

Towards GeoExt 3

Supporting both OpenLayers 3 and ExtJS 6



Marc Jansen & Christian Mayer

FOSS4G 2015, Seoul, South Korea, 2015-09-18

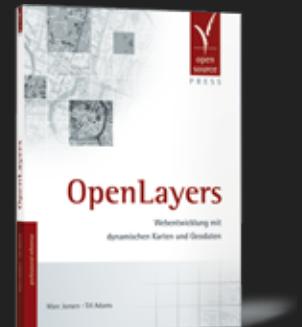
Outline

- Intro & Meta
- A (short) history of GeoExt
- So what is GeoExt 3?
 - Objectives
 - State
 - Examples & features
- Outlook

Intro & Meta

Marc Jansen

- Since 2007 developer & project lead @ terrestris
- Core developer & member of PSC GeoExt
- Core developer OpenLayers
- Author of the German "OpenLayers" book
- OSGeo Foundation Charter Member
- ❤ OpenSource & GIS / Spatial



terrestris



○ @terrestris
🐦 @terrestrisde

- terrestris.de
- OpenSource GIS from Bonn, Germany
- Development, Projects & Support/Teaching
- Consulting, Planning, Implementation & Maintenance

Christian Mayer

- Software developer & architect
- Especially GIS / SDI
- Founder of meggsumum
- Core developer & member of PSC GeoExt
- OSGeo Foundation Charter Member
- Speaker at nat. & intern. conferences
- ❤ OpenSource & GIS / Spatial



meggsimum



⌚ @meggsimum
🐦 @meggsimum

- meggsimum.de
- Services around GIS
- Based in Germany
- Webmapping Solutions
- Software Planning and Development
- Consulting and Trainings

GeoExt

- JavaScript framework for sophisticated WebGIS
- Based on OpenLayers and ExtJS
- Extends ExtJS with spatial components
- Embedding of spatial formats in ExtJS data-components
- Rich webmapping interfaces
- © OSGeo, OpenSource
- **First commit** on Mar 25, 2009

GeoExt...

...is the marriage of ExtJS and OpenLayers

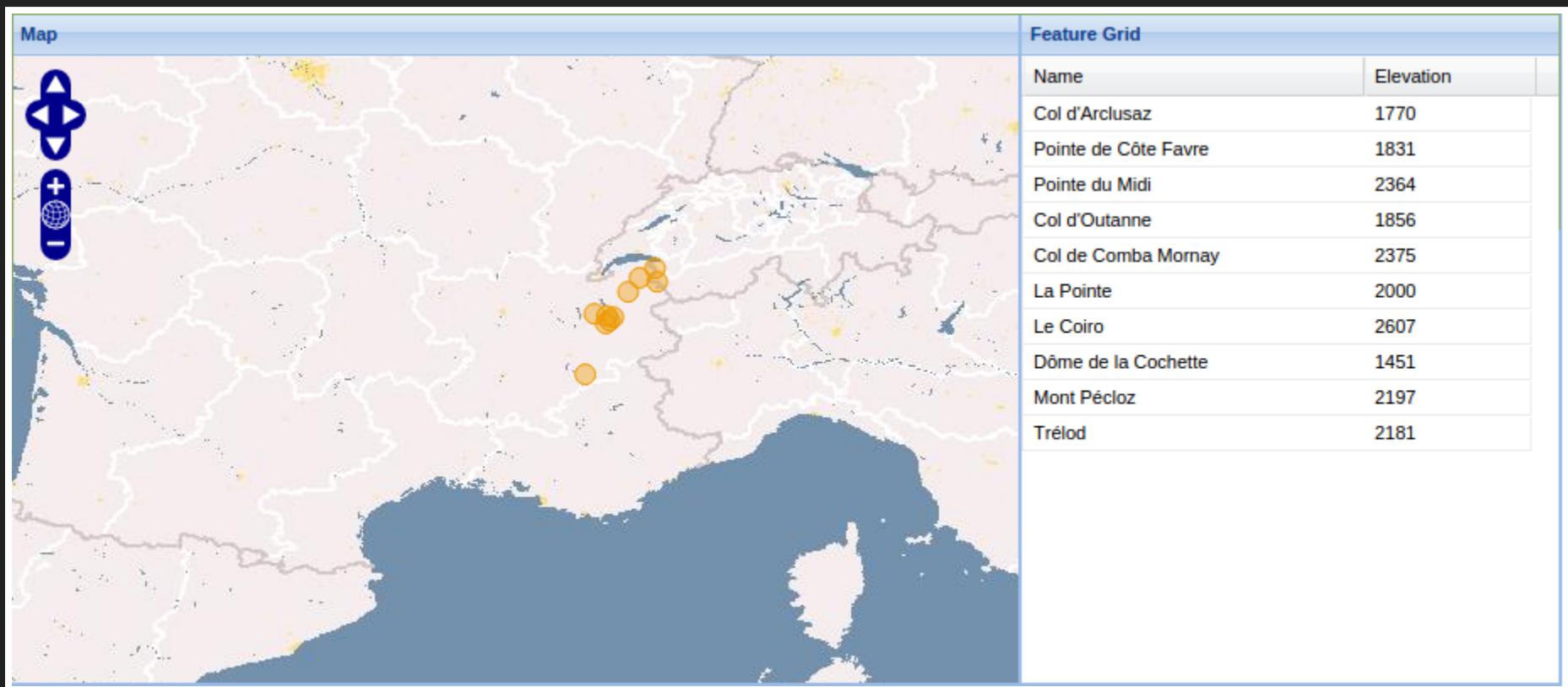
...is the child of ExtJS and OpenLayers

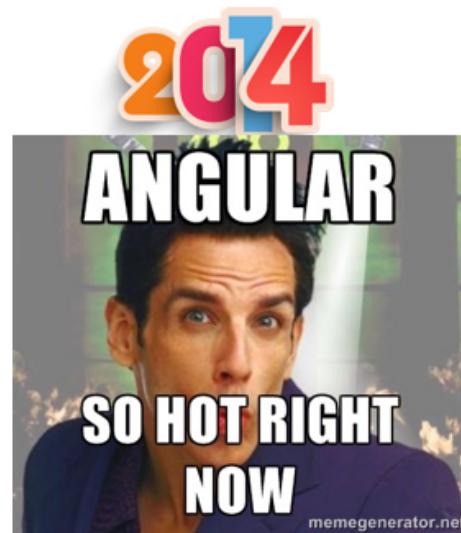
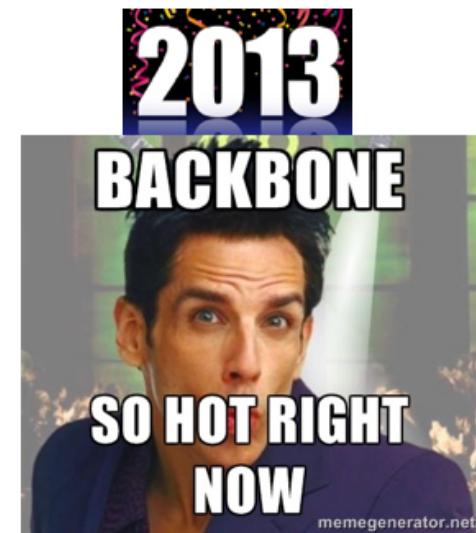
...enhances both ExtJS and OpenLayers

A (short) history of GeoExt

GeoExt 1.x

- Based on ExtJS 3.x & OpenLayers 2.x
- geoext.org





@bitovi on twitter

GeoExt 2.0.x

- Based on ExtJS 4.x & OpenLayers 2.x
- geoext.github.io/geoext2

Map

The map displays a topographic view of the Alps, covering parts of France, Switzerland, Italy, and Spain. Major cities like Paris, Lyon, Marseille, and Genoa are visible. The map includes a legend for zoom levels (+ and -), a scale bar, and a copyright notice for terrestris GmbH & Co. KG and OpenStreetMap contributors.

Feature Grid

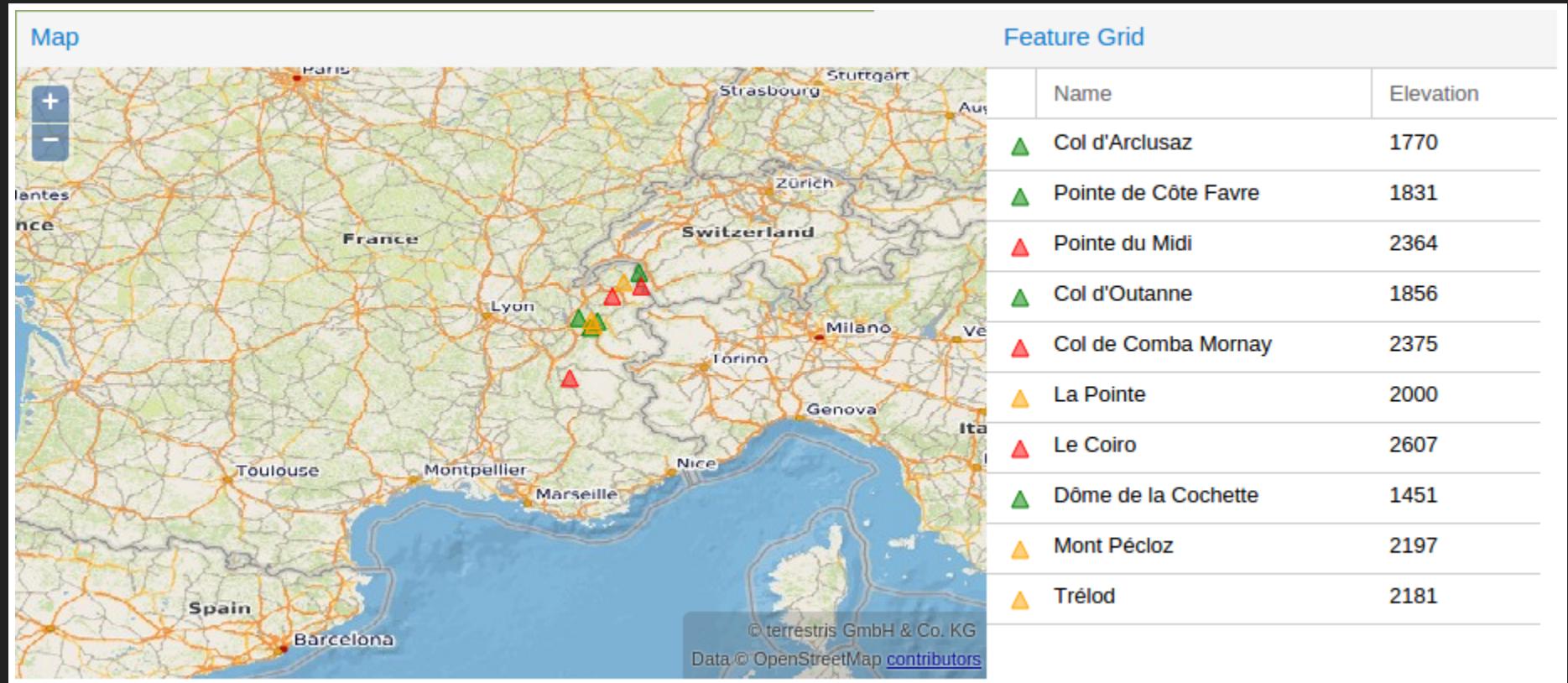
Name	Elevation
Col d'Arclusaz	1770
Pointe de Côte Favre	1831
Pointe du Midi	2364
Col d'Outanne	1856
Col de Comba Mornay	2375
La Pointe	2000
Le Coiro	2607
Dôme de la Cochette	1451
Mont Pécloz	2197
Trélod	2181

GeoExt 2.0.x

- Major improvements
 - Support for new creation syntax
 - MVC support
 - Advanced app theming
 - Improved API-Docs
 - Compatibility to Sencha's build tools (dependency resolving, ...)

GeoExt 2.1.x (beta)

- Based on ExtJS 4.2.x / ExtJS 5.1.x OpenLayers 2.x
- geoext.github.io/geoext2



GeoExt 2.1.x

- Major improvements
 - Support for two major ExtJS versions
 - MVVM support
 - Two-way-binding
 - Improved mobile / touch support
 - Responsive design

In the meantime...

OpenLayers 3

&

ExtJS 6

...were born

GeoExt 3 Codesprint



- Jun 17 - Jun 19, 2015 in Bonn
- 10 developers from 4 countries
- Built foundation for GeoExt 3 with
 - OpenLayers 3
 - ExtJS 6



Sponsors

- Bistum Eichstätt
- Boundless
- Bundesamt für Strahlenschutz
- Compass Informatics Ltd
- ISB AG
- Landesamt für Geoinformation und Landentwicklung
Baden Württemberg
- Landplan AG
- meggsum
- terrestris GmbH & Co. KG

So what is GeoExt 3?

Objectives

- Start from scratch
- Benefit from sencha tooling (build / packaging)
- Benefit OpenLayers feature galore
- Unbiased about medium (desktop / mobile)
- Enable access of library objects (e.g. ol3)
- More examples, improved tests and documentation

State

- github.com/geoext/geoext3
- > 300 commits ✓
- 7 contributors ✓
- Build and packaging ✓
- 82% test-coverage ✓
- Nice API-docs ✓
- Some examples ✓
- BSD to GPLv3 ✓
- Universal app example ✘
- 0 releases ✘

State

- [Homepage](#)
- [latest API Docs](#)
- [latest API Docs with ExtJS](#)
- [latest Examples \(linked on Homepage\)](#)
- [latest Sencha Package](#)

```
# Once on the commandline
sencha package repo add \
    GeoExt http://geoext.github.io/geoext3/cmd/pkgs
```

```
// in app.json
"requires": [
    "GeoExt"
],
```

Examples & features

Basic MapComponent example

GeoExt.component.Map Example

This example shows how to use the `GeoExt.component.Map` class. Have a look at [map.js](#) to see how this is done.

The map displays the San Francisco Bay Area, including the city of San Francisco, the city of Oakland, and parts of the surrounding counties. Key features include:

- Geographic Labels:** Muir Woods National Monument, Mount Tamalpais State Park, Tiburon, Sausalito, Golden Gate National Recreation Area, Presidio, Lombard St, The Embarcadero, San Francisco, Great Hwy, 19th Ave, Portola Dr, Market St, Guerrero St, Cesar Chavez St, Alameda Blvd, 280, Bayshore Blvd, John McLaren Park, Candlestick Point State Recreational Area, Lake Merced Park, Daly City, Colma, Mussel Rock Park, Holy Cross Cemetery, San Bruno Mountain State Park, Brisbane, Albany, Berkeley, Emeryville, Piedmont, Tilden Park, Orinda Country Club, Sibley Volcanic Regional Preserve, Mountain View Cemetery, West Grand Ave, Broadway, Alameda, Chuck Corica Municipal Golf Complex, Doolittle Dr, OAK, and International Blvd.
- Road Networks:** Major highways 80, 280, 101, and 880 are shown.
- Parks and Landmarks:** Golden Gate National Recreation Area, Muir Woods National Monument, Mount Tamalpais State Park, and various city parks.

```
var olMap = new ol.Map({
  layers: [
    // ...
  ] ,
  view: new ol.View({
    // ...
  } )
} ) ;

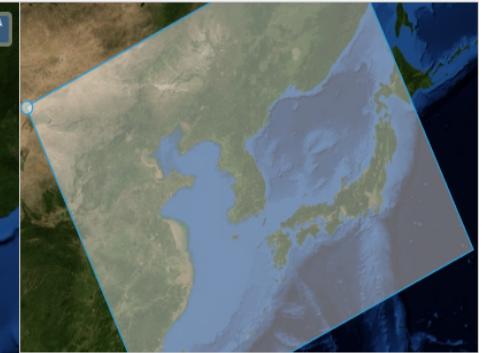
var mapComponent = Ext.create('GeoExt.component.Map', {
  map: olMap
} ) ;
```

OverviewComponent example

GeoExt.component.OverviewMap Example



OverviewMap (default)



Description

This example shows how to use the `GeoExt.component.OverviewMap` class.

The overviewmap will visualize the extent of the main map with a rectangle. The main map can be rotated (using SHIFT & drag), and the overviewmap will adjust the rotation of the rectangle. The top-left corner is visualized with a circle in the overviewmap.

Have a look at [overviewMap.js](#) to see how this is done.

OverviewMap (configured)



LayerTree with legends example

Legends in tree panel

-  Vector
-  MapQuest Hybrid
-  ol.layer.Group
 -  MapQuest OSM
 -  MapQuest Satellite

Description

This example shows how to use the GeoExt.tree.Panel class and shows two methods how to include legends for every treenode.

Have a look at [tree-legend-simple.js](#) to see how this is done.

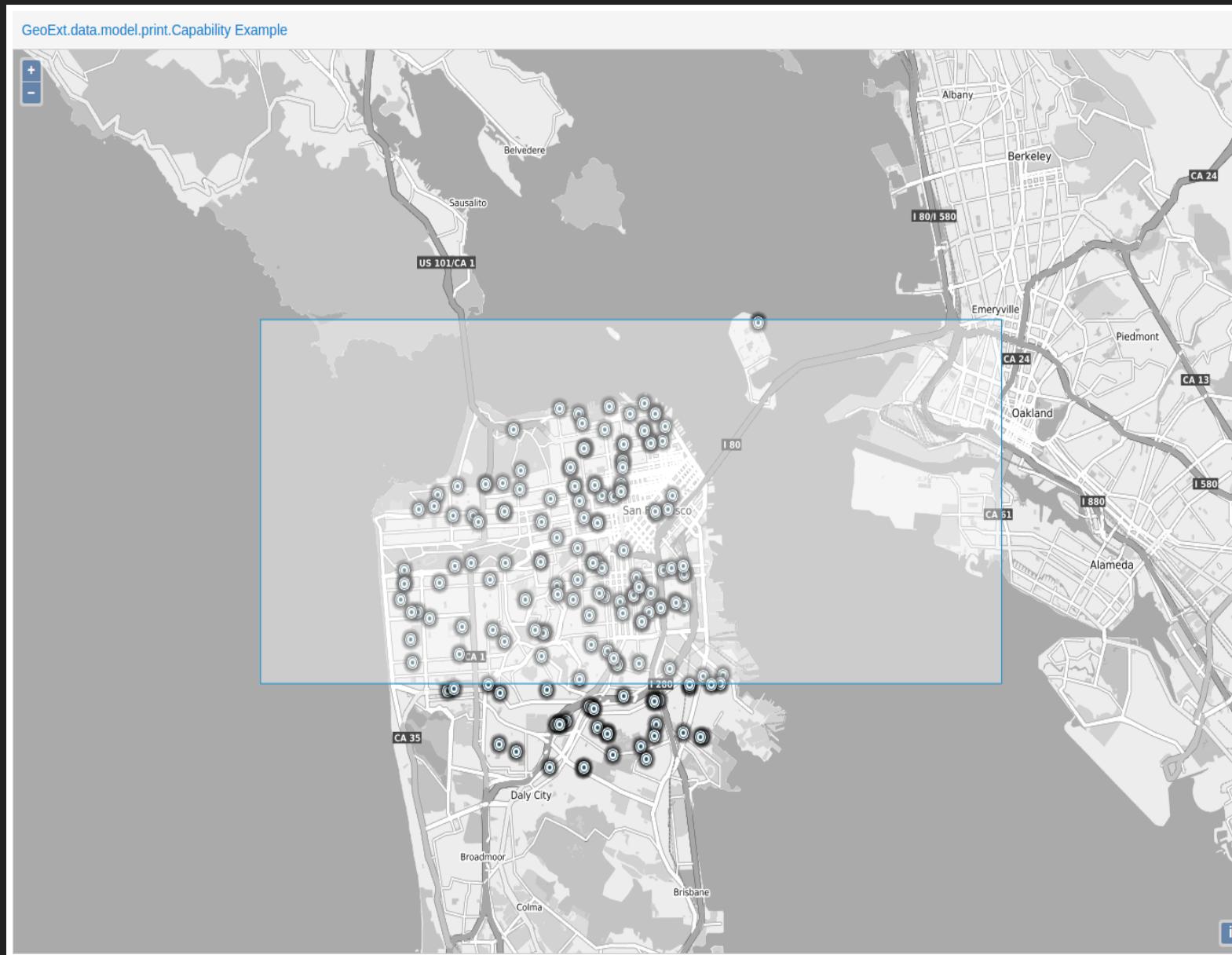
treePanel

-  Vector
-  MapQuest Hybrid
-  ol.layer.Group



Printing example (with MapFish v3)

GeoExt.data.model.print.Capability Example



Print

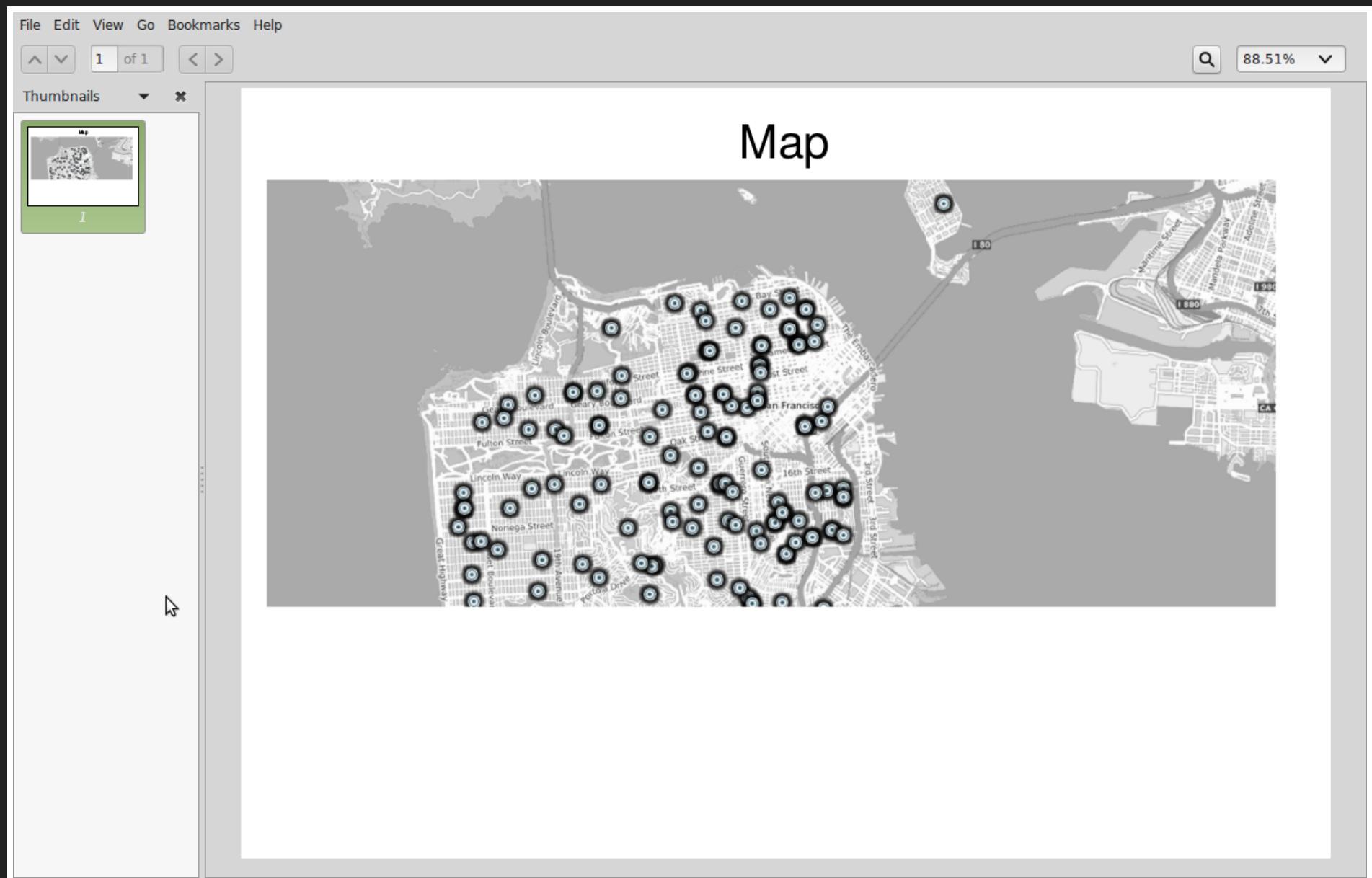
Description

This example shows how to use the GeoExt.data.MapfishPrintProvider class to talk to a Mapfish Print Server (v3.x). Afterwards we have all information to create a valid POST to the servlet. The printed extent is highlighted as vector layer. If you move around or change the zoom, the extent will adjust accordingly.

Click the button labelled 'Print' to actually create a PDF for the displayed extent.

Have a look at [basic-mapfish.js](#) to see how this is done.

Resulting PDF of printing example



GeoExt popups and pointerrest



FeatureRenderer

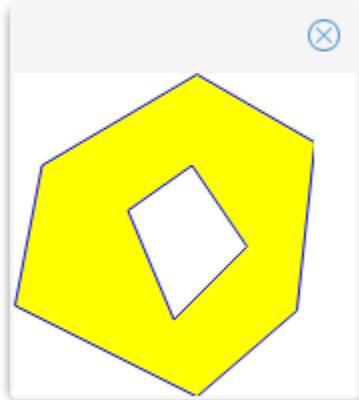
	point	line	polygon	text
default	○	~	□	n/a
red	○	~	□	n/a
custom	★	~	■	Ab
stacked	★	~	□	Ab

Text-graphic

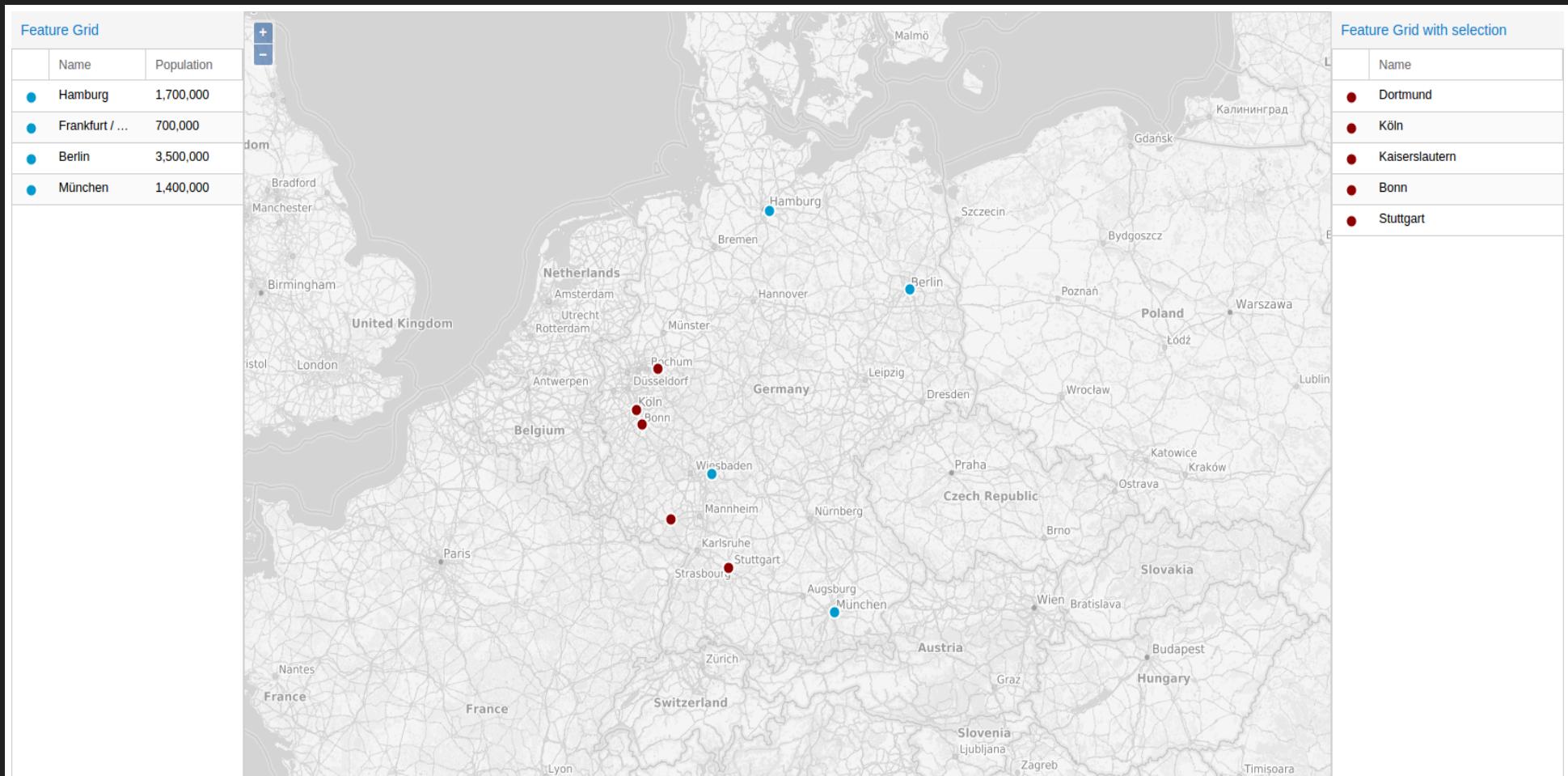
Text and graphic combined
Ab

Text only
Ab

Graphic only
■



FeatureStore in ExtJS Grid



Description

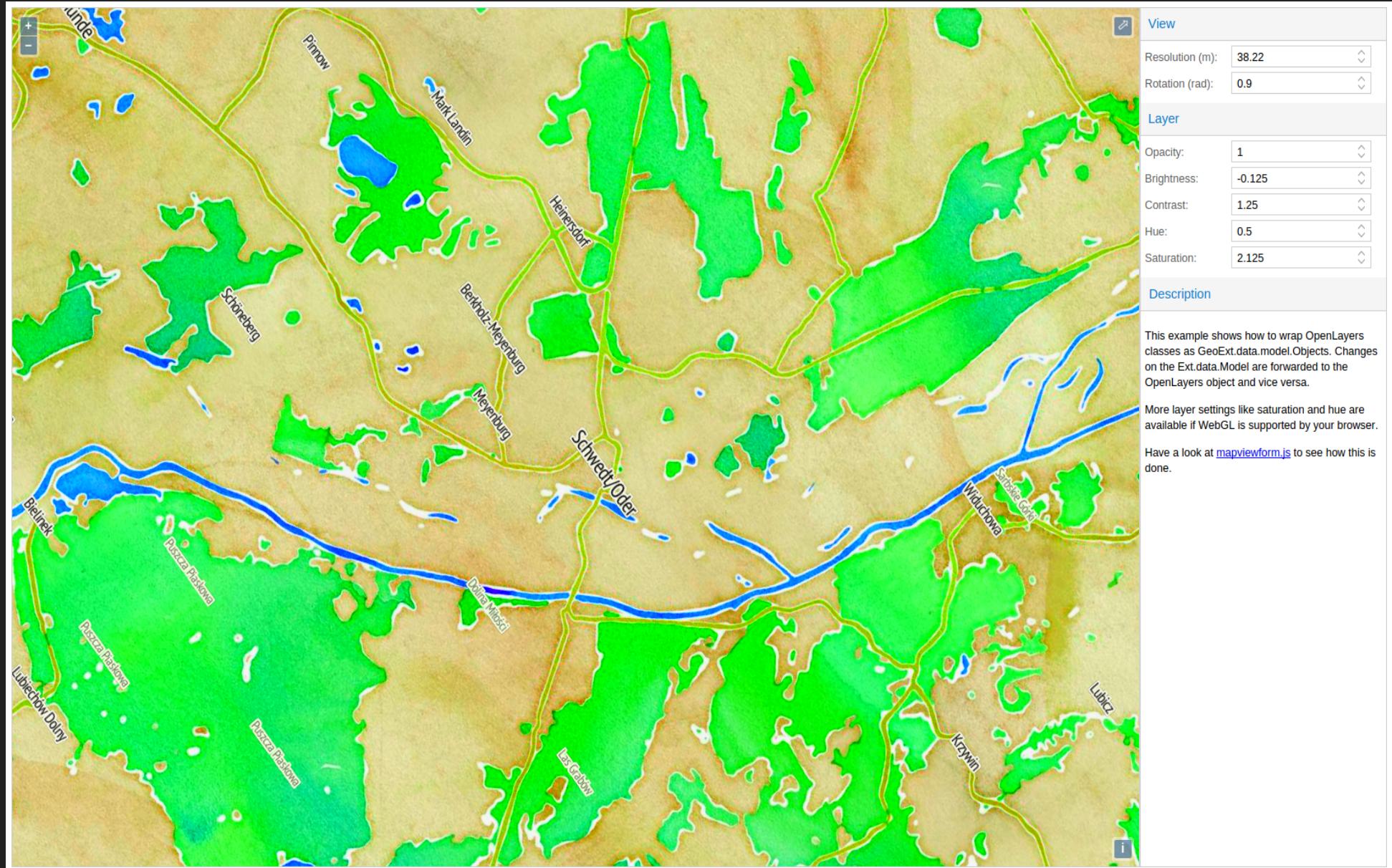
This example shows how to display features in grids.

The grid on the left side is created by passing an OpenLayers collection (`ol.Collection`) with feature objects (`ol.Feature`)

The grid on the right side is created from an existing vector layer and also highlights the selected feature in the grid on the map.

Have a look at [grid.js](#) to see how this is done.

MapView-form



Outlook

Outlook / future

- Release betas / previews
- Develop roadmap
- Attract more people
- Universal application
- Possible restructuring: GeoExt-base, -modern, -classic
- Continuous deployment: first steps done
- ... then release it as 3.0.0

Thanks!

Questions & Remarks?

[Imprint](#)

Imprint

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