

# Towards GeoExt 3

Supporting both OpenLayers 3 and ExtJS 6

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Marc Jansen & Christian Mayer

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

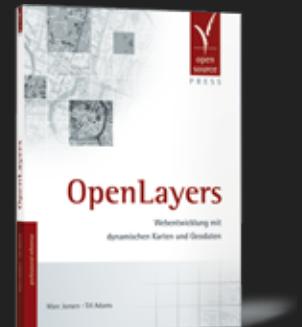
# Outline

- 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](http://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 meggsimum
- Core developer & member of PSC GeoExt
- OSGeo Foundation Charter Member
- Speaker at nat. & intern. conferences
- ❤ OpenSource & GIS / Spatial



# meggsimum



⌚ @meggsimum  
🐦 @meggsimum

- [meggsimum.de](http://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**

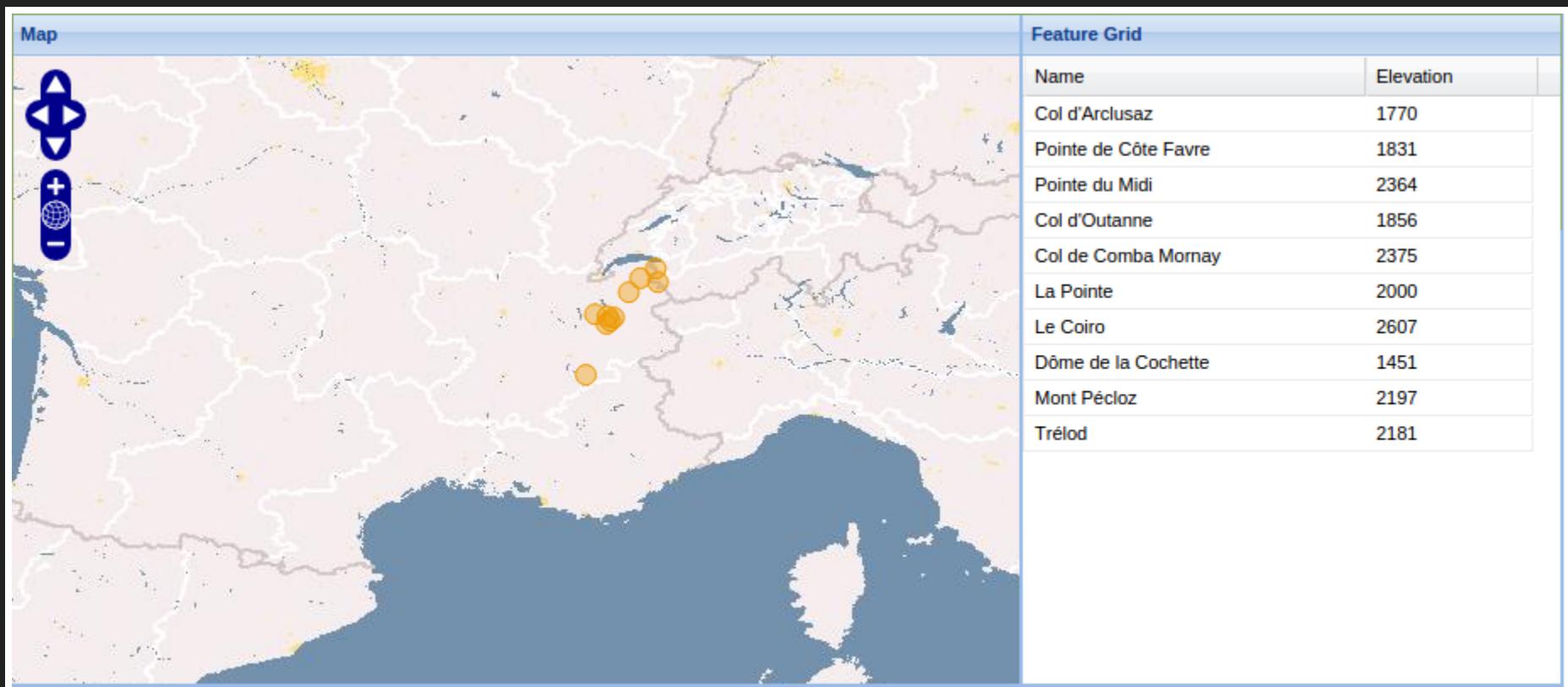
**...is the child of ExtJS and OpenLayers**

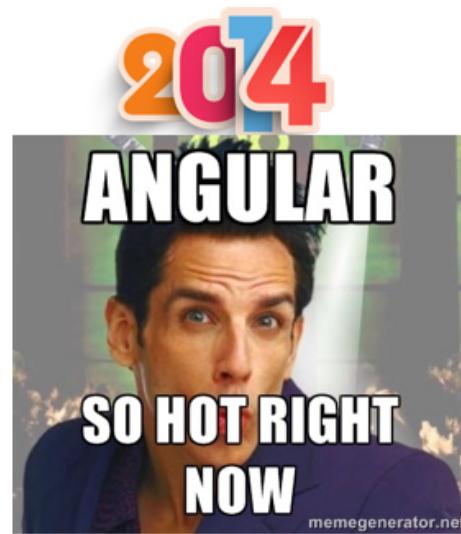
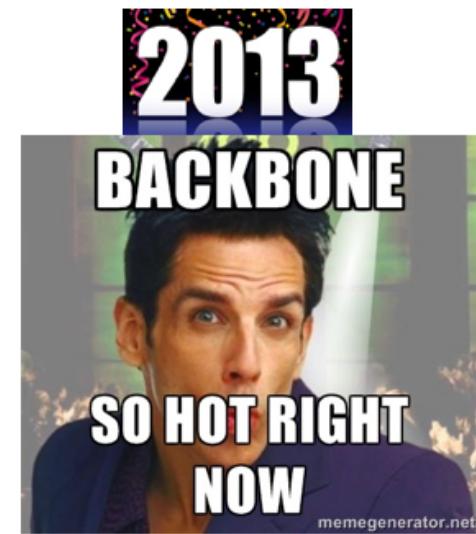
**...enhances both ExtJS and OpenLayers**

# A (short) history of GeoExt

# GeoExt 1.x

- Based on ExtJS 3.x & OpenLayers 2.x
- [geoext.org](http://geoext.org)





@bitovi on twitter

# GeoExt 2.0.x

- Based on ExtJS 4.x & OpenLayers 2.x
- [geoext.github.io/geoext2](https://geoext.github.io/geoext2)

Map

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

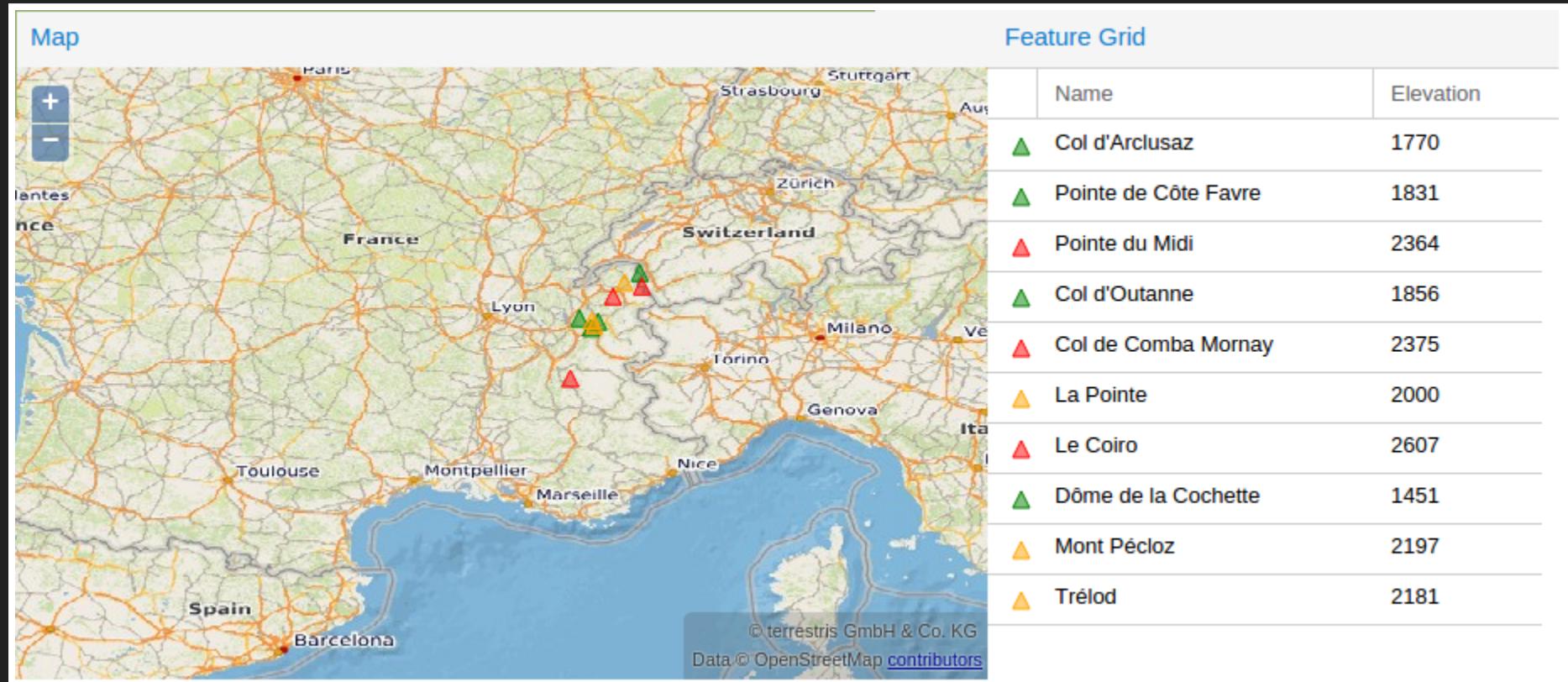
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Data © OpenStreetMap contributors

# 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](https://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)
- Unbiased about medium (desktop / mobile)
- Enable access of library objects (e.g. ol3)
- More examples, improved tests and documentation

# State

- [github.com/geoext/geoext3](https://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 ✘

# 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 surrounding areas like Berkeley, Emeryville, Piedmont, Alameda, and Daly City. The map includes a legend in the bottom right corner and a scale bar in the bottom left corner. The map is centered on the San Francisco area, with the Golden Gate Bridge visible in the background. The map shows major roads, highways, and landmarks such as the Golden Gate National Recreation Area, Muir Woods National Monument, Mount Tamalpais State Park, and various parks and cemeteries. The map is styled with a watercolor-like background and orange lines for roads.

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

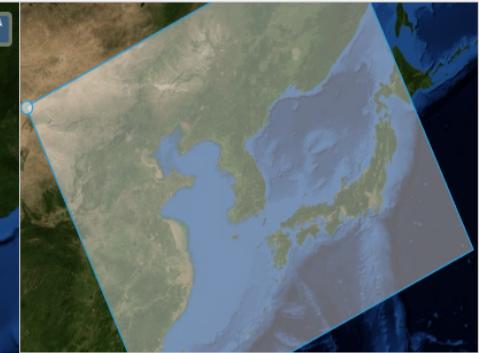
var mapComponent = Ext.create('GeoExt.component.Map', {
  map: olMap
} ) ;
```

# 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.

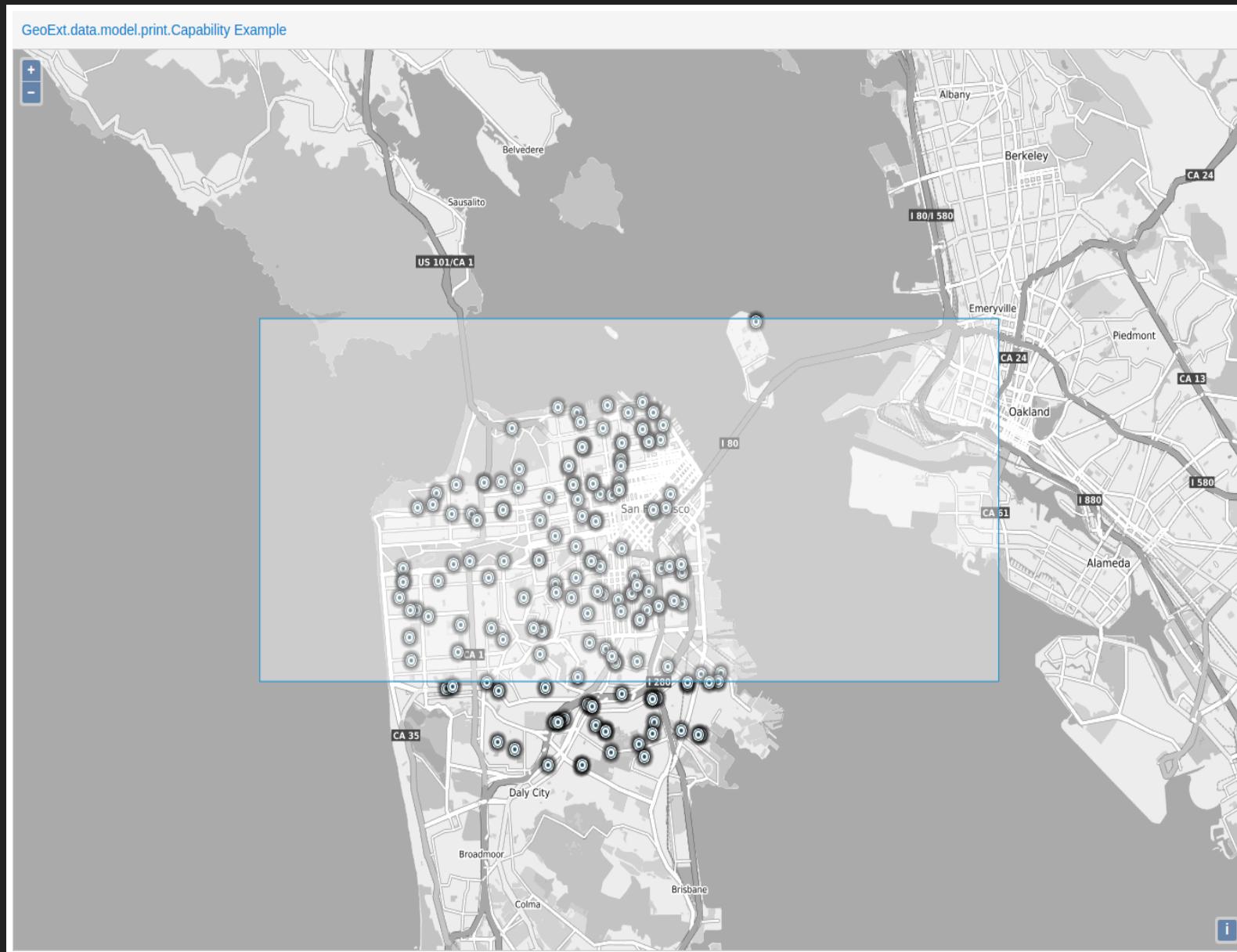
**treePanel**

-  Vector
-  MapQuest Hybrid
-  ol.layer.Group



# Printing example (with MapFish v3)

GeoExt.data.model.print.Capability Example



Description

[Print](#)

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

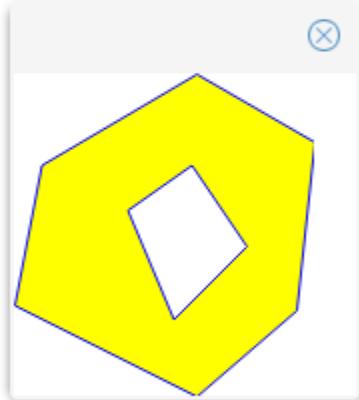
	point	line	polygon	text
default	○	~	□	n/a
red	○	~	□	n/a
custom	★	~	■	Ab
stacked	★	~	□	Ab

**Text-graphic**

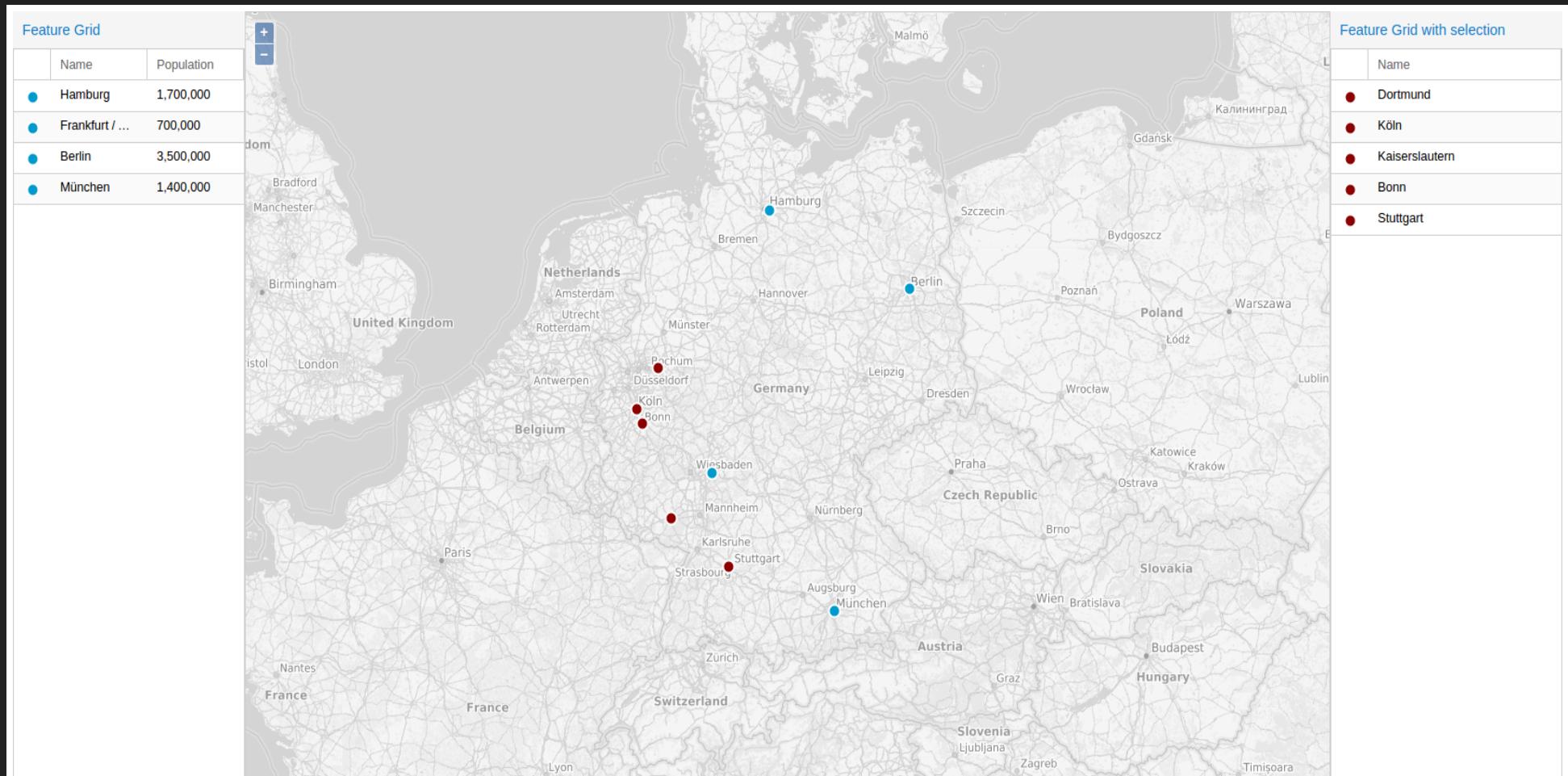
Text and graphic combined  
Ab

Text only  
Ab

Graphic only  
■



# FeatureStore in ExtJS Grid



## Description

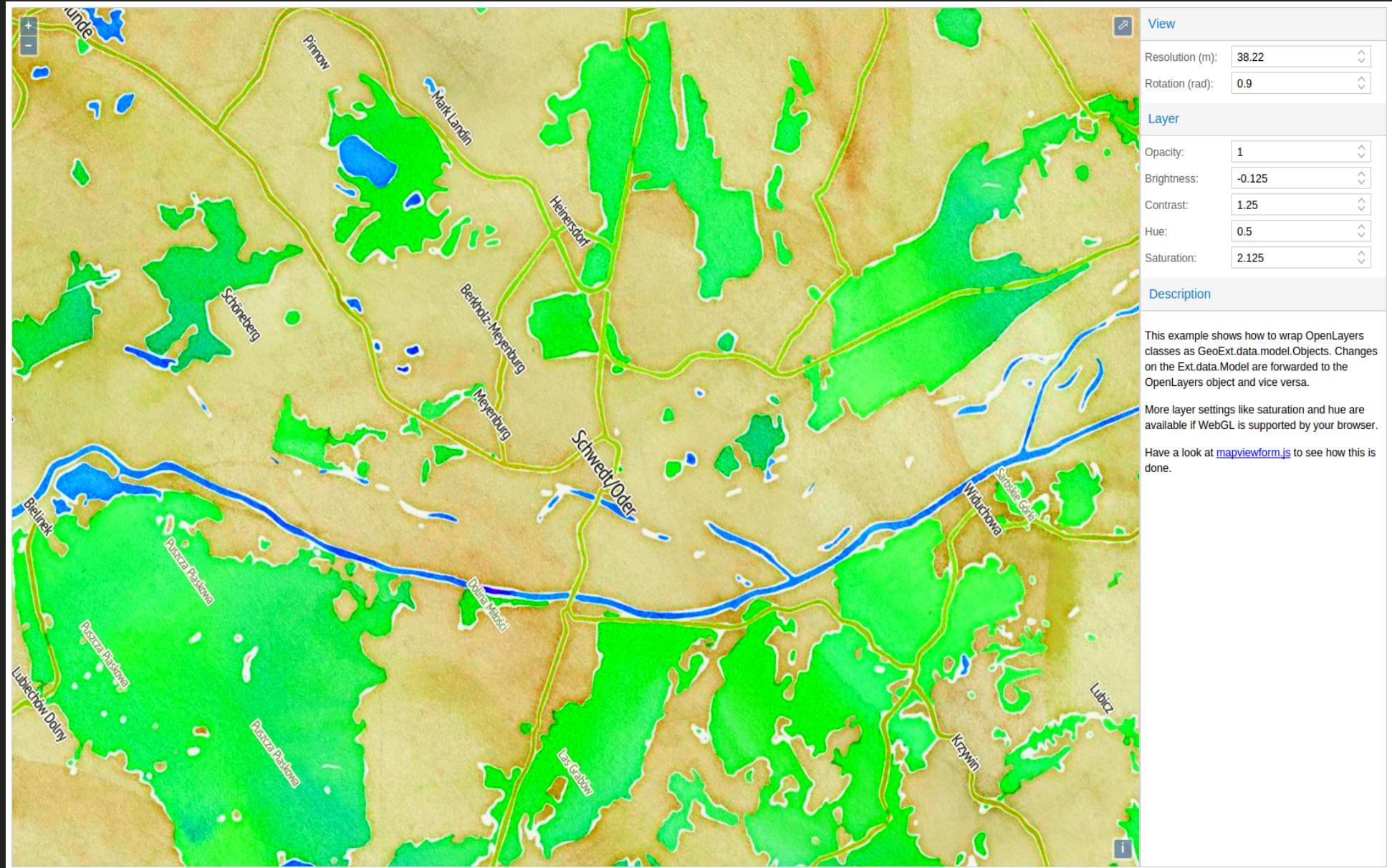
This example shows how to display features in grids.

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: [WIP](#)
- ... then release it as 3.0.0

Thanks!

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# Questions & Remarks?

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[Imprint](#)

# Imprint

## Authors

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