

Open Geospatial Consortium

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OGC GeoParquet Standards Working Group Charter

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To: OGC members & interested parties

A new OGC Standards Working Group (SWG) is being formed. The OGC members listed below have proposed the OGC GeoParquet SWG. The SWG proposal provided in this document meets the requirements of the OGC Technical Committee (TC) Policies and Procedures.

The SWG name, statement of purpose, scope, list of deliverables, audience, and language specified in the proposal will constitute the SWG's official charter. Technical discussions may occur no sooner than the SWG's first meeting.

This SWG will operate under the OGC IPR Policy. The eligibility requirements for becoming a participant in the SWG at the first meeting (see details below) are that:

- You must be an employee of an OGC member organization or an individual member of OGC;
- The OGC member must have signed the OGC Membership agreement;
- You must notify the SWG chair of your intent to participate to the first meeting. Members may do so by logging onto the OGC Portal and navigating to the Observer page and clicking on the link for the SWG they wish to join and;
- You must attend meetings of the SWG. The first meeting of this SWG is at the time and date fixed below. Attendance may be by teleconference.

Of course, participants also may join the SWG at any time. The OGC and the SWG welcomes all interested parties.

Non-OGC members who wish to participate may contact us about joining the OGC. In addition, the public may access some of the resources maintained for each SWG: the SWG public description, the SWG Charter, Change Requests, and public comments, which will be linked from the SWG's page.

Please feel free to forward this announcement to any other appropriate lists. The OGC is an open standards organization; we encourage your feedback.

1. Purpose of the Standards Working Group

The OGC GeoParquet SWG will work to advance the GeoParquet encoding format for cloud-native vector data to an OGC Encoding Standard. GeoParquet builds upon Apache Parquet, described by Apache as "an open source, column-oriented data file format designed for efficient data storage and retrieval. It provides efficient data compression and encoding schemes with enhanced performance to handle complex data in bulk."

2. Business value proposition

OGC is advancing a number of Standards to enable cloud-native geospatial ecosystems. GeoParquet fits in the group of data encoding Standards that are highly performant for large, cloud-based data stores, such as Cloud Optimized GeoTIFF for tiled rasters and Zarr for datacubes. GeoParquet will enable vector datasets to be as readily accessible from the cloud as the other formats already well-used in the community.

3. Scope of work

The GeoParquet SWG will take the initial efforts incubated in OGC's [GeoParquet GitHub repository](https://github.com/opengeospatial/geoparquet) (<https://github.com/opengeospatial/geoparquet>) as a draft specification from which a candidate Standard will be developed. As with many other recent OGC Standards, the repository will remain open to contributions from outside OGC and documentation will evolve in concert with prototype implementations.

The GeoParquet candidate Standard will handle all Simple Feature geometries. It is expected that GeoParquet will be tested as an encoding to be accessed by the OGC APIs.

The proposed SWG expects to have a candidate Standard ready for review and approval within one year of creation of the SWG.

3.1. Statement of relationship of planned work to the current OGC Standards baseline

GeoParquet will be another encoding of the OGC Simple Features Standard. While other OGC Standards also encode Simple Features, GeoParquet is intended to be optimized for native use in cloud environments.

3.2. What is out of scope?

GeoParquet will not create new requirements that must be included in the Apache Parquet specification.

3.3. Specific existing work used as starting point

- Apache Parquet: <https://parquet.apache.org/>
- GeoParquet draft specification: <https://github.com/opengeospatial/geoparquet>

3.4. Is this a persistent SWG

YES

NO

3.5. When can the SWG be inactivated

The SWG can be inactivated once the GeoParquet Standard is delivered, the related Compliance Test Suite is completed, and evidence of implementation that satisfies OGC's Full Standard track is provided. The SWG may reactivate to improve, extend, or fix the Standard.

4. Description of deliverables

The GeoParquet SWG will deliver a candidate Standard and associated developer resources.

The SWG expects to have a candidate Standard ready for OGC Architecture Board (OAB) review and public comment within nine months of creation of the SWG. Because example implementations will be developed at the same time the candidate Standard is formalized, reference implementations that fully use GeoParquet should be documented at the same time the candidate Standard goes to vote.

4.1. Initial deliverables

- OGC GeoParquet Standard
- GeoParquet developer resources

4.2. Additional SWG tasks

None at this time.

5. IPR Policy for this SWG

RAND-Royalty Free

RAND for fee

6. Anticipated audience / participants

The anticipated audience for this SWG includes developers and data managers working with large holdings of vector data and using the cloud for data management and dissemination. Commercial and non-profit entities creating road networks, national mapping agencies, and infrastructure management organizations are all likely to be interested in this work.

7. Domain Working Group endorsement

The SWG convenors will discuss the charter with potentially interested Domain Working Groups (DWGs) at the first opportunity.

8. Other informative information about the work of this SWG

8.1. Collaboration

The SWG will primarily work in GitHub.

8.2. Similar or applicable standards work (OGC and elsewhere)

Existing OGC Standards such as GML, KML, and GeoPackage all encode the same type of content. These Standards may also have potential for some degree of enhancement for use in the cloud.

[FlatGeobuf](https://github.com/flatgeobuf/flatgeobuf) (<https://github.com/flatgeobuf/flatgeobuf>) is in development and includes many of the same features and goals, but operates on a different core encoding.

8.3. Details of first meeting

The SWG will first meet within one month of approval of this charter.

8.4. Projected on-going meeting schedule

Web meetings are expected to occur every two weeks, although much of the development and issue deliberation will occur in the GitHub issues.

8.5. Supporters of this Charter

The following people support this proposal and are committed to the Charter and projected meeting schedule. These members are known as SWG Founding or Charter members. The charter members agree to the SoW and IPR terms as defined in this charter. The charter members have voting rights beginning the day the SWG is officially formed. Charter Members are shown on the public SWG page. Extend the table as necessary.

Name	Organization
Mark Korver	AWS
Tom Augspurger	Microsoft
Chris Holmes	Planet
Ib Green	Foursquare
Javier de la Torre	CARTO
Matthias Mohr	University of Muenster - Institute for Geoinformatics

8.6. Conveners

Javier de la Torre, Carto

9. References

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