OL3-CESIUM

3D for OpenLayers

https://github.com/openlayers/ol3-cesium

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Adding 3D to an OL3 map

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var ol3d = new olcs.OLCesium({map: map, target: id});
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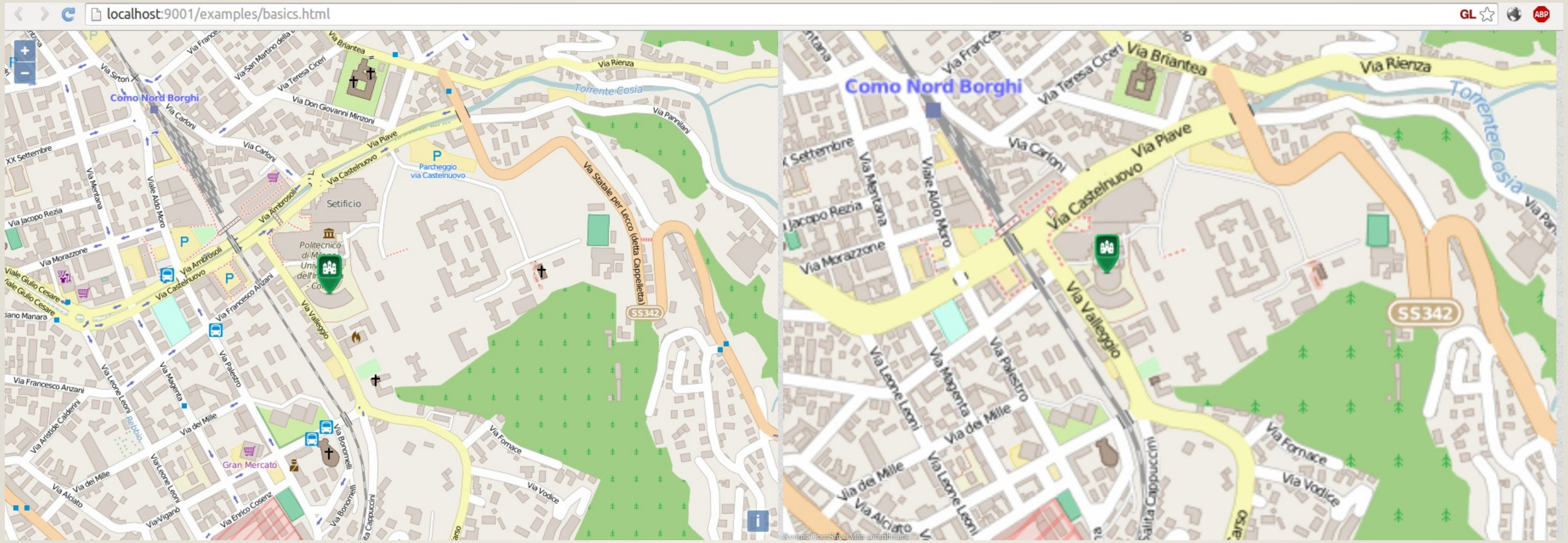
- A Cesium globe is created
- Existing layers and view are synchronized
- Some listeners are registered

One point demo



- Try it

Real life example

SuisseMobile 3d

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Real life example

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- Swiss projection

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Heterogeneous projections

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- Rasters handled by application

Vector clustering

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Vector clustering

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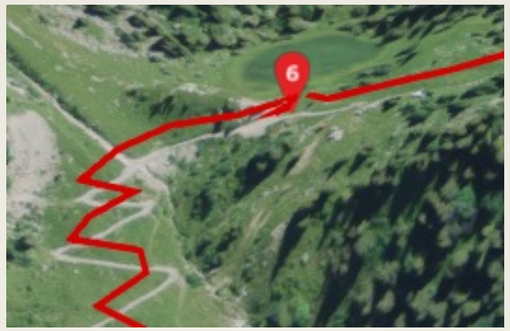
- Pregenerated using a custom OpenLayers3 tool
- Picking: id, children and resolution per feature
- Data only sent once to the GPU, decimation in the shader

3D geometries



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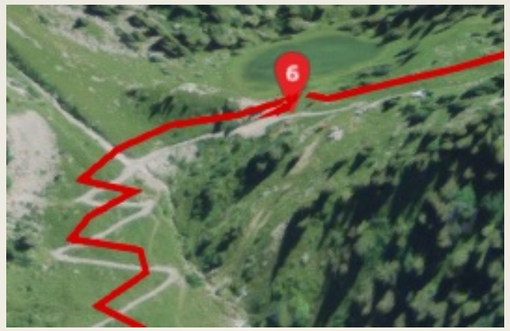
3D geometries



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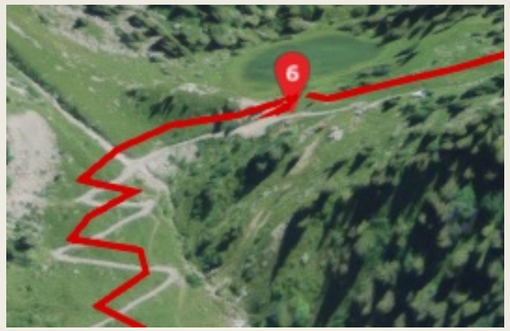
3D geometries



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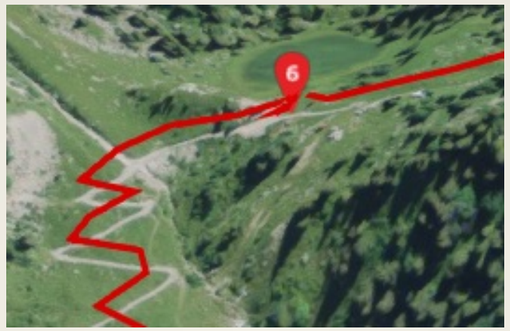

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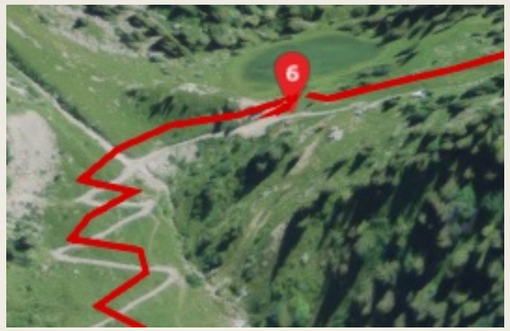

- Absolute positioning (x, y, z) for all geometries
- ...but incompatible with terrain LOD
- Dynamic positioning (altitudeMode = clampToTerrain)
- ...only points supported, polygon and lines are WIP

Streaming buildings and vectors

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- 2.5D extruded polygons of a single "tile" POC

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- TODO:
  - tiling
  - loading/unloading strategy
  - Levels Of Details
  - 3D models

Other ideas for future

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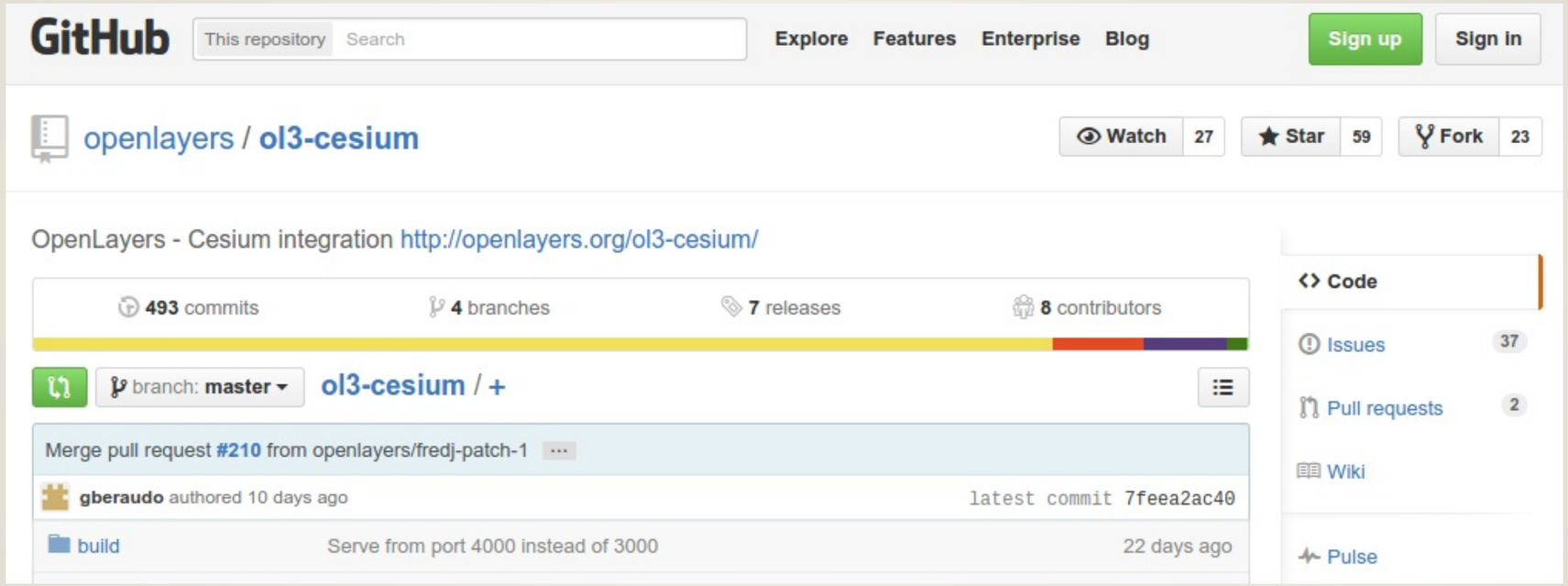
Thanks



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