GeoJSON Specifications

A small document about GeoJson and Isiviewer.js

Manikanta - February 3, 2015

Introduction

GeoJSON is a format for encoding a variety of geographic data structure.

```
{
        “type” :  “Feature”,
        “geometry” : {
                “type” : “Point” ,
                “coordinates” : [125.6, 10.1] ,
        },
        “properties” : {
                “name” : “Manikanta’s dorm room”
        }
}
```

Present Scenario:

GeoJSON supports the following geometry types: *Point*, *LineString*, *Polygon*, *MultiPoint*, *MultiLineString*, and *MultiPolygon*. Lists of geometries are represented by Geometry Collection. Geometries with additional properties are Feature objects. And lists of features are represented by a FeatureCollection. FeatureCollection represents a list of features.

Lets see a few examples of how these features are encoded into a json object.

- Point:
  ```
  { “type”: “Point”, “coordinates”: [100.0, 19.0] }
  ```

- LineString:
  ```
  { “type”:”LineString”, “coordinates”:[[101.1, 99.2], [102.4, 99.5]]
  ```

- Polygon:

```
{“type”:”polygon” , “coordinates”: [
        [[102.4, 18.6], [103.4, 110.2], [111.3, 32.6]],
        [[34.5, 62.7], [65.9, 43.7], [23.7, 21.9]]
]}
```

- MultiPoint:

```
{“type”: “MultiPoint”, “coordinates”: [[11.4, 34.2], [10.5, 34.8], [32.4, 43.8], [11.4, 53.8]]}
```

- MultiLineString:

```
{“type”: “MultiLineString”, “coordinates”: [
        [[102.4, 18.6], [103.4, 110.2], [111.3, 32.6]],
        [[34.5, 62.7], [65.9, 43.7], [23.7, 21.9]]
]}
```

- MultiPolygon:

```
{ “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], [100.8, 0.2], [100.8, 0.8], [100.2, 0.8], [100.2, 0.2]]]]
]}
```

How to draw GeoJSON on Canvas?

I’ll help you in understanding the process and things we must do to draw the map on canvas.

- Bounding Box(xMin, xMax, yMin, yMax)
- Scale (xScale, yScale)
- Coordinates
- Draw Function(moveTo, lineTo, drawRect for Points)