Pending addressing the following items
 - Provide a cheat-sheet that highlights the differences between the old template and the new
 - Need to include example of Requirement with conditions and multiple parts (OGC API – Processes Requirement 20)
 - Support for Indirect Dependency per ModSpec
 - Permit requirements, requirements classes, and abstract tests to be written directly in their appropriate sections and not require separate files. Editors have the option to choose either approach.
- There was no objection to unanimous consent
- These templates apply only to work managed in GitHub and authored primarily in AsciiDoc. The Word templates are not affected.

Policy Directive 43 – proposal to rescind

- Approved September 2016

“A single format for stating requirements is approved for standards (provided in latest standard template, Example A in previous template).

Each requirement shall be numbered, initially in sequence.

For a revision to a standard, all unchanged requirements retain the same number. Deleted requirements have numbers which are deleted and not to be reused. New requirements take the next available number at the end of the sequence, even if inserted between existing, consecutive requirements.”

- Overcome by use of unique requirement identifiers in template, numbering is for convenience only and not required

Document Approval Motion

- The Document Subcommittee (DocTeam) recommends that the OGC Technical Committee rescind Policy Directive 43 regarding the numbering of Requirements in Standards and instead Standards must use unique Identifiers for each Requirement and Requirement Class.
- There was no objection to unanimous consent



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Earth Observation Exploitation Platform DWG Report

The 122nd OGC Member Meeting

Guenther Landgraf, European Space Agency
Pedro Goncalves, Terradue Srl
Ryan Ahola, Natural Resources Canada
3 March 2022

Meeting
sponsor



The most important thing for this WG is...

Interoperable deployment and execution of applications on cloud was settled with OGC Best Practice for Earth Observation Application Package - OGC 20-089. The remaining issue is interoperable access to data by cloud-based applications.

Can data cube based access overcome these difficulties?

OGC 122 session focussed on Geo Data Cube APIs. What approaches should OGC focus on to provide the best user experience for different requirements?

Session Agenda

- **Testbed-17 D012 Geo Data Cube API Engineering Report**
Jerome Jacovella-St-Louis (Ecere Corporation)
- **openEO and OGC APIs - are we reinventing the wheel?**
Matthias Mohr (University of Münster)
- **Workflows and Chaining in OGC API Processes and openEO**
Panagiotis (Peter) Vretanos (CubeWerx)
- **Data Cube Access: Opportunities, challenges & requirements from a user-oriented perspective**
Jonas Eberle (Deutsches Zentrum für Luft- und Raumfahrt - German Aerospace Center)
- **Requirements for a high-volume high frequency weather forecast data cube — An ECMWF perspective**
Tiago Quintino (ECMWF)
- **Environmental Data Retrieval: Big Data in Small Bytes**
Chris Little (UK Met Office)
- **Open Discussion and Closing**

Activity Summary

- Discussion Topics

- High diversity of requirements for geo data cubes.
- A need to support many applications (e.g. weather, atmosphere, ocean).
- Different types of data (in addition to EO) are key
- pixel-level processing
- processing during extraction becomes a must for future HR datacubes (1PB/day for 1km resolution)

- Upcoming deliverables

- Testbed-17 Geo Data Cube API Engineering Report

- Coordination (ongoing and planned)

- Desire for a formal place in OGC to discuss (new DWG or GEO Datacube API SWG ?)
- Many organizations are interested. Potential opportunities to collaborate.
- ECMWF highlighting possible impact of DestinE Digital Twin Earth programme

- Future meetings

- Next Member Meeting

Key activities

- EOEPKA: Open source published 24 December: <https://eoepca.org/>
- Desire to have a formal OGC space to discuss geo data cubes.
 - Is there an existing DWG and/or SWG where this could occur?
 - Is a new DWG and/or SWG needed?
 - Ideas from TC would be appreciated!
- DWG would monitor fitness of output for resolving data access interoperability for cloud-based exploitation

Document Approval Motion

- The Earth Observation Exploitation Platform Domain Working Group recommends that the OGC Technical Committee approve release of 21-027 “OGC Testbed 17 Geo Data Cube API Engineering Report” as an OGC Engineering Report.
 - Pending any final edits and review by OGC staff
 - There was no objection to unanimous consent.
- This OGC Engineering Report documents the results and recommendations of the Testbed-17 Geo Data Cube API task. The document defines draft specifications for an interoperable Geo Data Cube API leveraging OGC API building blocks, details implementation of that API, and explores various aspects including data retrieval and discovery, cloud computing and Machine Learning. Implementations of the draft API are demonstrated with use cases including the integration of terrestrial and marine elevation data and forestry information from Canadian wetlands.



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Plenary Report - EDM DWG

The 122nd OGC Member Meeting

Don Sullivan, NASA
03 March 2022

Meeting sponsor



**The most important thing for this WG,
this quarterly meeting,
- any quarterly meeting,
is defining resources,
and initiatives,
for Ukraine.**

Agenda – Special Session

- This special session was a community roundtable on resources and initiatives for Ukraine.
- Special session co-host: Nadine Alameh, CEO of the OGC
- Participants in the session included:

Attendees, Pt1

- US National Aeronautics and Space Administration (NASA) Disasters Program
- Feng Chia University
- US Census Bureau
- Norwegian Mapping Authority
- United Kingdom Hydrographic Office (UKHO)
- Health Solutions Research, Inc.
- Hexagon
- US Geological Survey (USGS)
- The Joint Staff
- Secure Dimensions GmbH
- Health Solutions Research, Inc.
- Defence Science & Technology Laboratories (Dstl)

Attendees, Pt2

- New York City Geospatial Information System and Mapping Organization (GISMO)
- Safe Software, Inc.
- Ordnance Survey
- Hexagon
- George Mason University
- Blackshark.ai
- Pelagis Data Solutions
- American Society for Photogrammetry & Remote Sensing (ASPRS)
- Microsoft
- Google
- Maxar

We need to

- Create an OGC GitLab instance
 - OGC staff

- Plan further discussions
 - EDM DWG and OGC staff to assemble mail list
 - Additional regular meetings likely, out of band of the quarterly TC/PC meeting schedule

- Coordinate our response (ongoing and planned), to support
 - Existing Support Agencies
 - Honest and fair news dissemination
 - Religious Organizations
 - ...

- GET YOU ALL INVOLVED
 - ‘nuf said



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GeoAI DWG Closing Plenary Report

The 122nd OGC Member Meeting

Meeting sponsor



Kyoung-Sook Kim, Tien-Yin (Jimmy) Chou,
Anneley Hadland, Dimitris Kotzinos, Ashley Antonides
3 Month 2022



The most important thing for this WG is...

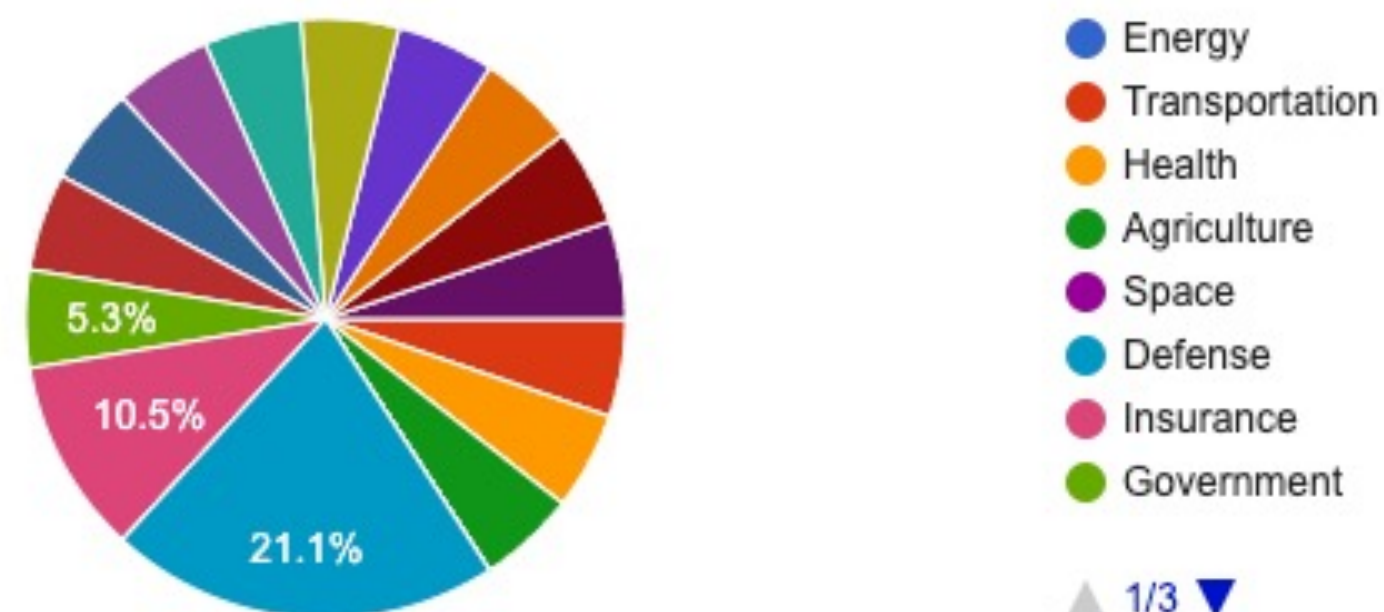
Many new members of the OGC are .ai businesses and/or are using GeoAI to some extent. The GeoAI group is a great forum to get those members engaged in sharing best challenges and interoperability gaps as well as lessons learned.

Survey is for figuring out who amongst our members “self-identifies” with GeoAI:

<https://forms.gle/FCqufP7ENJ8Cf6f48>

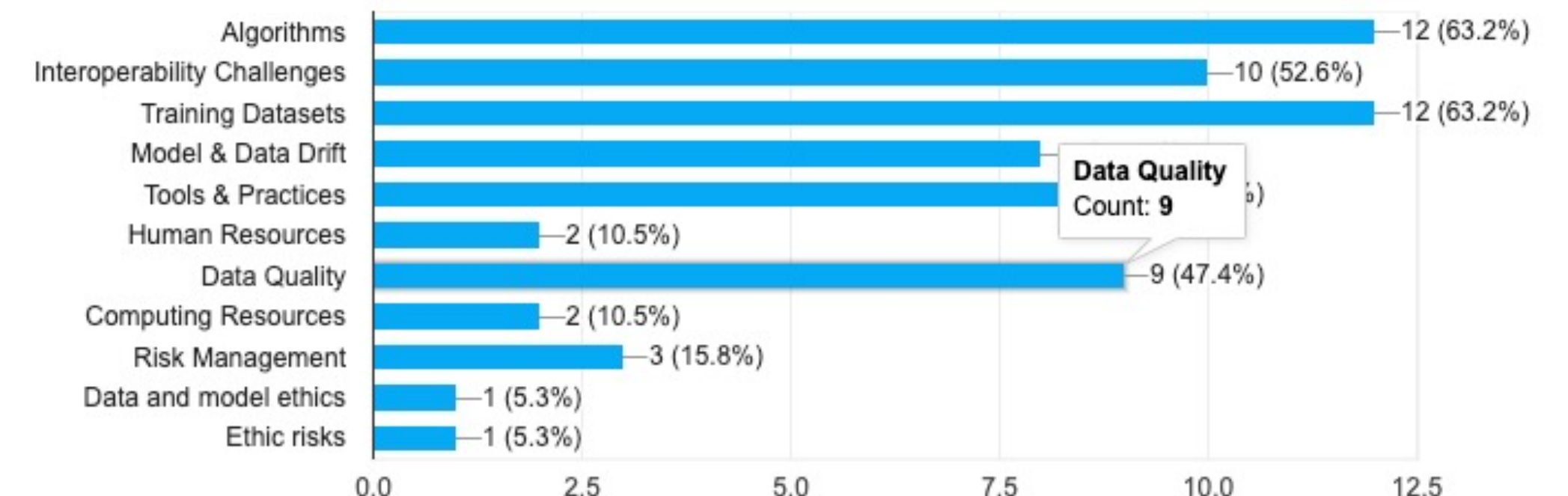
What is the domain of your business?

19 responses



What, if any, are the highest priority concerns to adapt GeoAI in your business? (Choose all that apply)

19 responses



Session Agenda

March 1st, 3:00 PM - 4:30 PM (EST/UTC-5)

- 3:00pm - 3:05pm DWG Introduction
- 3:05pm - 3:15pm Update from TrainingDML-AI SWG activity: Peng Yue (Wuhan Univ.)
- 3:15pm - 3:25pm Outcomes of the Disasters Pilot: Josh Lieberman (OGC)
- 3:25pm - 3:35pm Geospatial Machine Learning model catalog spec : Jon Duckworth (Radiant Earth Foundation)
- ~~• 3:35pm - 3:45pm Framework of GeoAI: Dimitris Kotzinos (CY Cergy Paris University)~~
- 3:45pm - 3:55pm The HDF5 for the labeled point cloud (discussion paper): Taehoon Kim (AIST)
- 3:55pm - 4:15pm Outcomes of the survey to members: Nadine Alameh (OGC)
- ~~• 4:15pm - 4:30pm Self-introduction to members~~

Activity Summary

- Discussion Topics

- Data - To - Action Value Chain
- Interoperability & difficulties in data sharing and cloud computing
- Cataloging ML workflows using STAC
- Discussion paper: labeled point cloud
- Outcomes of the survey

- Upcoming deliverables

- OGC 21-077 The HDF5 for the labeled point cloud
- GeoAI White paper based on survey results

- Coordination (ongoing and planned)

- TrainingDML-AI SWG
- Data Quality DWG
- Defense and Intelligence DWG
- Point Cloud DWG
- ISO/IEC JTC1 SC42
- ITU-T

- Future meetings

- Next TC meeting: Roundtable for cross-group discussions

Document approval motion

- The GeoAI DWG recommends that the OGC Technical Committee approve release of OGC [21-077](#) **The HDF5 for the labeled point cloud** as an **OGC Discussion Paper**.
 - Pending any final edits and review by OGC staff
 - There was no objection to unanimous consent.
 - This OGC Discussion Paper (DP) investigates and summarizes point cloud data formats (such as PLY, LAS, etc.) how to support the labeled point cloud. This paper also proposes a new data model for labeled point cloud based on HDF5 format to resolve current issues of the point cloud data formats.

Next Quarter WG Communications Plan

- A roundtable event for cross-group discussions during the next TC meeting
 - Objectives
 - To identify the common pain points and interoperability challenges in the community to help the GeoAI working focus their efforts for 2022 - in a world that's talking about GeoAI all the time
 - To provide our members (especially the new ones) an opportunity to tell the world what they are doing



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IndoorGML SWG

The 122nd OGC Member Meeting

Ki-Joune Li
3 March 2022

Meeting sponsor



Document Approval Motion

- The IndoorGML SWG recommends that the OGC Technical Committee approve release of 21-010r2, “Extensions of IndoorGML 1.1 - Indoor Affordance Spaces” (https://portal.ogc.org/files/?artifact_id=100086&version=1) as an OGC Discussion Paper
 - Pending any final edits and review by OGC staff
 - There was no objection to unanimous consent
- This discussion paper provides an extension of IndoorGML 1.1 for describing indoor LoDs, hierarchical space models, and other space concepts in indoor space.



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OGC API - Processes SWG

The 122nd OGC Member Meeting

Benjamin Pross, 52°North
03 March 2022

Meeting sponsor



Motion to approve T-17 CITE ER

- The OGC API Processes SWG recommends that the OGC Technical Committee approve release of 21-044 “Testbed 17 CITE ER” as an OGC Engineering Report.
 - Pending any final edits and review by OGC staff
 - There was no objection to unanimous consent
- This OGC Testbed 17 Engineering Report (ER) documents the result of the work performed in the 2021 OGC Testbed 17 initiative CITE thread. CITE is the Compliance Interoperability & Testing Evaluation Subcommittee that provides a forum for an open, consensus discussion regarding approaches and issues related to conformance and interoperability testing as part of the OGC standards process. This ER provides information about the development of a test suite for the OGC API-Processes Standard OGC18-062 to be executed in the OGC Test Evaluation tool (TEAM Engine). The ER also documents an evaluation of an alternative environment for OGC compliance testing.



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Closing Plenary – no motions

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Scott Simmons + WG Chairs
3 March 2022

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3DIM DWG

The 122nd OGC Member Meeting

Carsten Rönsdorf, OS
Filip Biljecki, NUS
David Graham
3 March 2022

Meeting sponsor



The most important thing for this WG is...

Good to see a variety of activities, including upcoming revision of 3D Tiles and collaboration with Khronos group.

Session Agenda

- Automatic Unfolding of CityGML Buildings to Paper Models, Steffen Goebbels, HS Niederrhein (15 mins)
- IMDF for First Responders, David Coggeshall (10 mins)
- 3D Tiles Next update, David Cozzi and Sean Lilley, Cesium (15 mins)
- Understanding issues, challenges, and barriers to the adoption of 3D CityModels/Digital Twins, Binyu, NUS (20 mins)
- Updated Khronos-OGC discussions, Leonard Daly (25 mins)

Activity Summary

- Discussion Topics

- Highlighted possibility to liaise with new Digital Twin working group Michael Mulquin is setting up—great link into the NUS research work into barriers to the adoption of 3D city models
- Great efforts on using IMDF for first responders and creating paper models from CityGML

- Upcoming deliverables

- n/a

- Coordination (ongoing and planned)

- Smart Cities DWG
- CityGML SWG
- IndoorGML SWG
- LandInfra DWG/SWG

- Future meetings

- June Member Meeting
- Support organising committee for DT/built environment summit



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Agriculture DWG - EO data for monitoring agricultural activities

The 122nd OGC Member Meeting

Karel Charvat, Plan4all
02 March 2022

Meeting
sponsor



The most important thing for this WG is...

Agriculture DWG is domain oriented DWG, that needs to coordinate the effort with other DWGs. For example (not exclusively):

- ❑ Artificial Intelligence in Geoinformatics
- ❑ Big Data DWG
- ❑ Blockchain and Distributed Ledger Technologies DWG
- ❑ Citizen Science DWG
- ❑ Data Quality DWG
- ❑ Earth Observation Exploitation Platform
- ❑ Earth Systems Science
- ❑ Geosemantics DWG
- ❑ Land Administration
- ❑ Metadata and Catalog
- ❑ Sensor Web Enablement

Session Agenda

- Intro Ag DWG chair (Karel Charvát)
- Use of Sentinel-1 and Sentinel-2 data in agricultural data analysis (Herman Sneva, Plan4all)
- NIVA support to the EO monitoring of CAP payments (Dominique Laurent, IGN)
- EuroCrops and HCAT: Collecting and Harmonising open agricultural data within the European Union (Maja Schneider, TUM)
- E³ SAFER F³: Nature produces Ecology Economy Energy Sustainable Agriculture Forestry Environment Risk-management with Farm Fork Fun (Walter H. Mayer, PROGIS)
- The role of standards in strengthening agricultural monitoring in Africa (Lilian Ndungu, RCMRD)
- Satellogic - space is closer than ever (Eldrige Costa de Melo, Satellogic)
- What are we doing wrong? Why have farmers not used EO services regularly so far? What can we change in the future? (Runar Stein Bergheim, Avinet)

Activity Summary

- Discussion Topics

- What kind of data do you use for monitoring agricultural activities? (satellite data, in-situ data, aerial data)
- What data models do you use for EO data?
- What architecture do you use for EO data?

- Upcoming deliverables

- N/A

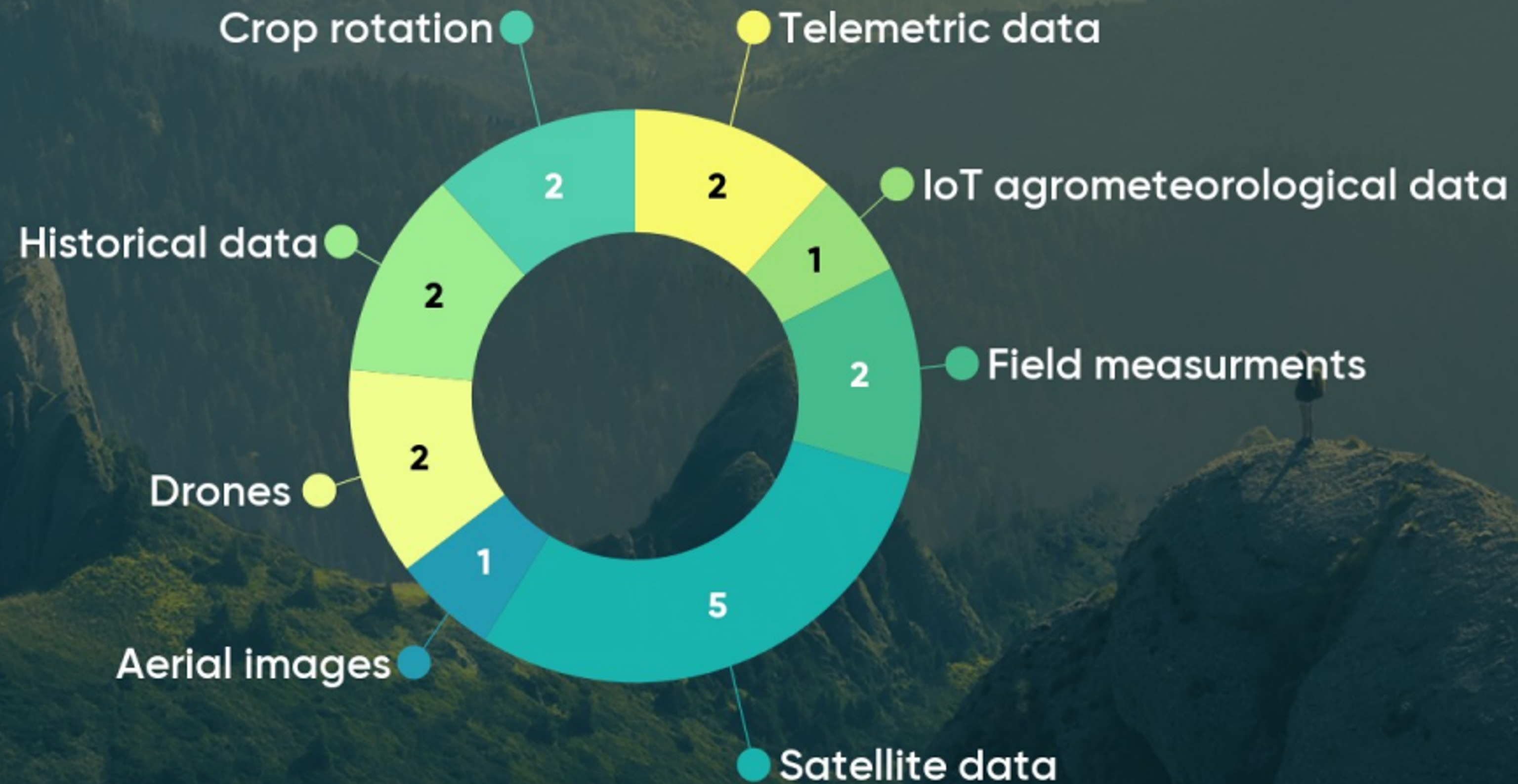
- Coordination (ongoing and planned)

- N/A

- Future meetings

- 123 OGC Member Meeting

What kind of data do you use for monitoring agricultural activities?



What data models do you use for EO data?

FOODIE data model and Open
Land Use model

FOODIE

OLU

FOODIE

OLU

NIVA has developped a draft data
model for EO monitoring processes.

Foodie

What architecture do you use for EO data?

Open SOurce solution based on CCloud
Open Stack

Open Stack as cloud

Jupyter Notebook

Open data cube

NIVA partners use various infrastuctures
:- in-house - DIAS (mainly CREODIAS as
very relevant with Sen4CAP)- other
clouds

Next Quarter WG Communications Plan

- Communicate with other organisations like RDA
- Promote standards to EU projects
- OGC 123 AG DWG suggested topic: How to improve farming advisory services - from global needs to local advisory services



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Big Data DWG Closing Plenary

The 122nd OGC Member Meeting

Chuck Heazel, Heazeltech
03 March 2022

Meeting sponsor



The most important thing for this WG is...

Heterogeneous data is a fact of life. What can the OGC do to make it more manageable?

A BoF session is planned for the next Membership Meeting to discuss.

Session Agenda

- On the Integration of Heterogeneous Data and Service Models
 - Peter Baumann, Jacobs University
- Sensor Integration Framework
 - Chuck Heazel, Heazeltech
- Open Discussion

Activity Summary

- Discussion Topics

- We need a strategy to integrate data conforming to multiple standards:
 - into a coherent data pool,
 - which is easily consumable by Big Data applications,
 - without sacrificing Volume or Velocity

- Upcoming deliverables

- None

- Coordination (ongoing and planned)

- None planned

- Future meetings

- BoF session at next Membership Meeting

Key activities

- Query language strategies for heterogeneous data
- Integration framework for heterogeneous sensor systems
- Proposal to hold a BoF session on these topics at the next Members Meeting



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CDB SWG Closing Plenary Report

The 122nd OGC Member Meeting

David Graham, CAE Inc.
03 March 2022

Meeting sponsor





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CityGML SWG

The 122nd OGC Member Meeting

Steve Smyth
2 March 2022

Meeting sponsor



Meeting sponsor

The 122nd OGC Member Meeting

Coverages SWG (OGC API Track) Closing Plenary Report

March 2nd, 2022

Co-chairs:

- Jerome St-Louis, Ecere
- Stephan Meißl, EOX
- Peter Baumann, rasdaman





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CRS DWG Closing Plenary Report

The 122nd OGC Member Meeting

Keith Ryden, Esri
02 March 2022

Meeting sponsor



The most important thing for this WG is...

Continuing to move forward with the Deformation Model Functional Model and GGXF: Gridded Geodetic data eXchange Format. We need to get these to a point where we can begin public review and encourage further prototype implementation work.

Session Agenda

- Coordinate Reference Web Ontologies – Frans Knibbe, Jo Abhayaratna, Timo Homburg
- Naming Authority update to OGC Name Type Specification – Roger Lott
- "Pole Rotation" operation method proposal - Martin Desruisseaux
- Dynamic Datum Working Group:
 - Update on the Deformation Model Functional Model – Chris Crook, Kevin Kelly
 - Update on GGXF: Gridded Geodetic data eXchange Format – Roger Lott, Kevin Kelly
 - GGXF code sprint - Martin Desruisseaux

Activity Summary

- Discussion Topics

- CRS References in Web Ontologies
- Short URI changes in the Naming Authority
- How to handle Pole rotations for MetOcean usage
- Updates on the Deformation Model Functional Model
- Updates on GGXF: Gridded Geodetic data eXchange Format

- Upcoming deliverables

- Working towards public reviewable documents for the Deformation Model Functional Model and GGXF: Gridded Geodetic data eXchange Format

- Coordination (ongoing and planned)

- Continue working with the Semantic Web working group to understand wants and needs – need a better understanding of workflows and real requirements in the Semantic Web world.
- Continue close coordinate between the Deformation Model and GGXF exchange format.

- Future meetings

- Continue Deformation Model and GGXF exchange format meetings every other week.
- Possible continuation of Web Ontologies discussion in the June CRS DWG meeting.



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Data Quality DWG

The 122nd OGC Member Meeting

Ivana ivánová
28 February 2022

Meeting sponsor



The most important thing for this WG is...

Current focus of DQ DWG is in contributing to the improvement of ISO/TC211 standards for Data Quality (ISO 19157-1 and ISO 19157-3) and to the guidelines and best practice in managing quality in Earth Science datasets.

Session Agenda

- Ivana Ivánová (Curtin University): Introduction
- Joan Maso (CREAF): Translate Climate Adapt Uncertainty Guidance into DQ_Elements for Decision Ready Information
- Robert Downs (Center for International Earth Science Information Network, Columbia University): Interdisciplinary Representation of Data Quality Information about Socioeconomic Data: a Pilot Study
- Discussion

Activity Summary

- Discussion Topics

- Uncertainty in Climate Adapt
- Applicability of ISO DQ_Elements in Climate Adapt
- Quality Information in Socio-Economic applications of Earth Science datasets
- ISO 19157-1 and ISO 19157-3 update

- Upcoming deliverables

- Comments on ISO/DIS 19157-1
- Contribution to ISO/AWI 19157-3

- Coordination (ongoing and planned)

- ISO/TC211 WG9
- ESIP IQC

- Future meetings

- OGC Member Meeting – May/June'22



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Defence & Intelligence DWG

The 122nd OGC Member Meeting

Author, Affiliation
DD Month 2022

Meeting sponsor



The most important thing for this WG is...

Request from I. Burnell to establish a fixed session inside this DWG dealing with DGIWG standardization activity and coordination.

Session Agenda

- Motion imagery prototype L. Colaiacomo
- DGIWG OGC API session I. Burnell P. Lacey
- Discussion



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DGGS DWG

The 122nd OGC Member Meeting

Author, Affiliation
DD Month 2022

Meeting sponsor



Session Agenda

- 1. Introductions and Logistics (Robert Gibb - Chair) - 5 min
- 2. Presentation - "Intelligent Geospatial Maritime Risk Analytics Using The Discrete Global Grid System" (Andrew Rawson) - 20 min
- 3. Discussion - OGC DGGS API Conformance Class Simplification (Perry Peterson) - 45 min
- 4. Other Business (Robert Gibb - Chair) - 10 min

Activity Summary

- Discussion Topics

- Use of DGGS to evaluate risk in a marine environment
- OGS DGGS API: working with other APIs, where is the gaps, getting back to basics

- Upcoming deliverables

- none

- Coordination (ongoing and planned)

- Focus on API development

- Future meetings

- next Member Meeting March 17

Key activities

Use case for DGGS in data mining and marine risk assessment.

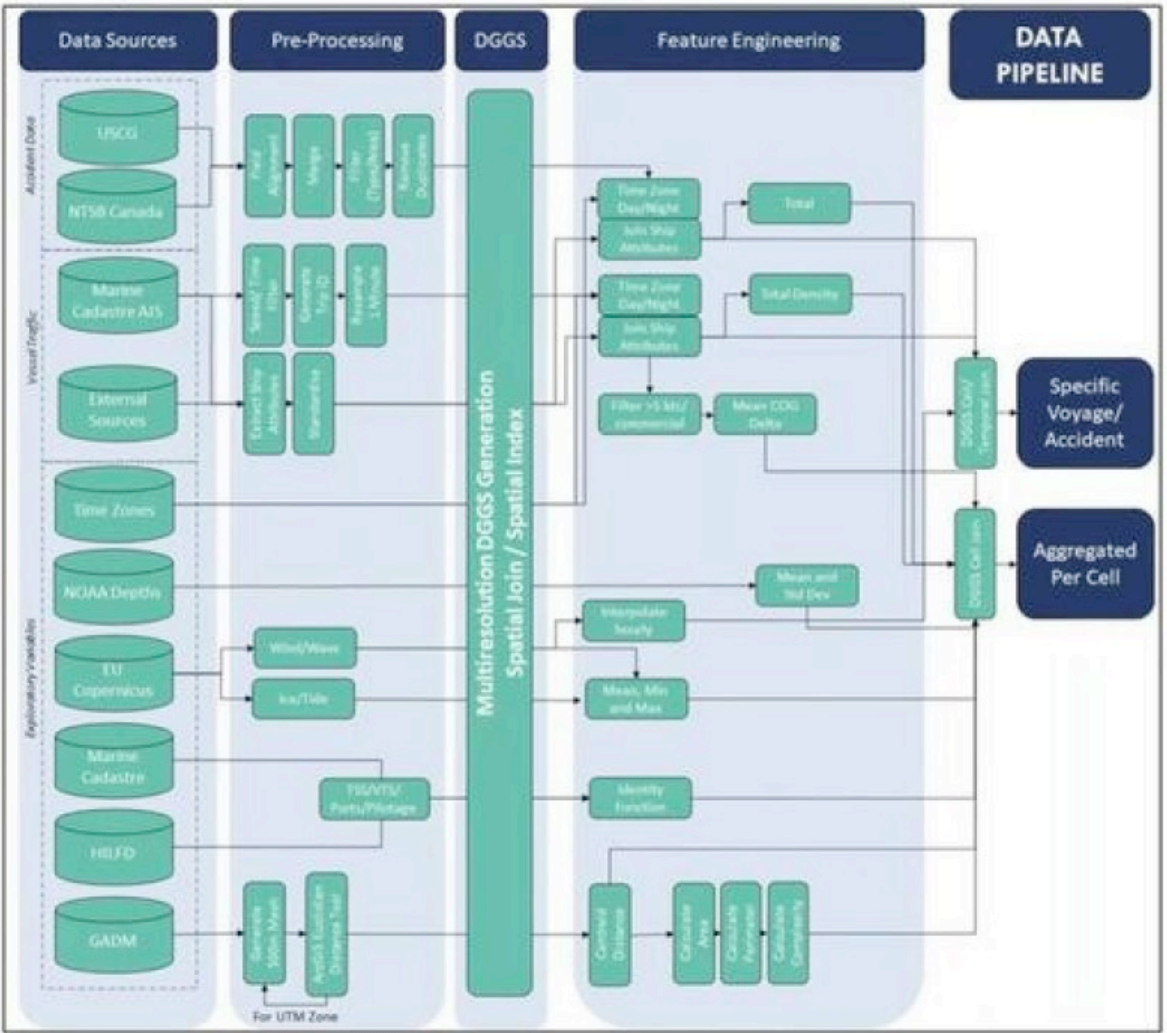
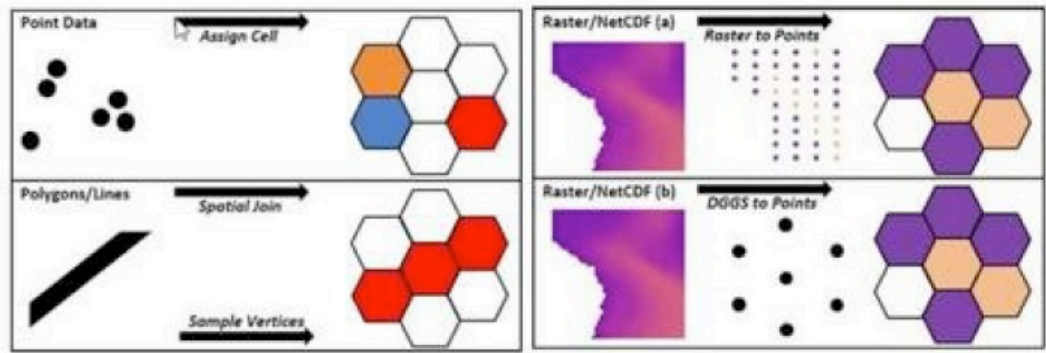
Maritime Risk Management

- **Strategic Risk:**
 - Allocation of Risk Controls (SAR/Towage).
 - Consenting of Offshore Developments (Oil&Gas/Wind Farms).
- **Tactical Risk:**
 - Identification of high-risk vessel transits.
 - Deployment of Search and Rescue.
- **Challenges:**
 - Reliant on qualitative judgement.
 - Expensive.
 - Massive areas and 1000s of vessels.
 - Complex/multifactorial causes of accidents.



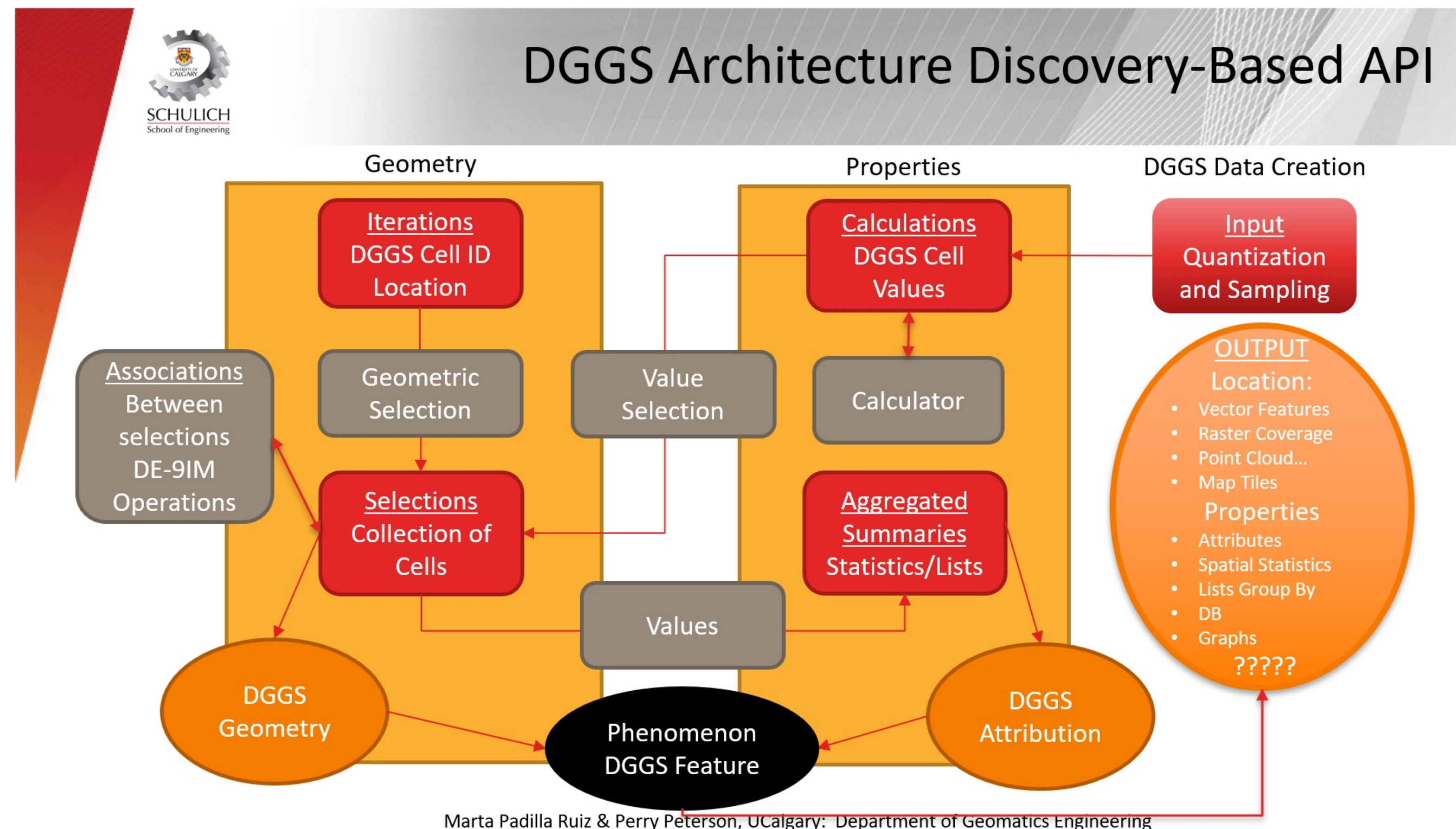
Development of Maritime Data Pipeline

- DGGS as central spatial data framework.
- Datasets needed to be processed, standardised, quality checked and integrated into a common data model.
- Handling of Vector (XY, Lines & Polygons), Raster (GeoTiff/NetCDF) and unstructured data.



Key activities

What are the Gaps in the current API stacks? A simple model showing Red as the internal “black box” DGGS capabilities and others support input/output-based enquiry via APIs



Next Quarter WG Communications Plan

- Noting use of DGGS in the Federated Marine Spatial Data Infrastructure Pilot Project as a Fusion Server



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OGC Energy & Utilities DWG

The 122nd OGC Member Meeting

Eddie Oldfield, QUEST
Jessica Webster, CanmetEnergy-Ottawa, NRCan
01 March 2022

Meeting sponsor



The most important thing for this WG is...

Energy SDI and Testbed 18

Collaboration toward proposed Built Environment Summit

Session Agenda

- Welcome/Introductions (15 minutes)
- Presentation by Natural Resources Canada (CanmetEnergy-Ottawa and GeoConnections), on topic of Energy SDI and Testbed 18 (30 minutes)
- Q&A / discussion (15 minutes)
- Discussion: Communicating the importance and benefits of Energy SDI to a non-technical audience (15 minutes)
- Presentation by Carsten Roensdorf, Ordnance Survey, on the topic of Digital Twins using OGC standards (15 minutes)

Activity Summary

- Discussion Topics

- Canadian context and background research
- Vision: Energy Spatial Data Infrastructure
- Testbed 18 – Building Energy component Call for Participation, March 17 deadline
- Digital Twins

- Upcoming deliverables

- Facilitate involvement in Testbed 18
- Potential blog topic: What is Energy SDI and how it can help to achieve net-zero emissions and address ‘energy poverty’ (+what is being done / still needed)
- Organize DWG session for next OGC Members meetings
- Track outcomes of Testbed 18 (2023)

- Coordination (ongoing and planned)

- Support for proposed OGC Built Environment Summit
- Correspondence with MUDDI SWG, and other DWGs, with overlapping interest in Digital Twins for the built environment

- Future meetings

- Presentations and discussion on Digital Twins – i.e. requirements from the energy & utilities domain, and cross domain collaboration on standards development
- Presentations on Testbed 18 (building energy and utility hosting capacity components)
- Proposed OGC Built Environment Summit

Next Quarter WG Communications Plan

- OGC Testbed 18 – Building Energy Spatial Data Interoperability
<https://www.ogc.org/projects/initiatives/testbed-18>
- Blog
- Prepare for next E&U DWG session
- Correspondence with other DWGs/SWGs, toward proposed summit

Resources identified during session

- OGC Testbed 18 and Call for Participation: <https://www.ogc.org/projects/initiatives/testbed-18>
- BEMA-CDS - <https://www.ogc.org/projects/initiatives/bdgenergycds>
- Canadian Energy End-use Mapping (CEE-Map) <https://www.nrcan.gc.ca/energy/offices-labs/canmet/ottawa-research-centre/the-built-environment/canadian-energy-end-use-mapping/23534>
- Comparative analysis of different methodologies and datasets for Energy Performance Labelling of buildings (JRC Technical Report) <https://publications.jrc.ec.europa.eu/repository/handle/JRC124885>
- Use case "Comparative analysis of different methodologies and datasets for Energy Performance Labelling of buildings" <https://joinup.ec.europa.eu/collection/elise-european-location-interoperability-solutions-e-government/use-case-comparative-analysis-different-methodologies-and-datasets-energy-performance-labelling>
- Key Decisions for Hosting Capacity Analysis (IREC) <https://irecusa.org/blog/press-release/new-paper-guides-regulators-utilities-on-key-hosting-capacity-analysis-decisions/>
- What is Hosting Capacity Analysis (IREC) <https://irecusa.org/our-work/hosting-capacity-analysis/#:~:text=Hosting%20Capacity%20Analyses%20are%20an,or%20electric%20vehicle%20charging%20stations.>



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Features and Geometries JSON SWG

The 122nd OGC Member Meeting

Meeting sponsor



Clemens Portele, interactive instruments
3 March 2022





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GeoPose SWG

The 122nd OGC Member Meeting

Christine Perey
3 March 2022

Meeting sponsor





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OGC Hydro DWG

The 122nd OGC Member Meeting

1 March 2022

Meeting sponsor



Agenda

- GWML2 Workshop
- Water Quality Workshop
- HY_Features minimal ontology
- US Progress on River Features and GWML2 Geopackage
- Open Discussion



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Interoperable Simulation & Gaming DWG Closing Plenary Report

The 122nd OGC
Member Meeting

David Graham, CAE Inc.
03 March 2022

Meeting sponsor



The most important thing for this WG is...

Keeping up with the pace of rapid change, particularly the rapid interest in 'the Metaverse' for which the ISG Community has been developing at least partial solutions for a very long time

ISG DWG Agenda

- Introduction, **Log Attendance Please!**
Co-Chairs: David Graham (CAE), Lance Marrou (Leidos), David Ronnfeldt (DOD Australia)
- XR and the Metaverse, EPIC Games, Sébastien Lozé
- How to Build (parts of) the Metaverse, Microsoft, Chris Covert
- SISO Simulation & Wargaming Study Group, Charles Turnitsa
- USAF SCARS Initiative Overview, Lance Marrou, Leidos



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JAG with TC211

The 122nd OGC Member Meeting

OGC co-chairs:
Robert Gibb, Manaaki Whenua – Landcare Research
Matt Purss, Pangaia Innovation
24 February 2022

Meeting sponsor





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Met Ocean DWG Plenary Report

The 122nd OGC Member Meeting

Chris Little, Met Office
Steve Olson, National Weather Service
01 Mar 2022

Meeting sponsor



Most important thing for the Met Ocean DWG is...

Many implementations of OGC API-EDR V1.0.1 & 1.1 using standardised
CoverageJSON

Met Ocean DWG Agenda

- Welcome, Introductions and Technology Struggles (5 min)
- Project Updates (15 min)
 - CoverageJSON
 - TimeseriesML, Temporal DWG
 - API-Records Met Ocean / WMO Profile
 - API-EDR
- API-EDR Demos (30 min)
 - API-EDR Implementation, Mark Burgoyne (Met Office)
 - API Building Blocks Demo, Steve Olson, Shane Mill (NWS)
 - ESRI Demo, Pete Trevelyan (Met Office)
- Outreach (5 min)
 - EU Project ILIAD <https://www.ocean-twin.eu/> Digital Twin of the Ocean, using API-EDR
 - MEDIN funded 2 projects at 3 marine data centres to trial OGC API-EDR over next 6 months
- Future Plans (30 min)
 - API-EDR 1.0.1, 1.1, 1.2
 - CoverageJSON
 - Others and Discussion
- AOB (5 min)
- Date and Time of Next Meetings

Met Ocean DWG Activity Summary

- Discussion Topics

- Marine community use of API-EDR
- Combined API-EDR and API-Processes demo
- API-EDR façade on ESRI Image Server
- Beta CITE test of API-EDR

- Upcoming deliverables

- OGC API-EDR V1.0.1 Corrigendum (this week)
- OGC API-EDR V1.1 (Jun-Sep 2022)
- CoverageJSON Community Standard (soon?)
- Practical experience and workshop on API-EDR (Dec 2022)

- Coordination (ongoing and planned)

- EDR API SWG
- Coverages SWG
- Temporal DWG & ISO TC211/TC154 AHG9
- WMO and OGC NA for rotated pole method definitions
- WMO for Met Ocean metadata profile of API-Records

- Future meetings

- Regular GTM sessions
- June TC

Next Quarter Met Ocean DWG Comms Plan

- MEDIN workshop, 2022-12, on outcome of 2 implementation projects for API-EDR access to 3 marine archives (but need to check with stakeholders)



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Moving Features SWG Closing Plenary Report

The 122nd OGC Member Meeting

Meeting sponsor



Nobu & Kyoung-Sook & Mahmoud
3 March 2022





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MUDDI SWG

The 122nd OGC Member Meeting

Carsten Rönsdorf, OS
3 March 2022

Meeting sponsor





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O&M SWG

The 122nd OGC Member Meeting

Ilkka Rinne / Spatineo
3rd March 2022

Meeting
sponsor



OGC API Records SWG Closing Plenary Report The 122nd OGC Member Meeting

Tom Kralidis, Environment and Climate Change Canada
Angelos Tzotsos, OSGeo
Panagiotis (Peter) A. Vretanos, CubeWerx Inc.
02-MAR-2022

Meeting sponsor





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Planetary DWG

The 122nd OGC Member Meeting

Jean-Christophe Malapert, CNES
Trent Hare, USGS
28 February 2022

Meeting sponsor



IAU Projection codes for Planetary

With PROJ \geq 8.2.0 and GDAL \geq 3.3+:

- `gdalsrsinfo IAU_2015:49910`

or

- `gdalsrsinfo urn:ogc:def:crs:IAU::49910`
- `gdalsrsinfo urn:ogc:def:crs:IAU:2015:49910` (since 3.4.2)
 - note versioning allowed IAU:2015:code

Codes also available in QGIS and soon Mapserver

for more see: <https://www.hou.usra.edu/meetings/planetdata2021/pdf/7012.pdf>

Session Agenda

- Approved two co-chairs
- IAU Planetary Codes in PROJ (GDAL, QGIS, Mapserver)
- Supporting irregular body CRSs (comets and asteroids)
- Web registry hosting locations (IAU codes web app completed)

Activity Summary

- Discussion Topics

- Chairs elected
- IAU projection codes
- Web registry app hosting for IAU codes
- Irregular Body CRSs
- OGC and Astronomy Standards
- Planetary data is heavily reliant on camera models and SPICE (spacecraft pointing).

- Upcoming deliverables

- Hosting IAU projection code web registry
- Coordination reports

- Coordination (planned)

- Irregular bodies
 - GeoPose
 - Other 3D shape definition WGs.
- OGC Staff
 - IAU projection code web app proxy or hosting
- Community Sensor Model (CSM) Working Group
 - Reinitiate as OGC standard?

- Future meetings

- Next TC
 - presentation on OGC<->Astronomy API proxy (by Jean-Christophe Malapert)
 - Use of STAC in planetary data repositories

Planetary DWG chair election

- The Planetary DWG approves the following individuals as Chairs of this Working Group.
 - Jean-Christophe Malapert (CNES)
 - Trent Hare (USGS)
- There was no objection to unanimous consent



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Point Cloud DWG Report to TC

The 122nd OGC Member Meeting

Stan Tillman, Hexagon
03 March 2022

Meeting sponsor



The most important thing for this WG is...

An update of the 3D Tiles Community Standard
will be coming into OGC soon

Session Agenda

- 3D Tiles Next
 - Patrick Cozzi / Sean Lilley, Cesium
- Moving Beyond Points: Utilizing a Voxel Database Structure to Increase the Value of Point Clouds
 - Peter Atalla, Voxelmarts
- AOB

Activity Summary

- Discussion Topics

- 3D Tiles Next
- Moving Beyond Points: Utilizing a Voxel Database Structure to Increase the Value of Point Clouds

- Upcoming deliverables

- An update to the 3D Tiles Community Standard

- Coordination (ongoing and planned)

- None

- Future meetings

- Next member meeting in June

Next Quarter WG Communications Plan

- < Are there any upcoming events (e.g., conference papers) related to your WG that you would like OGC to promote? > The update to the 3D Tiles Community Standard
- <Is there a new project or outcome that you think is worthy of an article or blog post? Please add a short description.> None
- <Have there been any articles published online/in magazines that reference the work your WG is doing?> None



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POI SWG

The 122nd OGC Member Meeting

Christine Perey
3 March 2022

Meeting sponsor





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Portrayal Domain Working Group

The 122nd OGC Member Meeting

Keith Ryden, Esri
03 March 2022

Meeting sponsor



The most important thing for this WG is...

Understand and communicate how to improve the interoperability between systems and people to improve spatial data information flow.

Session Agenda

- Introduction to Digital Accessibility - Karl Franz, Jessica McCall
- Making 2D/3D Cartographic Knowledge Accessible to Software Developers - Amy Griffin, Kuba Kubicek, Zdenek Stachon
- Model Extensions for Portrayal, A Discussion Piece - Dalia Varanka

Activity Summary

- Discussion Topics
 - Introduction to Digital Accessibility
 - Making 2D/3D Cartographic Knowledge Accessible to Software Developers
 - Model Extensions for Portrayal, A Discussion Piece

- Upcoming deliverables

- Coordination (ongoing and planned)
- Continue to coordinate with ICA on Portrayal topics.

- Future meetings
 - Put out call for future presentation
 - Look to future in-person meetings for hands-on use of systems for accessibility and information portrayal



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Security DWG Report to the TC

The 122nd OGC Member Meeting

Andreas Matheus, Secure Dimensions
01 March 2022

Meeting sponsor



The most important thing for this WG is...

... not not be superstitious

Session Agenda

- Secure GeoPackage Demonstration (result from DP '21)
 - Andreas Matheus (Secure Dimensions)
 - Josh Lieberman (OGC)
- GeoXACML update
- Discussion



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Smart Cities DWG

The 122nd OGC Member Meeting

Carsten Rönsdorf, OS
3 March 2022

Meeting sponsor



The most important thing for this WG is...

Renewed interest in topics related to Smart Cities and Digital Twins amongst OGC membership.

Agreement to re-charter the Smart Cities DWG and to participate in Built Environment/Digital Twin summit.

Session Agenda

- Summary of Urban Digital Twin Location Powers, Josh Lieberman
- Brainstorming of focus areas, all
- Built environment summit (in conjunction with MUDDI SWG as well as E&U DWG), Josh and Carsten
- Group leadership and re-charter, all

Activity Summary

- Discussion Topics

- Digital Twins as a topic in OGC
- Integration Mechanism for static and dynamic data
- Established that the group previously lost purpose and we now feel there is enough interest amongst members to re-ingest purpose into the group (kicked-off by re-charter)

- Upcoming deliverables

- New charter
- Summit

- Coordination (ongoing and planned)

- BuildingSMART international (Digital Twin Working group)

- Future meetings

- June Meeting
- Subgroup to work on new charter
- Support organising committee for summit



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Sensor Web Enablement DWG

The 122nd OGC Member Meeting

Chair
Mike Botts - Botts Innovative Research

24 February 2022

Meeting sponsor



The most important thing for this WG is...

- 1) Revival and repurposing of the SWE-DWG and the SensorML-SWG
- 2) Modernization of the SWE Standards

Agenda

- 10:30-10:35 Mike Botts Welcome
- 10:35-11:00 Alex Robin SWE API
- 11:00-11:20 Lucio Colaiacono Motion Imagery Integration
- 11:20-11:30 Alex Robin UxS Interoperability Experiment
- 11:30-12:00 Mike Botts Discussions on Rechartering SWE DWG and SensorML SWG

Activity Summary

- Discussion Topics

- General limited introduction of the more advanced needs for the new DWG in support of “sensors, things, robots, and processing”
- Initial presentation of the models and application of the SensorWeb API

- Upcoming deliverables

- New charter for SWE DWG to refocus the DWG on more advanced sensor application, robotics, and automation
- New charter for SensorML SWG to support development of the all-inclusive SensorWeb API as well as maintain and update individual SWE 2.0 standards as needed

- Coordination

- Will distribute the new charters through the SWE mail lists and then through the full TC for approval
- Will contact OGC groups that utilize the existing SWE Common Data and SensorML standards to determine their needs and to invite them to liaise with the SensorWeb SWG.

- Future meetings

- Next OGC TC meeting



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Temporal DWG

The 122nd OGC Member Meeting

Chris Little, Met Office
Chuck Heazel, HeazelTech
Ron Tse, Ribose

24 Feb 2022

Meeting sponsor



The 2 most important things for Temporal DWG is...

Discussion paper on Dynamic Features

Formal Liaison with ISO TC154 and CalConnect

Temporal DWG Session Agenda

- Welcome, Intro, Technology struggles
- A little bit of History, Chris Little
- Dynamic Features, Chuck Heazel
- Way forward discussion:
 - W3C Ontology
 - ISO Code Lists
 - OGC Draft Best Practice
 - OGC Conceptual Model
- Any Other Business
- Date of next meeting

Temporal DWG Activity Summary

- Discussion Topics

- Transformations between TRSs, including calibration level (e.g. MISB, NTP)
- Temporal Properties as well as Geometries
- Relativistic time now within scope

- Coordination (ongoing and planned)

- ISO TC154
- CalConnect

- Upcoming deliverables

(do not hold your breath!)

- Use Cases on Github
- Review of practices
- Dynamic Features Discussion Paper
- Draft Abstract Model
- (ISO 8601-2 revision)
- (ISO/PWI 34100(E) Physical time scales)
- (ISO/PWI 34300(E) Codes for calendar systems)

- Future meetings

- web meetings as effort allows
- Next TC Member Meeting
- ISO TC154 task team

Next Quarter Temporal DWG Comms Plan

- ISO publication of technical notes on calendar and timescale registers
- Liaison with ISO TC154 as well as TC211



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TimeseriesML SWG Closing Plenary

The 122nd OGC Member Meeting

Paul Hershberg, NOAA
03 March 2022

Meeting sponsor





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TrainingDML-AI SWG

The 122nd OGC Member Meeting

Peng Yue, Chair
3rd March 2022





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Plenary Report - UxS DWG

The 122nd OGC Member Meeting

Don Sullivan, NASA
03 March 2022

Meeting sponsor



Session Agenda

- Special Session
- Presentation of the results so far in the UxS Command and Control Interoperability Experiment
- Interoperability Demonstration
- Attendee input
- Discussion on the way forward
 - New SWG ?
 - Work under existing SWG ? (SWE ?)
 - Greater Participation

Key activities

- Coordination with other DWGs, SWG(s)
- Discussion continued in the SWE DWG Meeting