



What's new and cool in OpenLayers



Andreas Hocevar / @ahoce
Marc Jansen / @selectoid

FOSS4G 2016

Outline

- (somewhat boring) meta (short)
- What's new and cool in OpenLayers?
- What's new and cool in OpenLayers?
- What's new and cool in OpenLayers?
- What's next?

(somewhat boring)

meta

(short)

Andreas Hocevar



- OpenLayers core developer and steering committee member
- Consultant for Boundless

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⌚ @ahocevar
🐦 @ahoce

Boundless



🌐 @boundlessgeo
🐦 @boundlessgeo

- boundlessgeo.com
- Active leader in the open source community
- Has developed and supported powerful software for enterprise GIS applications since 2002

Marc Jansen



✉ jansen@terrestris.de
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🐦 [@selectoid](https://twitter.com/selectoid)



- Since 2007 developer and project lead @ terrestris
- Core developer / PSC member GeoExt
- Core developer OpenLayers
- Author "OpenLayers" (German)
- Speaker & workshop instructor national & international
- OSGeo Foundation Charter Member

terrestris



🌐 @terrestris
🐦 @terrestrisde

- terrestris.de
- Top-notch OpenSource GIS from Bonn, Germany
- Development, projects, support & teaching
- Consulting, implementation, planning & maintenance

What is
OpenLayers?

What is OpenLayers?

“

*A high-performance, feature-packed library
for all your mapping needs.*

– *openlayers.org, 2016-06-26*

- OpenSource (BSD)
- JavaScript
- OSGeo project

OpenLayers

- ...long history
 - v2.0.0, August 2006
 - v3.0.0, August 2014
 - v3.17.1, July 2016
- actively developed & big community
- well documented & huge examples collection
- usable & used everywhere



What is cool?

...things we have to mention:

- Many data sources & layer types
- Interactions & controls
- Works 100% on mobile devices
- Retina/HiDPI support out of the box

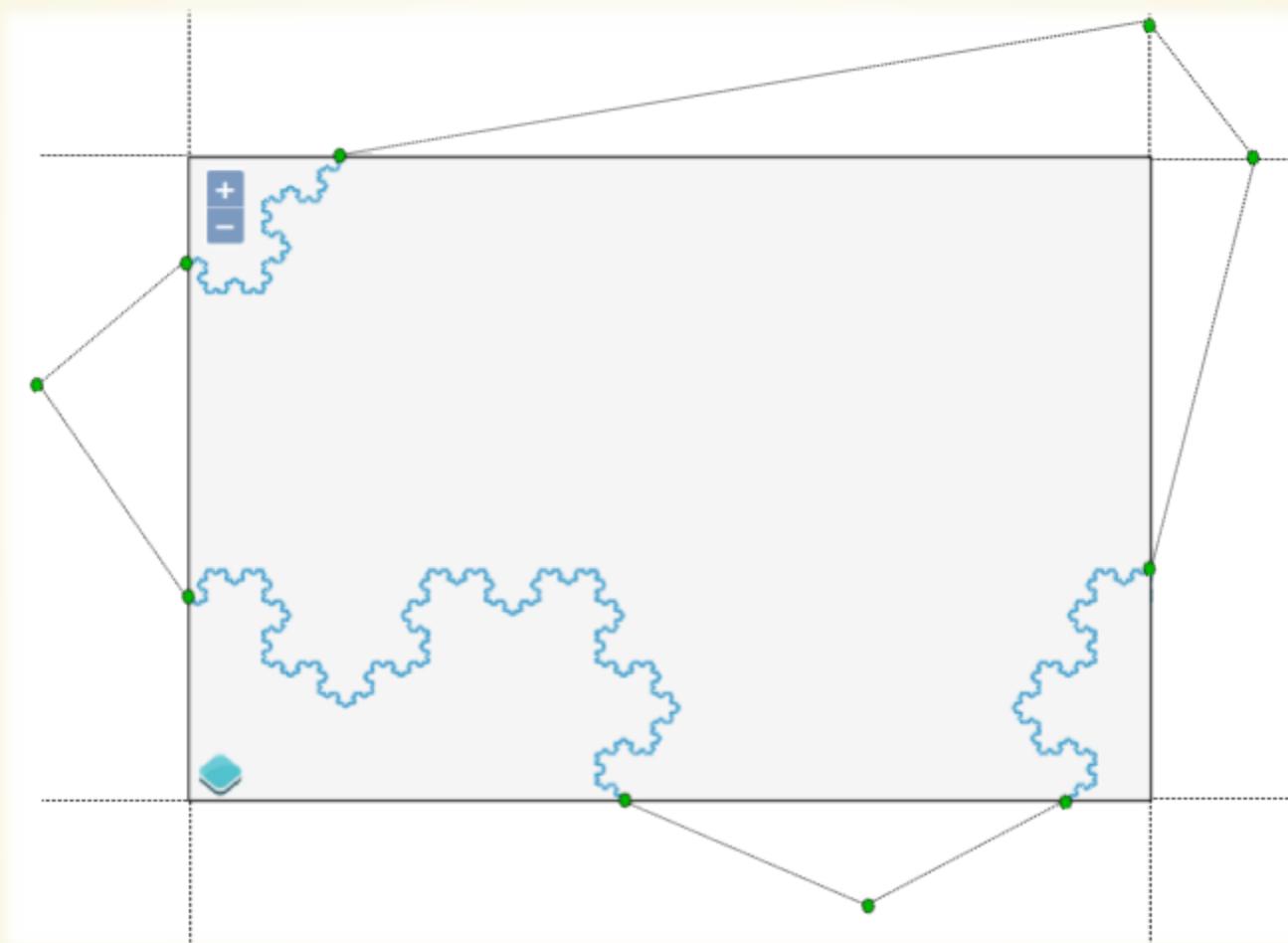
Rotation



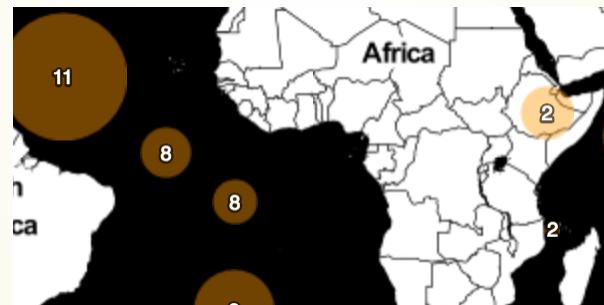
Projections



Vector rendering tricks



Vector styling



Raster operations

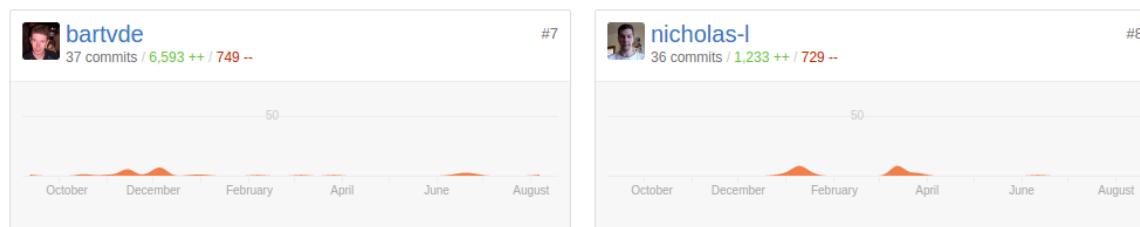
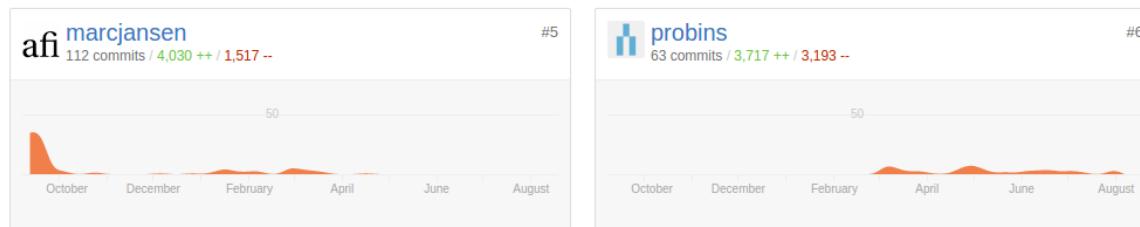
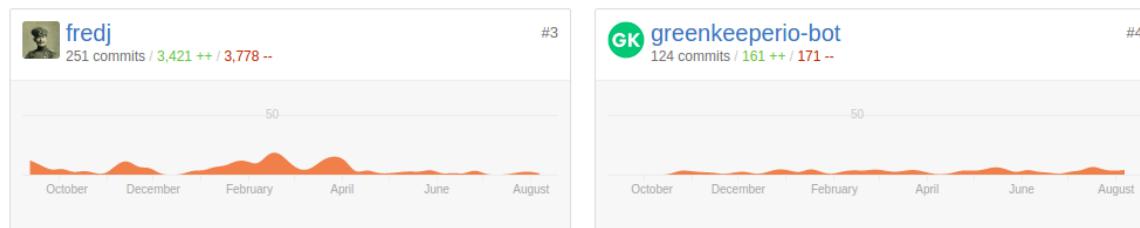
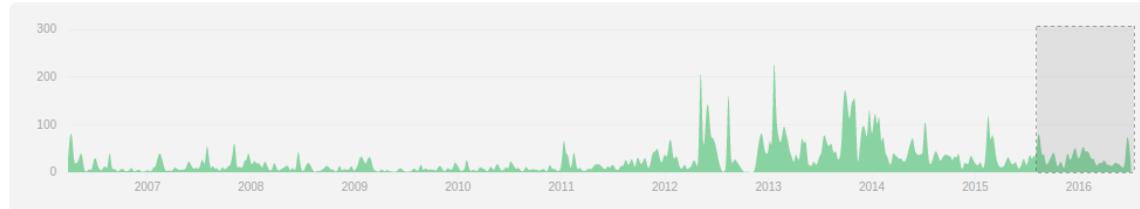


What is new?

Sep 15, 2015 – Aug 26, 2016

Contributions to master, excluding merge commits

Contributions: **Commits** ▾



Top 8 contributors since v3.9.0

- 4 different companies
- 2 individual contributors
- 7 different countries
- 1 bot



v3.9.0



v3.18.0

 openlayers / ol3

 Unwatch 285

 Unstar 1,996

 Fork 1,033

 Code

 Issues 435

 Pull requests 51

 Wiki

 Pulse

 Graphs

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#).



base: **v3.9.0** ▾

...

compare: **master** ▾

 Commits 2,353

 Files changed 1,195

 Commit comments 0

 21 contributors



What is new?

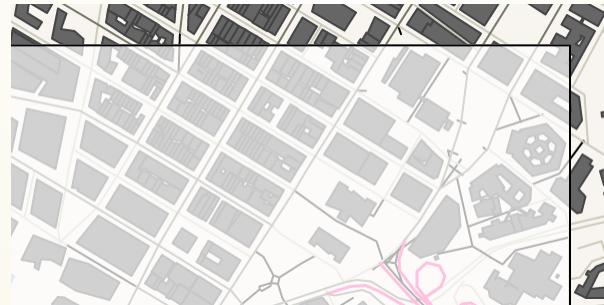
Raster reprojection



Vector tiles



Render geometries anywhere



Rotate geometries

```
var geom = ol.geom.Polygon.fromExtent([-5, -5, 5, 5]);
geom.rotate(Math.PI / 4);
```

CartoDB tile source

```
new ol.source.CartoDB({
  account: 'myaccount',
  config: {
    'layers': [{  
      'type': 'cartodb',  
      'options': {  
        'cartocss_version': '2.1.1',  
        'cartocss': '#layer { polygon-fill: #F00; }',  
        'sql': 'select * from european_countries_e where area > 50000'  
      }  
    }]  
  }
});
```

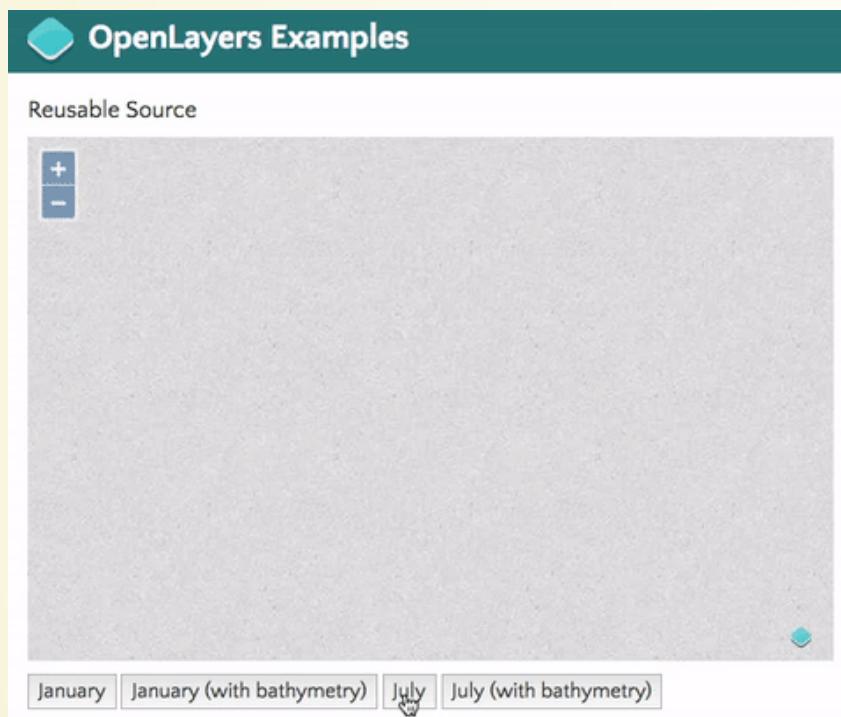
Image ArcGISRest source

```
new ol.source.ImageArcGISRest({  
  url: 'http://sampleserver1.arcgisonline.com/ArcGIS/rest/services/Specialty/ESRI_StreetMap_World_3D_Terrain/MapServer/0'  
});
```

OGC filters for WFS

```
new ol.format.WFS().writeGetFeature({
  srsName: 'EPSG:3857',
  featureNS: 'http://openstreetmap.org',
  featurePrefix: 'osm',
  featureTypes: ['water_areas'],
  outputFormat: 'application/json',
  filter: ol.format.ogc.filter.and(
    ol.format.ogc.filter.like('name', 'Mississippi*'),
    ol.format.ogc.filter.equalTo('waterway', 'riverbank')
  )
});
```

Other improvements...



Library size

September 2015: 143 kB gzipped, minified from 3.8 MB

August 2016: 140 kB gzipped, minified from 2.9 MB



Tom MacWright

@tmcw



Following

@erilem I'm worried about closure and ol3. Big-project infrastructure always inspires big projects to be big and glued together.

6:05 PM - 14 Dec 2012



...



Eric Lemoine

@erilem



Following

@tmcw what's brilliant about Closure is that it enables selecting code on a per-function basis, as opposed to a per-file basis

6:11 PM - 14 Dec 2012



...

September 2015

“

*Our users want mainstream build tools and
bundlers. Let's remove the dependency on
Closure Library!*

– OpenLayers devs, FOSS4G 2015, Seoul

Existing Closure Compiler workflows won't break.

August 2016

Closure Library removal is 98% complete.

- Lightweight event system, matrix transforms and class inheritance.
- No more legacy code for outdated browsers.
- JavaScript as it was meant to be .

What is next?

```
var OLMap = require('openlayers/map');
var View = require('openlayers/view');
var TileLayer = require('openlayers/layer/tile');
var OSM = new require('openlayers/source/osm');

var map = new OLMap({
  target: 'map',
  layers: [new TileLayer({
    source: OSM
  })],
  view: new View({
    center: require('ol/proj').fromLonLat([7.0936, 50.7362]),
    zoom: 2
  })
});
```

Thank you

Questions &
comments?

Imprint

Imprint

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