ATIEC 2021

Developing Standards at the pace of Innovation

Presentation by:

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Open Geospatial Consortium (OGC)

- Mission
- 500+ Members
- Approach
  - Advancing & Applying S&T
  - Driving & Enabling Integration
  - Collective Problem Solving
- Products
  - Open Standards
  - Best Practices
  - Proof of Concepts
ATIEC 2021
• Evaluate OGC API using GeoJSON applicability for SWIM services
• Explore integration of multi-sourced backends
• Prototype fusion services (different data sources and areas)
• Exploration and lessons learned for data sources and applications (fusion services)

https://www.ogc.org/blog/4533
OGC Features and Geometries JSON - Aviation and UTM use cases

- Builds on GeoJSON with minimal extensions to support additional concepts that are important for the wider geospatial community and the OGC API standards.
  - Coordinate Reference Systems (CRSs) other than WGS84,
  - non-Euclidean metrics, in particular ellipsoidal metrics,
  - more geometry types (e.g. solids) and
  - Representing feature properties in JSON consistent with the General Feature Model, e.g., including temporal properties.

https://www.ogc.org/pressroom/pressreleases/4376
• Purpose:
  • Develop and maintain OGC API(s) core standard and extensions
  • Develop and maintain exchange models (GeoJSON/others) for aviation data

• Business value:
  • APIs as building blocks for aviation, cost-effective way to set up new services and build tailored products
  • Aviation APIs can help developers organize exchange standards used in the Aviation industry per application domain
  • Data integration across data providers: ANSPs (e.g., FAA SWIM/Eurocontrol NM B2B), UTM USS, airspace users, airports

• Estimated kick-off: Early 2022
5.5. Use Cases

The Sprint was introduced by a quick review of the EDR API use cases at [https://github.com/opengeospatial/Environmental-Data-Retrieval-API/trac](https://github.com/opengeospatial/Environmental-Data-Retrieval-API/trac)

- Get Parameters for a Point across a Time series;
- Obtain or view a forecast time series of a parameter at a point;
- Get Unstructured Observations from within a Polygon;
- Show Weather Radar data time series; and
- Obtain or view Air Traffic Hazards and Restrictions for an Area.

[https://www.ogc.org/blog/3211](https://www.ogc.org/blog/3211)

- Imagery classification and segmentation
- Feature extraction, Analysis and Responses
  - Extracting Moving Features from Full Motion Video
  - Interpretation of the environment (data from autonomous driving)
  - Transformation of environmental data into car commands (steering, speed, etc.)
- Impacts in many domains: Disasters, Insurance, Energy & Utilities
- Increasingly more GeoAI in simulation and prediction
- AI as a service

[https://www.ogc.org/projects/groups/geoaidwg](https://www.ogc.org/projects/groups/geoaidwg)
Thank You!

Community
540+ International Members
115+ Member Meetings
60+ Alliance and Liaison partners
50+ Standards Working Groups
45+ Domain Working Groups
25+ Years of Not for Profit Work
10+ Regional and Country Forums

Innovation
120+ Innovation Initiatives
380+ Technical reports

Standards
65+ Adopted Standards
300+ products with 1000+ certified implementations
1,700,000+ Operational data sets using OGC Standards

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