

### Useful links

RFC [EN]      Wikipedia [EN]

### Overview

Use	geospatial data interchange
Based on	JSON
Coordinate system	World Geoedtic System (WGS 1984, EPSG:4326)
MIME	<i>application/geo+json</i>
File format type	GIS
Extensions	<i>.json, .geojson</i>
Coordinate format	Decimal degree (e.g. 104.0)

### Position & Coordinates

What is the position?

The smallest unit that we can really consider 'a place' since it can represent a point on earth

What is a coordinate?

A single number representing a single dimension.

How does a position look like?

An array of 2 or 3 coordinates (decimal float numbers)

The first is..?

*Easting* for projected coordinates, *Longitude* for geographic coordinates

.. and the second?

*Northing* for projected coordinates, *Latitude* for geographic coordinates

.. while the third (optional) is ..?

Altitude or Elevation

### External members

bbox

### Geometries

Name	Category	Children	Example
Point	single (primitive)	"coordinates": single position	<pre>{   "type": "Point",   "coordinates":   [100.0, 0.0] }</pre>

### Geometries (cont)

LineString	single (primitive)	"coordinates": array of positions	<pre>{   "type": "LineString",   "coordinates": [     [100.0, 0.0],     [101.0, 1.0]   ] }</pre>
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Polygon	single (primitive)	"coordinates": array of at least 4 closed <i>LineStrings</i> where the first element is the exterior ring, the other interior rings (or holes)	<pre>{   "type": "Polygon",   "coordinates": [     [[35, 10],     [45, 45], [15,     40], [10, 20],     [35, 10]],     [[20, 30],     [35, 35], [30,     20], [20, 30]] ] }</pre>
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MultiPoint	multipart	"coordinates": array of 2 or more positions	<pre>{   "type": "MultiPoint",   "coordinates": [     [10, 40], [-10,     30], [120, -2] ] }</pre>
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MultiLineString	multipart	"coordinates": array of LineString "coordinates" arrays	<pre>{   "type": "MultiLineString",   "coordinates": [     [ [100.0, 0.0],     [101.0, 1.0] ], [     [102.0, 2.0],     [103.0, 3.0] ] ] }</pre>
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### Geometries (cont)

```
MultiPolygon multipart "coordinates": array of Polygon "coordinates" arrays {
  "type": "MultiPolygon",
  "coordinates": [ [ [
    [102.0, 2.0], [103.0, 2.0],
    [103.0, 3.0], [102.0, 3.0],
    [102.0, 2.0] ] ], [ [
    [100.0, 0.0], [101.0, 0.0],
    [101.0, 1.0], [100.0, 1.0],
    [100.0, 0.0] ], [ [100.2,
    0.2], [100.2, 0.8], [100.8,
    0.8], [100.8, 0.2], [100.2,
    0.2] ] ] ] }
```

### Geometries (cont)

```
GeometryCollection "geometries": array of single or multipart geometries { "type": "GeometryCollection", "geometries": [ { "type": "Point", "coordinates": [100.0, 0.0] }, { "type": "LineString", "coordinates": [ [101.0, 0.0], [102.0, 1.0] ] } ] }
```

### GeoJSON Objects

Name	Properties	Example
Feature	"geometry": geometry or null, "properties": generic JSON or null	{ "type": "Feature", "geometry": { "type": "Point", "coordinates": [125.6, 10.1] }, "properties": { "name": "Dinagat Islands" } }



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### GeoJSON Objects (cont)

```
FeatureCollection: array of single or multipart geometries
{
  "type": "FeatureCollection",
  "features": [
    {
      "type": "Feature",
      "geometry": {
        "type": "Point",
        "coordinates": [102.0, 0.5]
      },
      "properties": {
        "prop0": "value0"
      }
    },
    {
      "type": "Feature",
      "geometry": {
        "type": "LineString",
        "coordinates": [
          [102.0, 0.0],
          [103.0, 1.0],
          [104.0, 0.0],
          [105.0, 1.0]
        ]
      },
      "properties": {
        "prop0": "value0",
        "prop1": 0.0
      }
    },
    {
      "type": "Feature",
      "geometry": {
        "type": "Polygon",
        "coordinates": [
          [
            [100.0, 0.0],
            [101.0, 0.0],
            [101.0, 1.0],
            [100.0, 1.0],
            [100.0, 0.0]
          ]
        ]
      },
      "properties": {
        "prop0": "value0",
        "prop1": {
          "this": "that"
        }
      }
    }
  ]
}
```

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