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GeoJSON Text Sequences
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Abstract

A proposed standard for geographic data that can be parsed and produced incrementally.

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[1.](#) Introduction

Large or never-ending sequences of values pose a problem for JSON that is well explained in the motivation for JSON Text Sequences [[RFC7464](#)]. GeoJSON [[RFC7946](#)] faces the same kind of problem: geographic datasets often run to the tens of thousands or millions of features. The problem is often amplified by the presence of large arrays of coordinates for each of the features.

This document describes a specialization of JSON Text Sequences. A GeoJSON Text Sequence is a document of possibly infinite size containing one or more GeoJSON objects, e.g., multiple GeoJSON texts that can be parsed and produced incrementally, and not only a single GeoJSON FeatureCollection, Feature, or Geometry.

The advantage of using ASCII character RS "0x1e" to denote a text is that sequence producers and parsers need not enforce a canonical form of GeoJSON. Any valid GeoJSON, pretty-printed or compact, can be used in a GeoJSON text sequence. Additionally, GeoJSON text sequences inherit from the other [[RFC7464](#)] rules for consistent processing of sequences with potentially corrupted texts.

[1.1.](#) Requirements Language

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [[RFC2119](#)].

[2.](#) GeoJSON Text Sequence Format

Defined in prose, following [[RFC7464](#)]: a GeoJSON text sequence is any number of GeoJSON [[RFC7946](#)] texts, each encoded in UTF-8 [[RFC3629](#)], each preceded by one ASCII RS character, and each followed by a line feed (LF).

The GeoJSON Text Sequence Format conforms to all the rules of [\[RFC7464\]](#) and adds the following constraint: each JSON text MUST contain a single GeoJSON object as defined in [\[RFC7946\]](#).

Heterogeneous sequences containing a mix of GeoJSON Geometry, Feature, and FeatureCollection objects are permitted. How producers and parsers of GeoJSON text sequences communicate rules for allowed GeoJSON types in exchanged sequences is not specified in this document.

[3.](#) Security Considerations

GeoJSON text sequences have no security considerations beyond those of JSON text sequences and the GeoJSON format.

[4.](#) Interoperability Considerations

A variety of parsers designed for newline-delimited sequences of compact JSON text are deployed on the internet today. While there is no canonical form for JSON texts, and pretty-printed and compact forms are equally valid, GeoJSON text sequences containing compact GeoJSON texts with no internal newlines are more interoperable with existing non-standardized parsers.

In a distributed system where order and exactly-once delivery of messages are difficult to achieve, GeoJSON text sequences that do not rely on order of texts for extra semantics are more interoperable than those that do.

[5.](#) IANA Considerations

The MIME media type for GeoJSON feature sequences is application/geo+json-seq.

Type name: application

Subtype name: geo+json-seq

Required parameters: n/a

Optional parameters: n/a

Encoding considerations: binary

Security considerations: See [Section 3](#) above

Interoperability considerations: See [Section 4](#) above

Published specification: [[This document]]

Applications that use this media type: No known applications currently use this media type. This media type is intended for GeoJSON applications currently using colloquial line-delimited variants of GeoJSON.

Additional information:

Magic number(s): n/a

File extension(s): n/a

Macintosh file type code: n/a

Object Identifiers: n/a

Person to contact for further information: Sean Gillies
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Intended usage: COMMON

Restrictions on usage: none

6. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC3629] Yergeau, F., "UTF-8, a transformation format of ISO 10646", STD 63, [RFC 3629](#), DOI 10.17487/RFC3629, November 2003, <<http://www.rfc-editor.org/info/rfc3629>>.
- [RFC7159] Bray, T., "The JavaScript Object Notation (JSON) Data Interchange Format", [RFC 7159](#), March 2014.
- [RFC7464] Williams, N., "JavaScript Object Notation (JSON) Text Sequences", [RFC 7464](#), DOI 10.17487/RFC7464, February 2015, <<http://www.rfc-editor.org/info/rfc7464>>.
- [RFC7946] Butler, H., Daly, M., Doyle, A., Gillies, S., Hagen, S., and T. Schaub, "The GeoJSON Format", [RFC 7946](#), DOI 10.17487/RFC7946, August 2016, <<http://www.rfc-editor.org/info/rfc7946>>.

Appendix A. Contributors

TODO.

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