

GeoExt3



Universal WebGIS Applications with OpenLayers 3 and ExtJS 6

Christian Mayer & Marc Jansen

Outline

- Intro & meta
- GeoExt status
- Universal applications...
- ... with GeoExt
- Examples
- Conclusion

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

terrestris



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- terrestris.de
- OpenSource GIS from Bonn, Germany
- Development, Projecte & Support/Teaching
- Consulting, planing, implementation & maintenance

Christian Mayer



- Geoinformatics engineer
- Software developer & -architect
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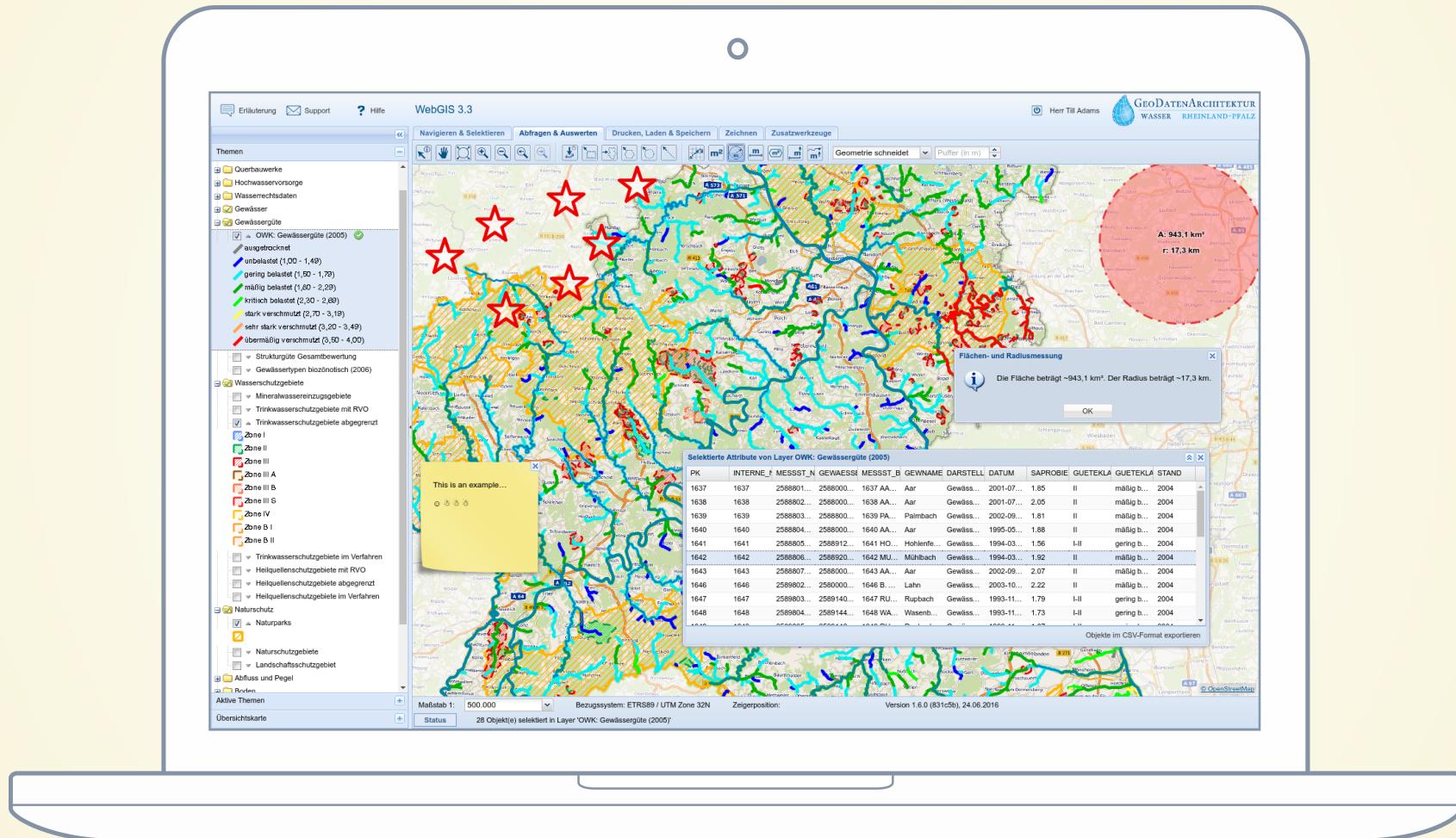
- meggsimum.de
- Services around Open Source GIS,
Webmapping & SDI
- Tailored WebGIS solutions
- Software concepts and
development
- Geodata
- Consulting and trainings

GeoExt

Current status

GeoExt

- JavaScript framework for "Rich WebMapping Applications"
- Based on OpenLayers und ExtJS
- Extends ExtJS with spatial components
- Graphical components and data packages
- Open Source, © OSGeo
- Since March 2009 (>7.5 years)



Versions

GeoExt	ExtJS	OpenLayers
1.1	3.x	2.10
2.1	4.2.x / 5.1.x	2.13.1
3 (master)	6.x	3.x

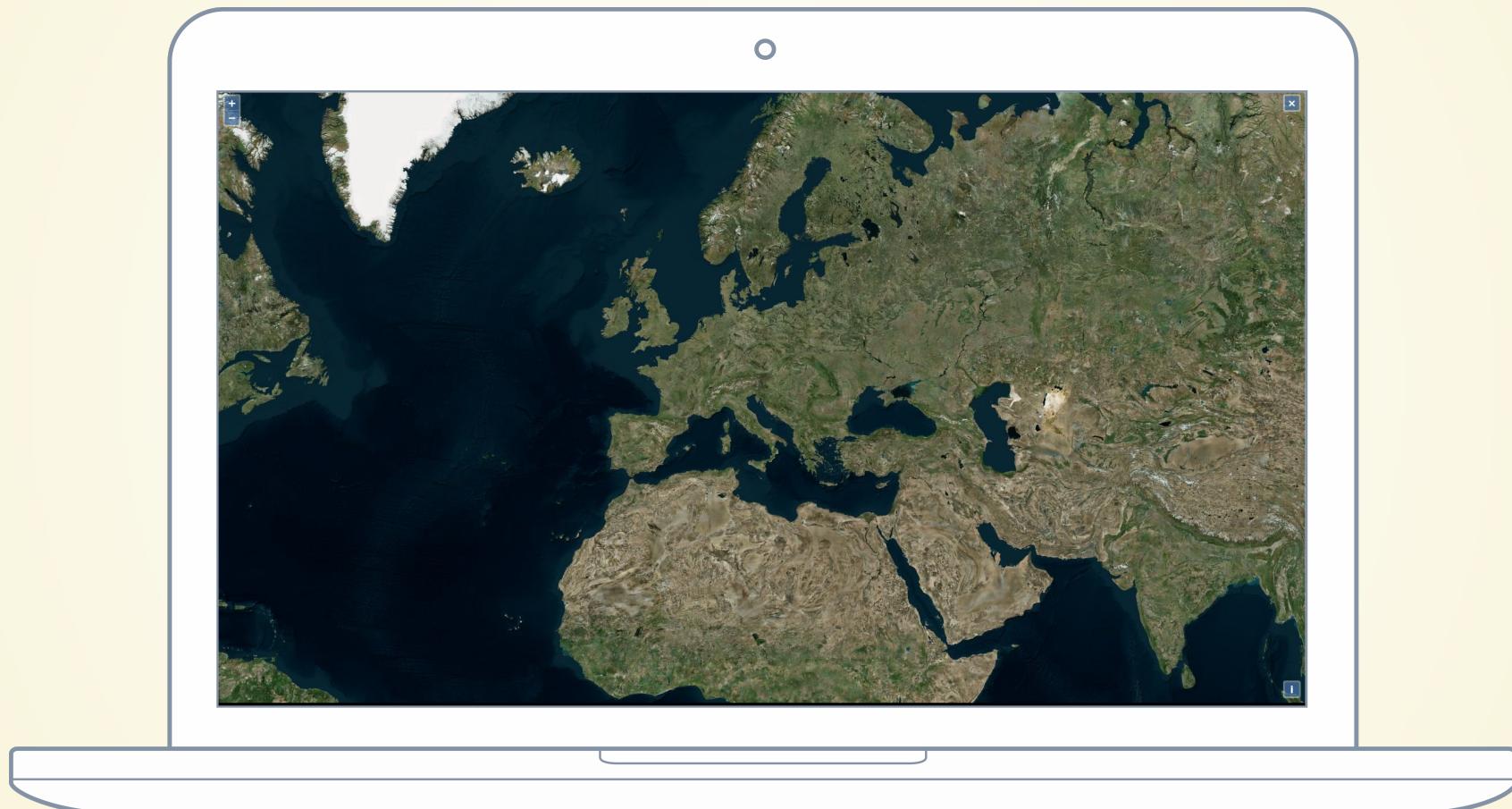
Innovations OpenLayers

“

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

– *openlayers.org, 2016-06-27*

- Complete rewrite after v2.x
- Mobile from start
- Independent from ...
 - ... device
 - ... browser
 - ... libraries



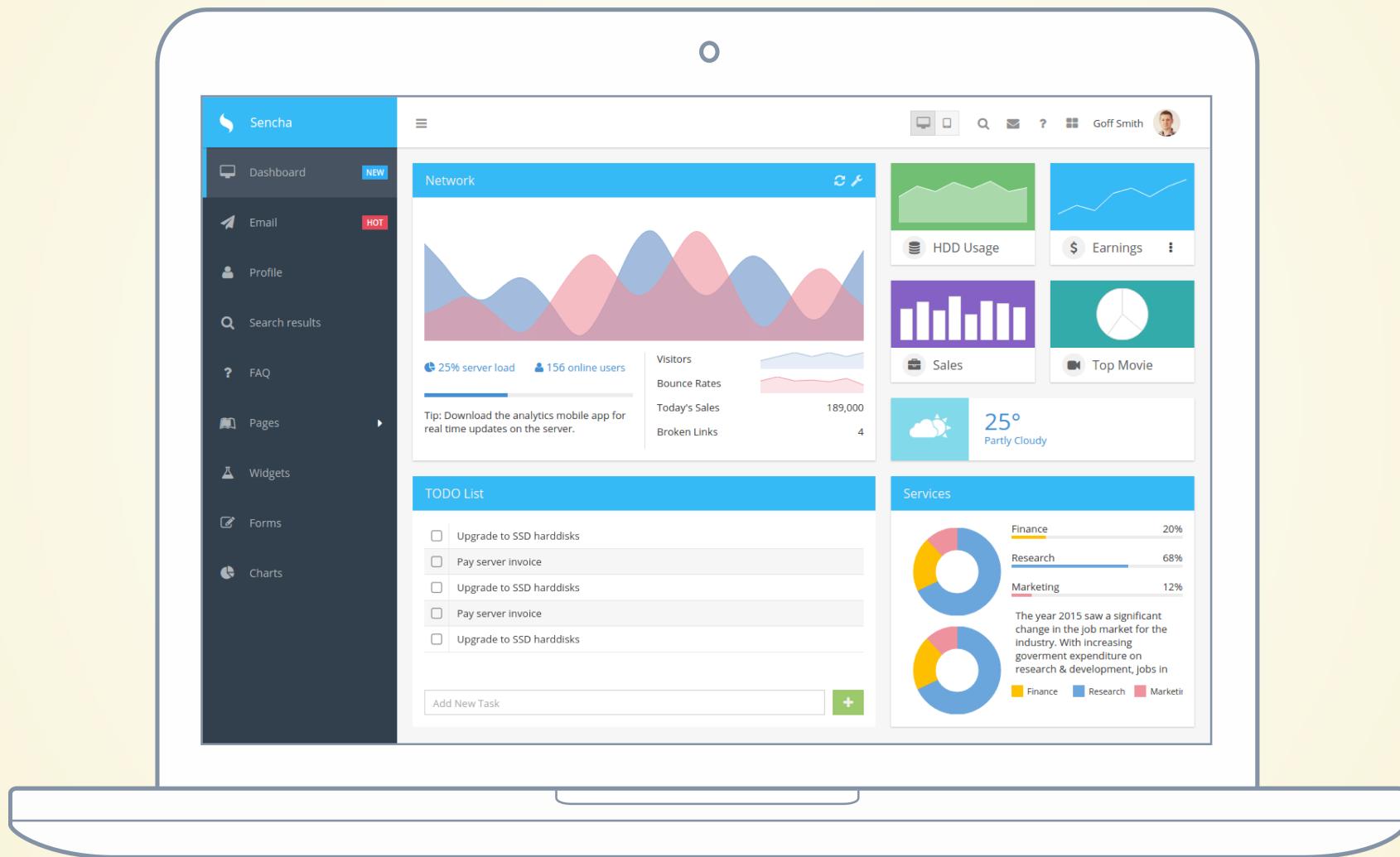


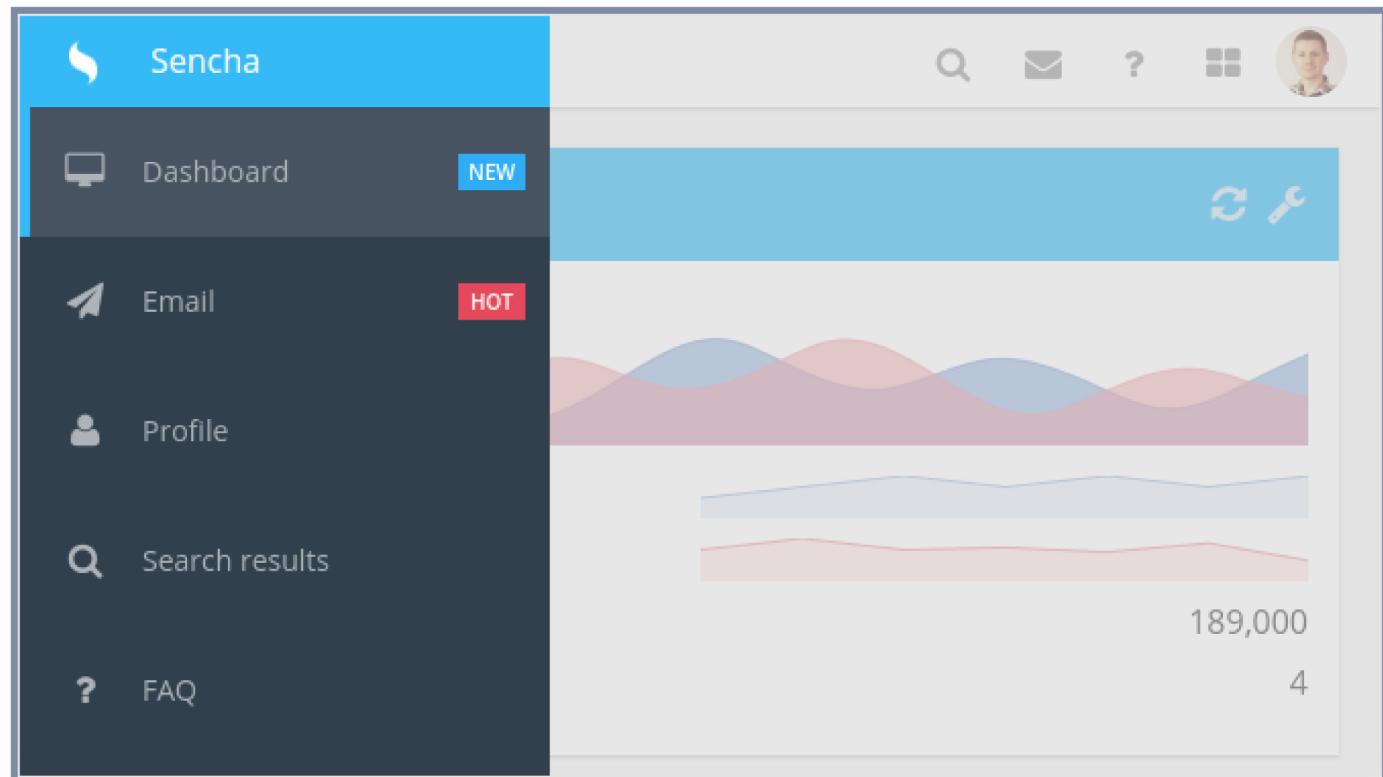
...universal.

Innovations ExtJS 6

Merging ExtJS / Sencha Touch

- Toolkits classic & modern
- Build profiles
- Improved theming (fashion)
- Model-View-Controller & Model-View-ViewModel
- Ext.Widget ... Ext.list.Tree





...universal.

Universal
applications

Goal

- One code base => multiple builds
- Less frictional losses
- Re-use of code
- UI (more or less) dependent from device

“

Ideally, the Universal aspect of the your application will contain data, models, viewmodels, etc. You can also share controllers, though, developers may need to be creative in order to produce logic that can span toolkits.

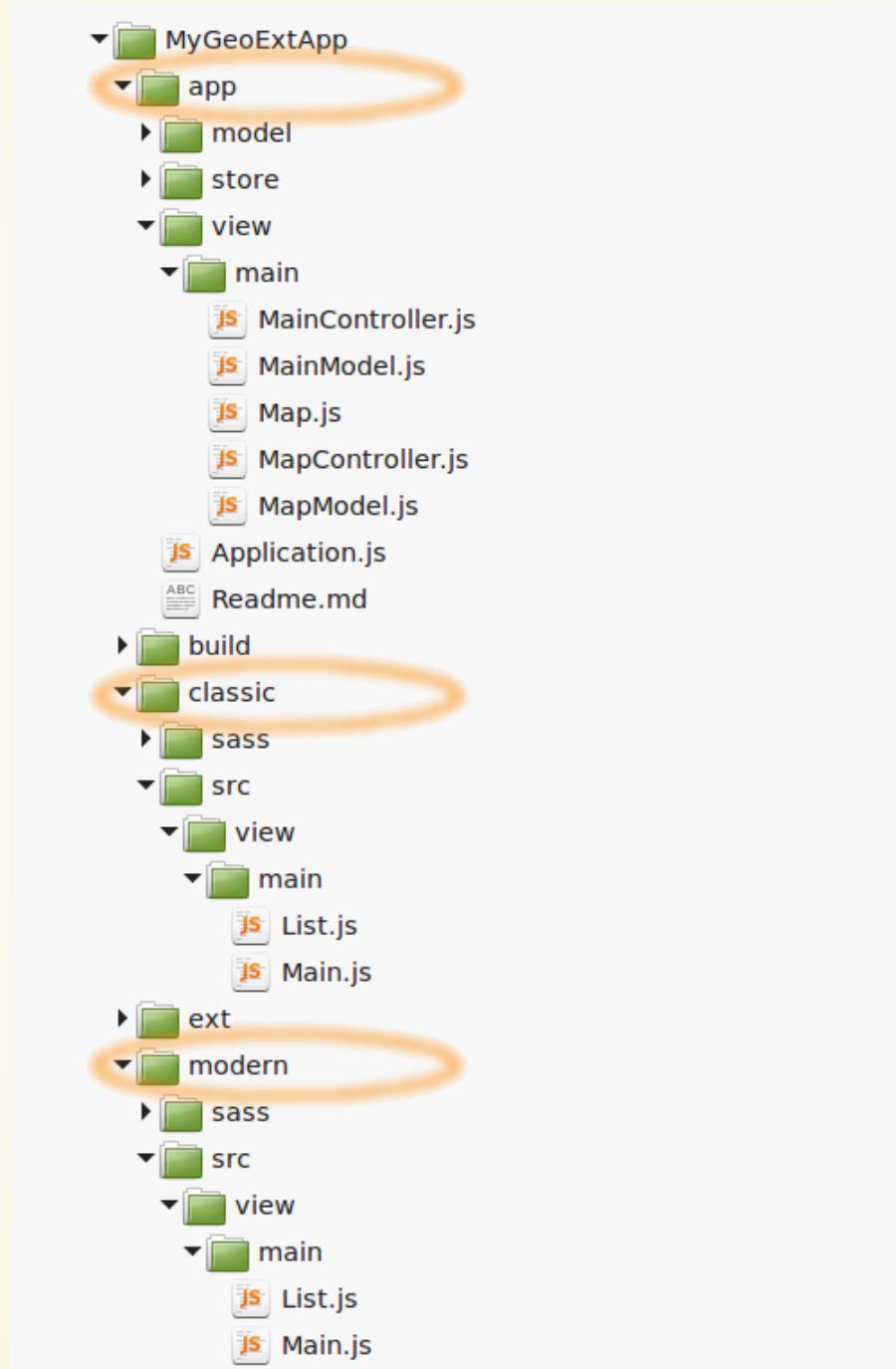
– *sencha.com, 2016-06-27*

Own emphasis

app.json & sencha

```
"builds": {  
    "classic": {  
        "toolkit": "classic",  
        "theme": "theme-triton"  
    },  
  
    "modern": {  
        "toolkit": "modern",  
        "theme": "theme-triton"  
    }  
}
```

```
$ sencha app build modern
```



Profile detection in index.html

```
Ext.beforeLoad = function (tags) {
    var s = location.search, // the query string (ex "?foo=1&bar")
        profile;
    // For testing look for "?classic" or "?modern" in the URL
    // to override device detection default.
    if (s.match(/\bclassic\b/)) {
        profile = 'classic';
    } else if (s.match(/\bmodern\b/)) {
        profile = 'modern';
    } else {
        profile = tags.desktop ? 'classic' : 'modern';
        // tag.phone, tags.cordova ...
    }

    Ext.manifest = profile; // must match a build profile name
};
```

Universal applications
...with GeoExt

What does this mean for GeoExt?

- Correct inheritance of own classes
- Example: `GeoExt.component.Map`
- Reutilization: all except
`GeoExt.grid.column.Symbolizer`
- Components, data package (models and stores), utilities & mixins
- Tree structures via models

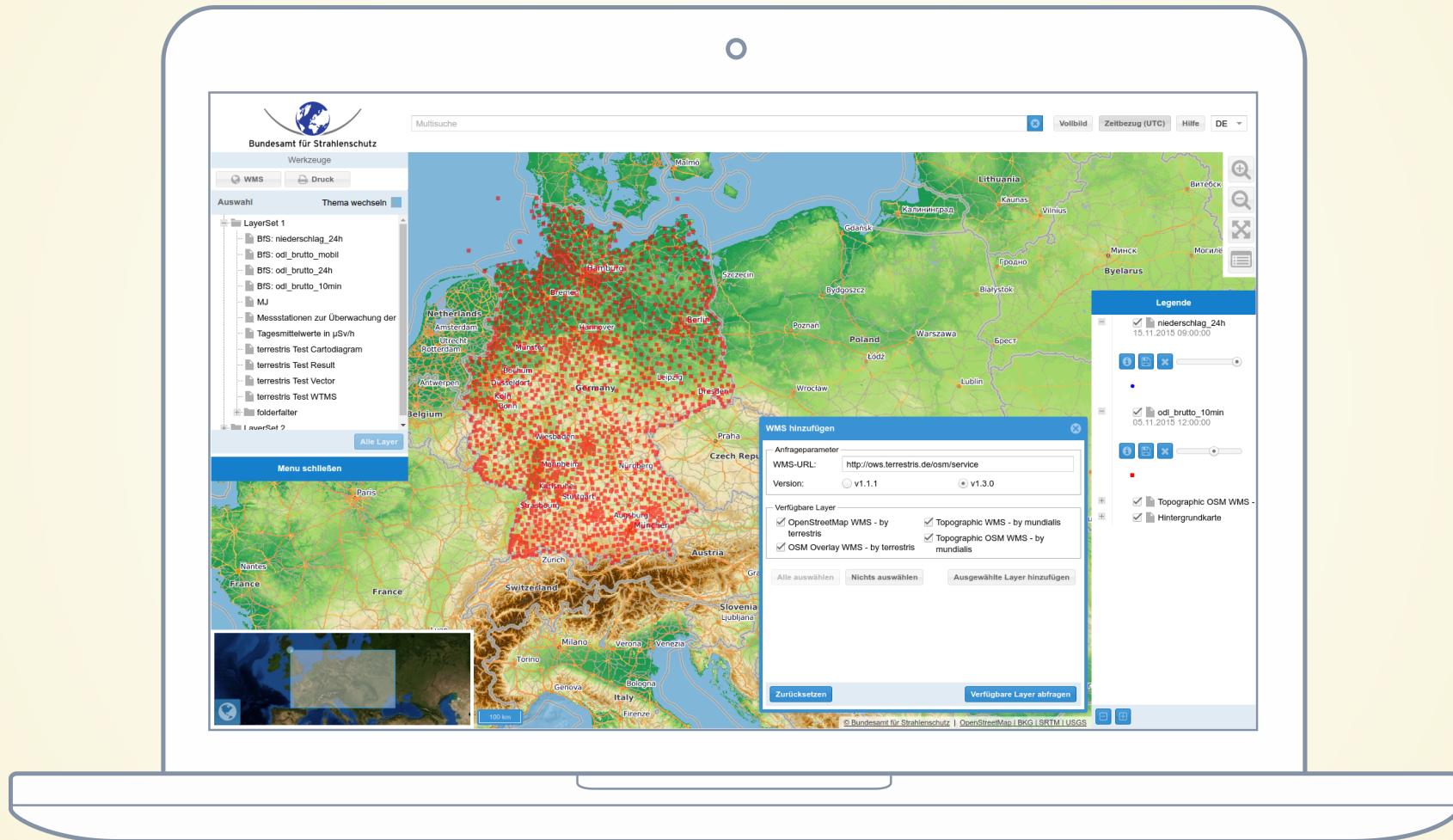
(currently)

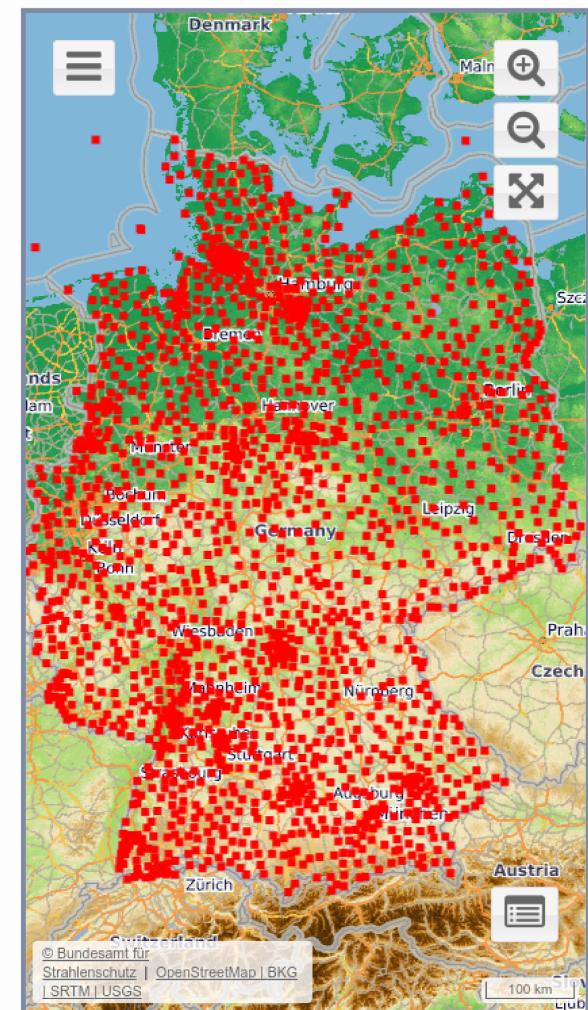
Not usable as package

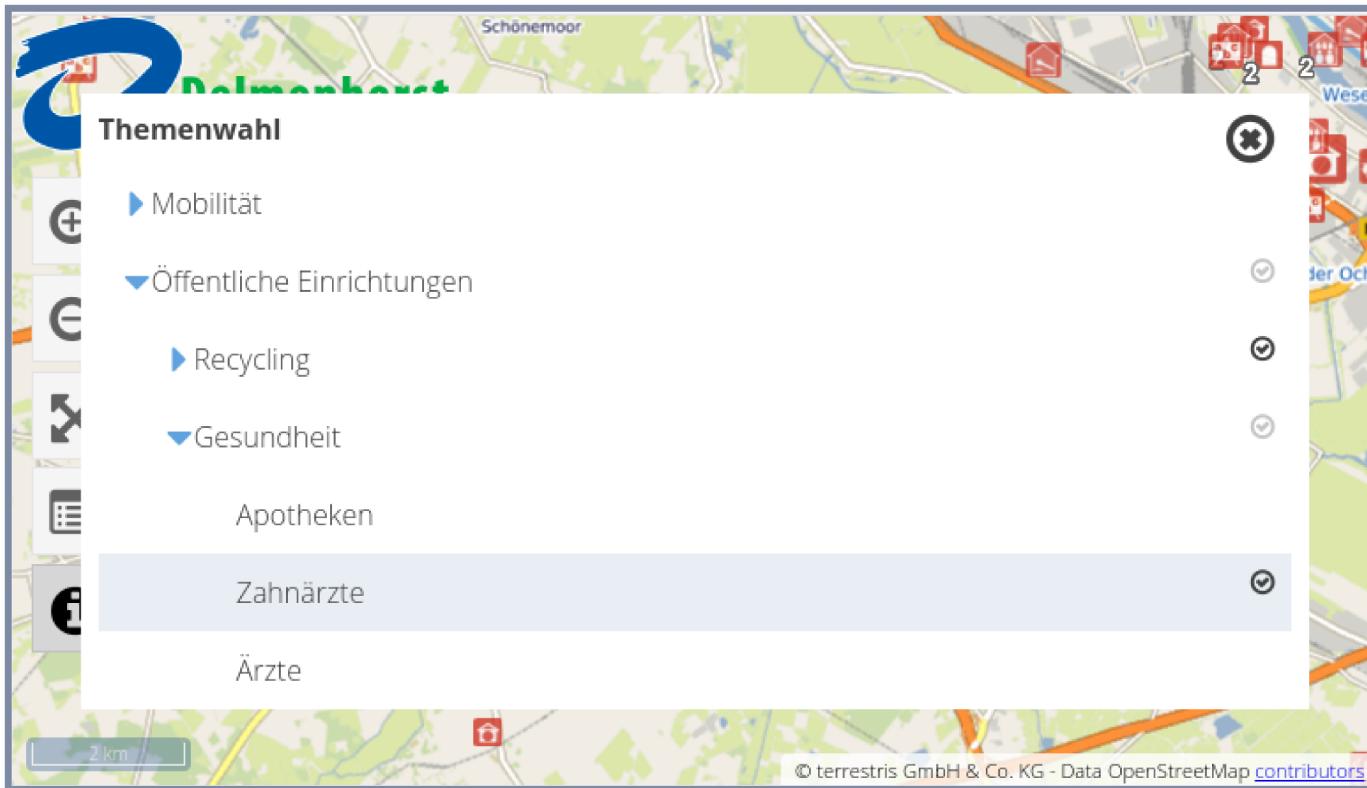
```
"classpath": [  
    "app",  
    "${toolkit.name}/src",  
    "packages/remote/GeoExt/src/component",  
    "packages/remote/GeoExt/src/data",  
    "packages/remote/GeoExt/src/mixin",  
    "packages/remote/GeoExt/src/util"  
]
```

Remove global "requires": ["GeoExt"] !!!

Examples







Conclusion

Conclusion

- Huge potential
- Sophisticated detail development (framework / app)
- Some unexpected pitfalls
- Attractive outcome
- Currently some improvements are financed (BfS)
- More collaboration desired
- Lot of ideas / little time
- Sponsors? Developers?

Thank you

Questions & comments?

Imprint

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They are based on this German GeoExt3 talk of the same authors.

Slides, PDF version, git repository