

(Freie) Geodaten

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E-Mail: andi@saerdnaer.de

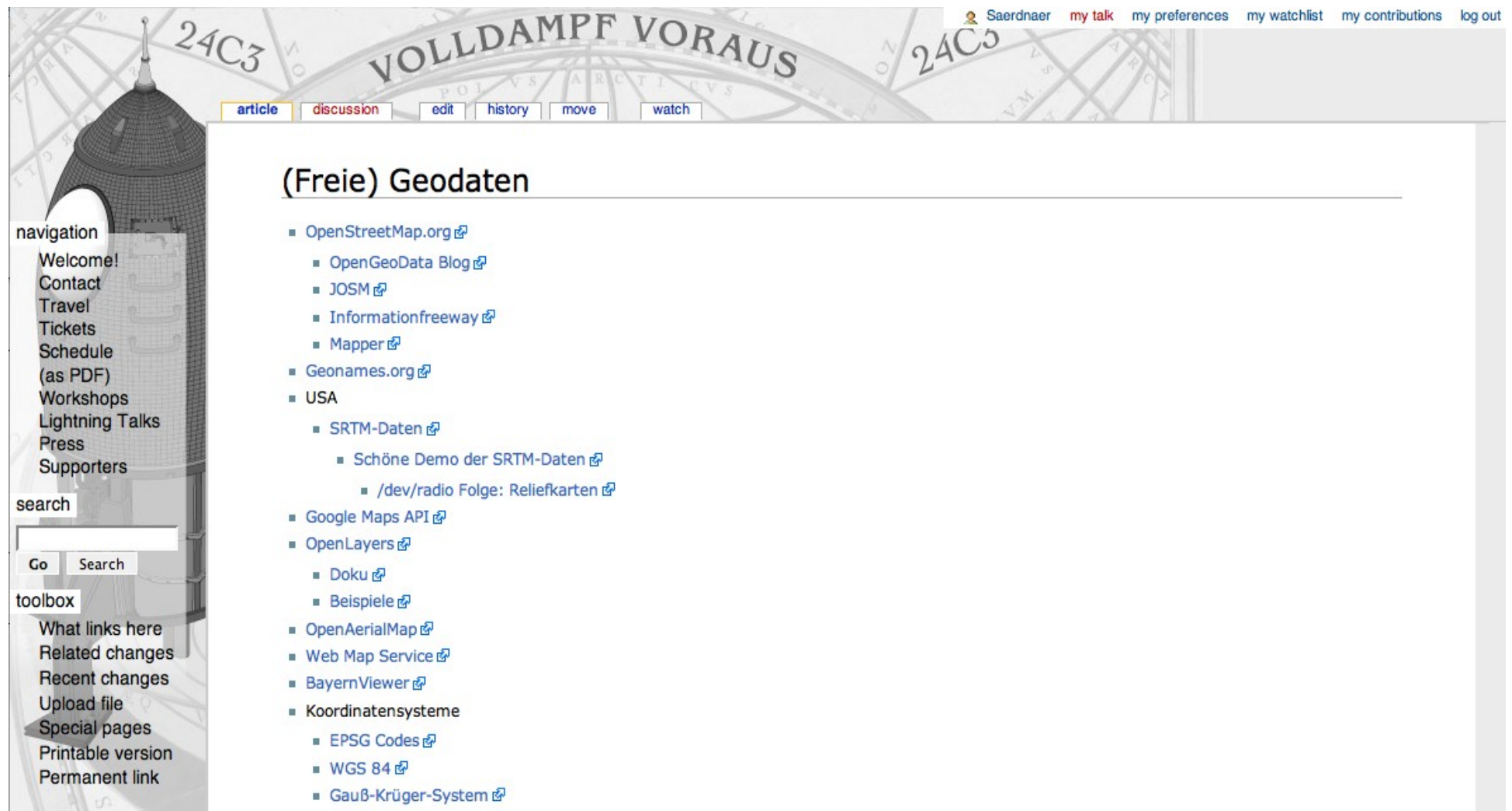
Jabber: [saerdnaer@jabber.ccc.de](jabber:saerdnaer@jabber.ccc.de)

Dect: 2206

24C3

Berlin 2007

<http://events.ccc.de/congress/2007/> (Freie)_Geodaten



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(Freie) Geodaten

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Open Street Map

- OpenGeoData Blog
- JOSM
- Informationfreeway
- „OpenStreetMap, the free Wiki world map“ von Frederik Rahm an Tag 3, Saal 3, 21:45



OpenStreetMap



The Free Wiki World Map

OpenStreetMap is a free editable map of the whole world. It is made by people like you.

OpenStreetMap allows you to view, edit and use geographical data in a collaborative way from anywhere on Earth.

OpenStreetMap's hosting is kindly supported by the [UCL VR Centre](#) and [bytemark](#).

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Users' diaries
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Map key

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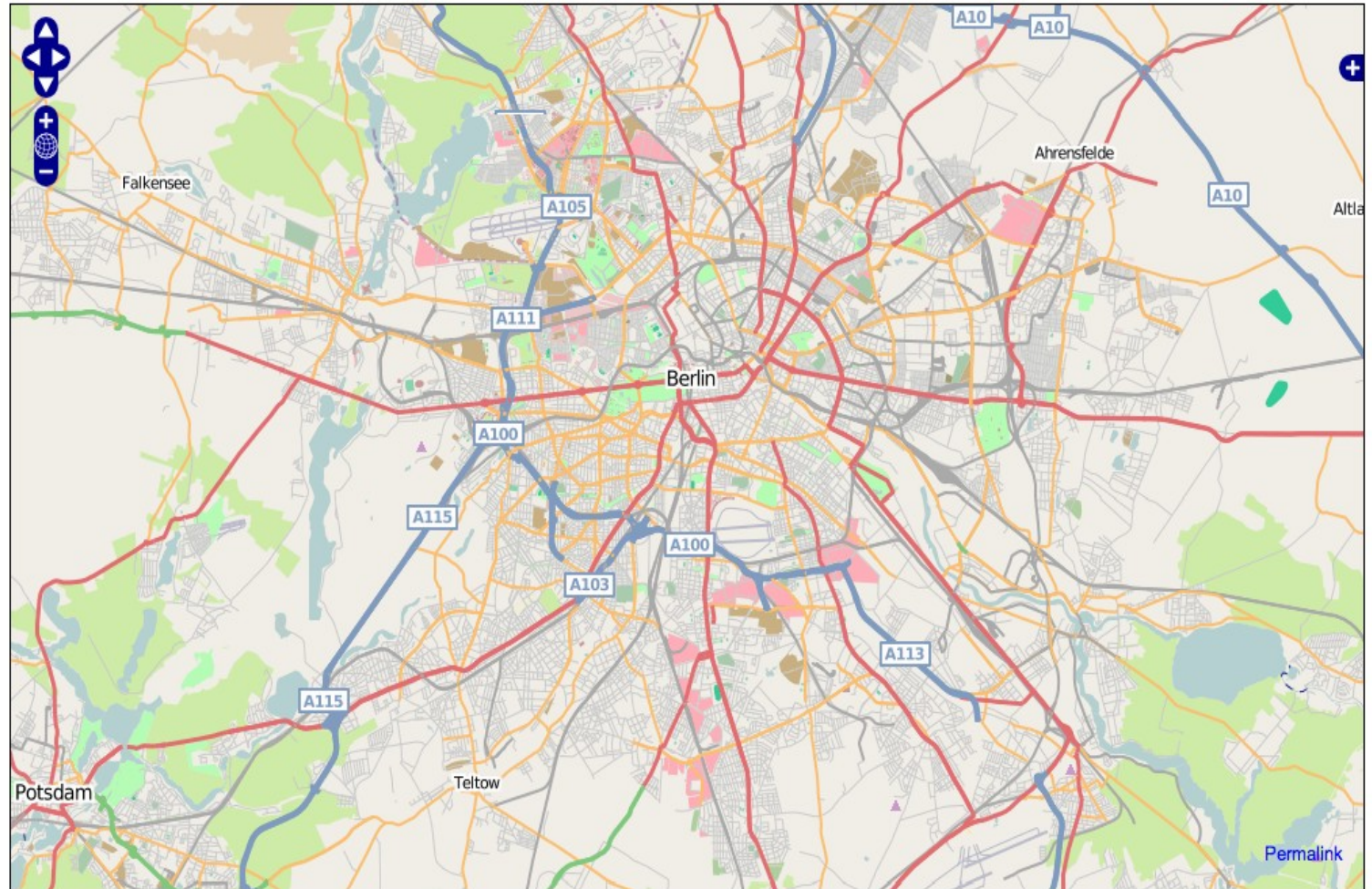
examples: 'Alkmaar', 'Regent Street, Cambridge', 'CB2 5AQ', or 'post offices near Lunen'
[more examples...](#)

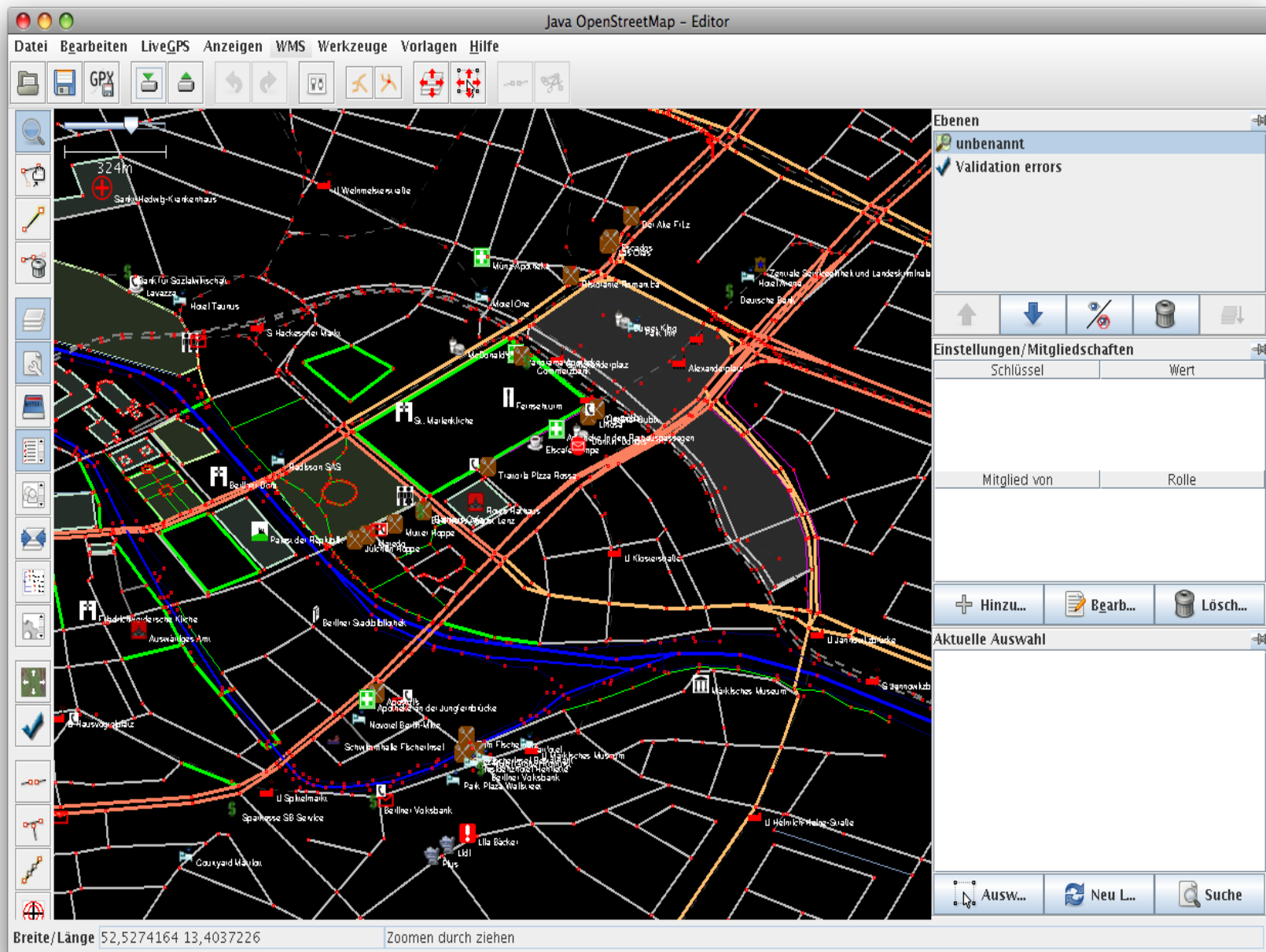
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Edit

GPS traces

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Open Street Map

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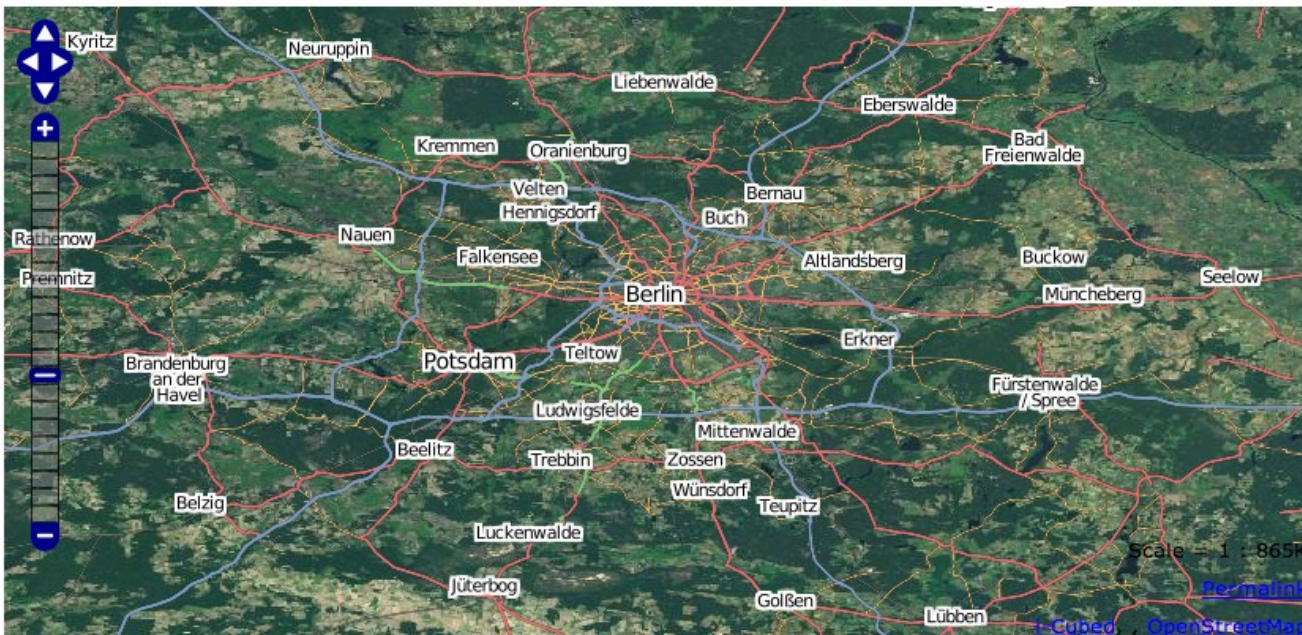


OpenAerialMap

OpenAerialMap

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OpenAerialMap is an open collection of aerial photographs, collected into a single coherent view of the world. Read the [tutorial](#) to find out how to upload your own imagery, check out the [wiki](#), or go straight to browsing [the map](#).



☒ Display OpenStreetMap Data

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Map center : N 52° 31' 30" E 13° 24' 49"

[ExploreOurPla.net](#) [google earth](#) [tagzania](#) [mapquest](#)

Karte Satellit Hybrid

Berlin, Stadt ca. 36 m
Germany » Berlin » Berlin, Stadt
third-order administrative division
population : 3387828
N 52° 31' 23" E 13° 24' 49"
52.5233 / 13.41377
GeoNameId : 6547383

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features

- city, village, ... ✓
- mountain, hill, rock, ... ✓
- stream, lake, ... ✓
- country, state, region, ... ✓
- parks, area, ... ✓
- road, railroad ✓
- spot, building, farm ✓
- forest, heath, ... ✓
- undersea ✓

Name	country	feature	km to center
1 Berlin, Stadt	Germany	third-order administrative division	0.06 km
2 Berlin, Stadt	Germany	fourth-order administrative division	0.06 km
3 Park Inn Berlin-Alexanderplatz	Germany	hotel	0.08 km
4 Park Inn Berlin	Germany	hotel	0.12 km

Google Maps API



Search
e.g. "ajax apis" or "open source"

[Site Directo](#)

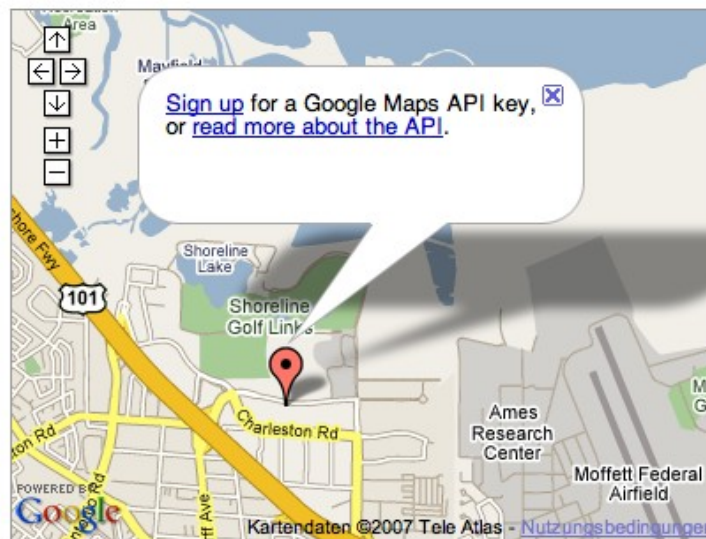
Google Maps API

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What is the Google Maps API?

The Google Maps API lets you embed Google Maps in your own web pages with JavaScript. The API provides a number of utilities for manipulating maps (just like on the <http://maps.google.com> web page) and adding content to the map through a variety of services, allowing you to create robust maps applications on your website.

Now! [Google Mapplets](#) - Build mini-applications to embed on the Google Maps site itself.



How do I start?

1. [Sign up for a Google Maps API key.](#)
2. Read the [Maps API Concepts](#).
3. Check out some [Maps examples](#).
4. Read the [Maps API Reference](#).

Featured Video



Developer Day 2007 - Google Maps API Introduction

Open Layers

- Doku
- Beispiele

 **OpenLayers**

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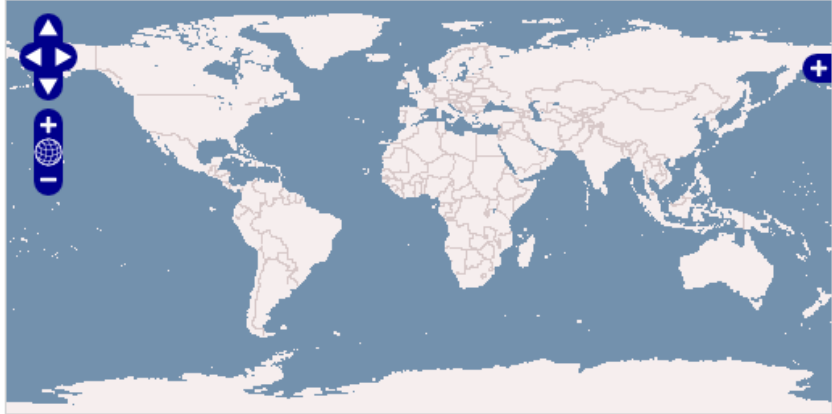
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Get OpenLayers Now!!
Latest code:

- [Link to the hosted version](#)
- 2.5 (Stable): [.tar.gz](#) | [.zip](#)
- [2.5 Release Notes](#)
- [Class Documentation](#)
- [See Screenshots](#)

About...
OpenLayers makes it easy to put a dynamic map in any web page. It can display map tiles and markers loaded from any source. [MetaCarta](#) developed the initial version of OpenLayers and gave it to the public to further the use of geographic information of all kinds. OpenLayers is completely free, Open Source JavaScript, released under the BSD License.

For Developers!
OpenLayers is a pure JavaScript library for displaying map data in most modern web browsers, with no server-side dependencies. OpenLayers implements a (still-developing) [JavaScript API](#) for building rich web-based geographic applications, similar to the Google Maps and MSN Virtual Earth APIs, with one important difference -- OpenLayers is Free Software, developed for and by the Open Source software community.



Put an open map widget in any web page!
Double-click to zoom in, and drag to pan. Hold down the shift key and drag to zoom to a particular region.

Furthermore, OpenLayers implements industry-standard methods for geographic data access, such as the OpenGIS Consortium's Web Mapping Service (WMS) and Web Feature Service (WFS) protocols. Under the hood, OpenLayers is written in object-oriented JavaScript, using components from [Prototype.js](#) and the [Rico](#) library. The OpenLayers code base already has hundreds of [unit tests](#), via the [Test.AnotherWay](#) framework.

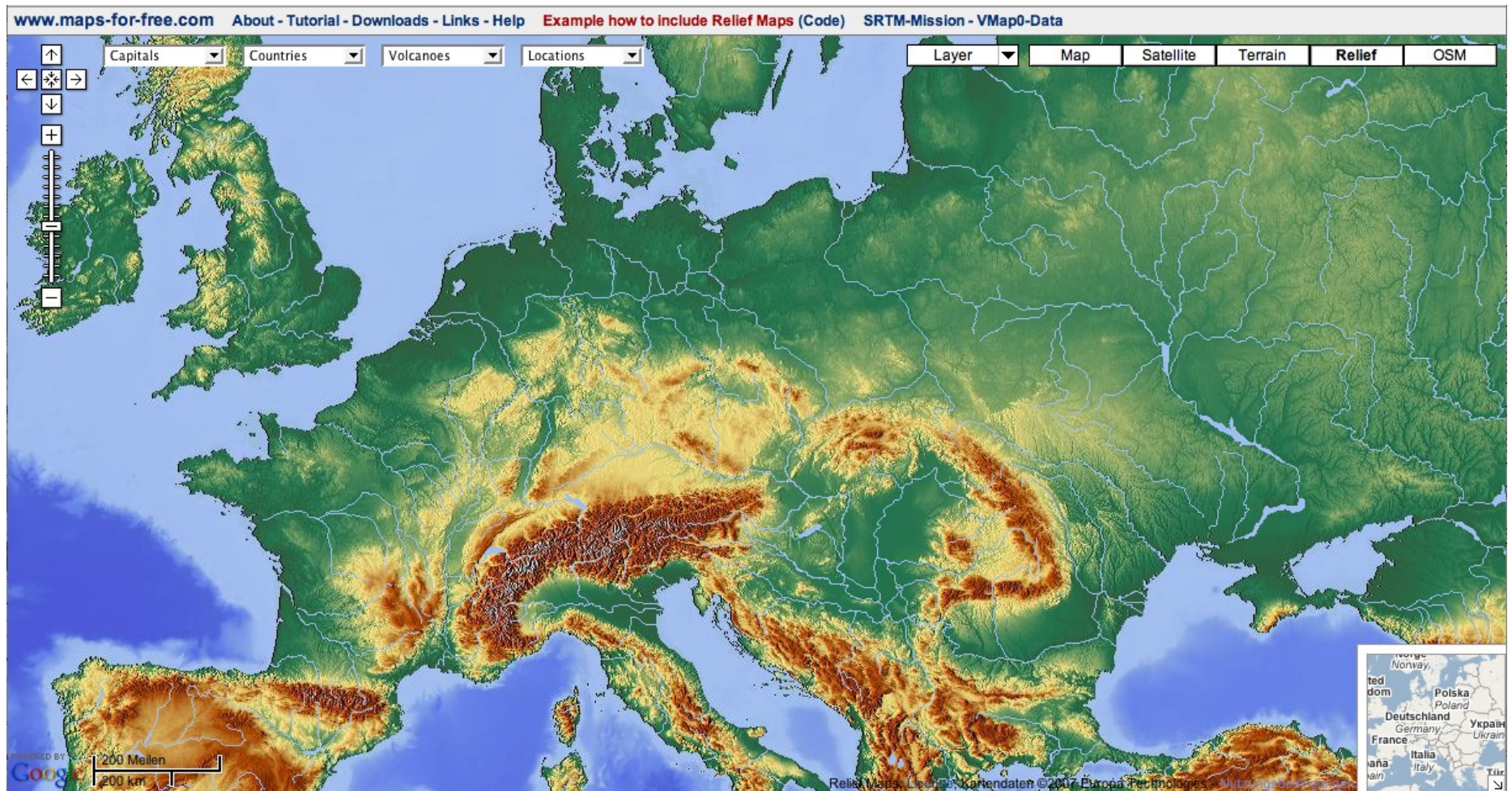
OpenLayers is becoming a project of the [Open Source Geospatial Foundation](#).

As a framework, OpenLayers is intended to separate map *tools* from map *data* so that all the tools can operate on all the data sources. This separation breaks the proprietary silos that earlier GIS revolutions have taught civilization to avoid. The mapping revolution on the public Web should benefit from the experience of history.

Geodaten aus den USA

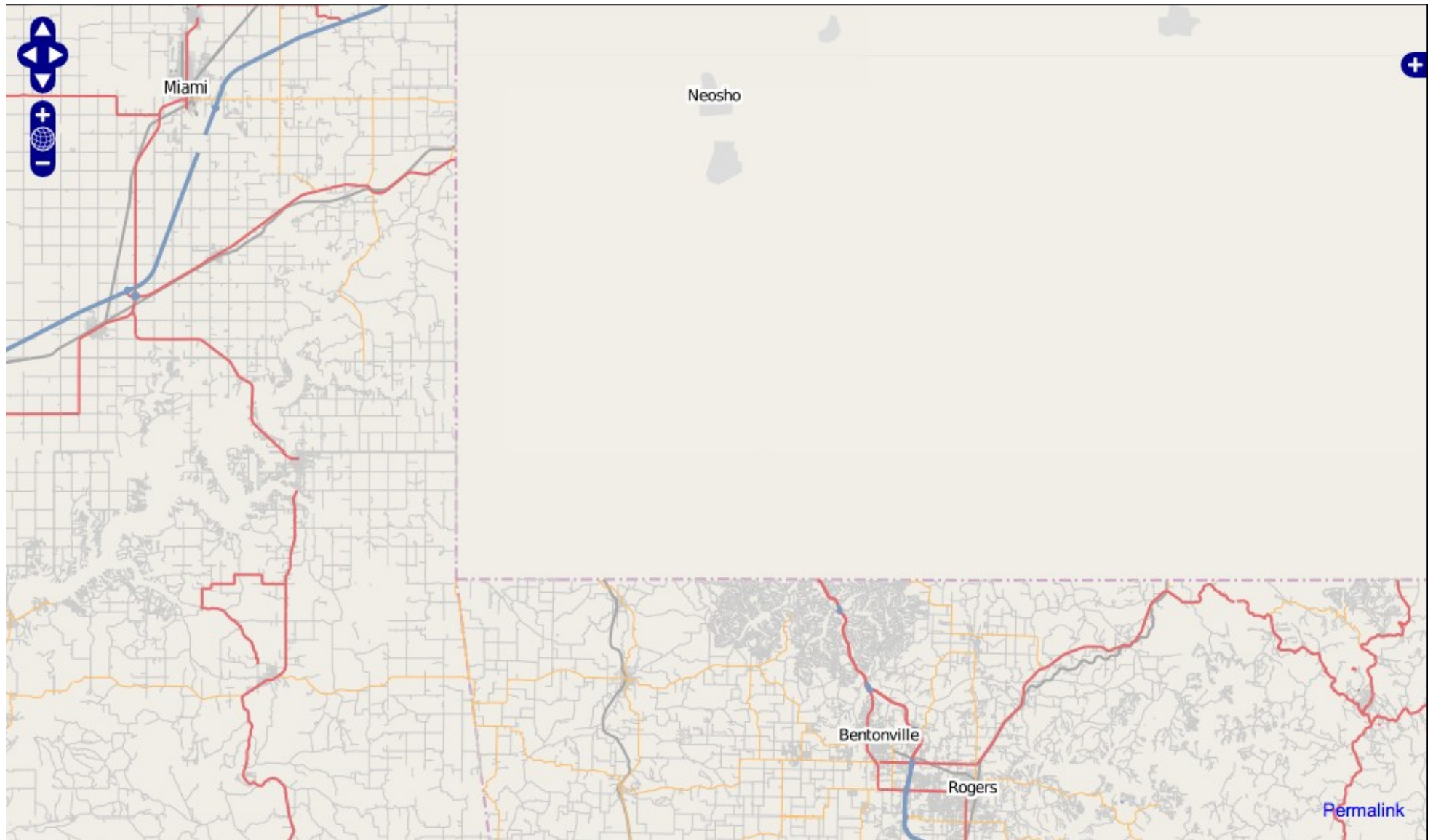
- Daten die von Bundesmitarbeitern erfasst wurden müssen frei zugänglich sein (Public Domain)
- SRTM-Daten
 - <http://www.maps-for-free.com/>
 - /dev/radio Folge #87: Reliefkarten
- Tiger-Daten
 - Import in OSM

<http://www.maps-for-free.com/>



Geodaten aus den USA

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- SRTM-Daten
 - <http://www.maps-for-free.com/>
 - /dev/radio Folge #87: Reliefkarten
- Tiger-Daten
 - Import in OSM



Web Map Service

- <http://domain.tld/xyz.cgi>
 - ?VERSION=1.0.0
 - &REQUEST=GetCapabilities

Web Map Service

```
- <WMT_MS_Capabilities version="1.0.0">
  - <!--
    MapServer version 5.0.0 OUTPUT=GIF OUTPUT=PNG OUTPUT=JPEG OUTPUT=WBMP OUTPUT=SVG SUPPORTS=PROJ SUPPORTS=FRE.
  -->
  + <Service></Service>
  - <Capability>
    - <Request>
      - <Map>
        - <Format>
          <GIF/>
          <PNG/>
          <JPEG/>
          <WBMP/>
          <SVG/>
        </Format>
        - <DCPType>
          - <HTTP>
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            <Post onlineResource="http://www.geodaten.bayern.de/ogc/getogc.cgi?"/>
          </HTTP>
        </DCPType>
      </Map>
    + <Capabilities></Capabilities>
    + <FeatureInfo></FeatureInfo>
  </Request>
  + <Exception></Exception>
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    - <Title>
      Web Map Service der Bayerischen Vermessungsverwaltung
    </Title>
    - <SRS>
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    </SRS>
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    <BoundingBox SRS="EPSG:31468" minx="4.28e+06" miny="5.22e+06" maxx="4.64e+06" maxy="5.61e+06"/>
  </Layer>
</Capability>
</WMT_MS_Capabilities>
```

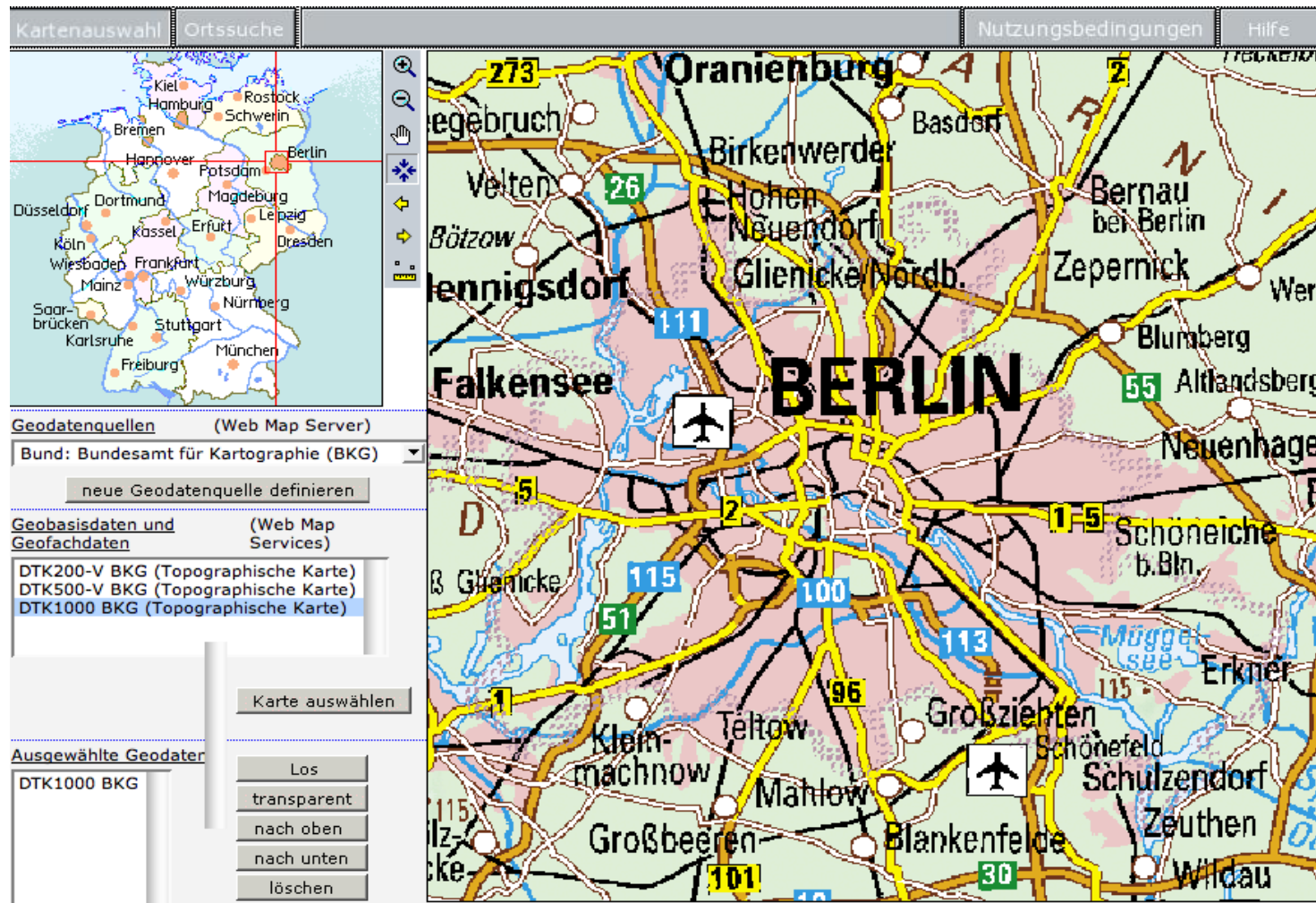
Web Map Service

- <http://domain.tld/xyz.cgi>
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 - &REQUEST=GetMap
 - &layers=DOP
 - &width=300&height=300
 - &srs=EPSG:31468
 - &BBOX=8.89292,47.0828,13.9782,50.6269
 - &format=image/jpeg

Koordinatensysteme

- EPSG Codes
 - EPSG:4326 WGS84 World Geodetic System
 - EPSG:31466 = Gauss Krüger 2. Streifen (Bessel)
 - EPSG:31467 = Gauss Krüger 3. Streifen (Bessel)
 - EPSG:31468 = Gauss Krüger 4. Streifen (Bessel)
 - EPSG:31469 = Gauss Krüger 5. Streifen (Bessel)

WMSeS der Vermessungsämter



WMSeS der Vermessungsämter

```
- <ThemeList>
- <Theme name="Geobasisdaten">
  <Service alias="LVA BY" type="OGC_WMS" url="http://deutschlandviewer.bayern.de/ogc/getogc.cgi"/>
  <Service alias="LVA HE" type="OGC_WMS" url="http://wmssrv.geo.hessen.de/ias/cgi-bin/siscgi.exe"/>
  <Service alias="LVA MV" type="OGC_WMS" url="http://www.gaia-mv.de/dienste/Rasterfarbig"/>
  <Service alias="LVA MV" type="OGC_WMS" url="http://www.gaia-mv.de/dienste/Rastergrau"/>
  <Service alias="LVA MV" type="OGC_WMS" url="http://www.gaia-mv.de/dienste/DOP"/>
  <Service alias="LVA MV" type="OGC_WMS" url="http://www.gaia-mv.de/dienste/DOPDLM"/>
  <Service alias="LVA NI" type="OGC_WMS" url="http://www.mapserver.niedersachsen.de/freezoneogc/mapserverogc"/>
  <Service alias="LVA NW VG" type="OGC_WMS" url="http://www.geoserver.nrw.de/GeoOgcWms1.3/servlet/NW2"/>
  <Service alias="LVA NW ?K500" type="OGC_WMS" url="http://www.geoserver.nrw.de/GeoOgcWms1.3/servlet/NRW500"/>
  <Service alias="LVA NW TK100" type="OGC_WMS" url="http://www.geoserver.nrw.de/GeoOgcWms1.3/servlet/TK100"/>
  <Service alias="LVA NW TK50" type="OGC_WMS" url="http://www.geoserver.nrw.de/GeoOgcWms1.3/servlet/TK50"/>
  <Service alias="LVA NW TK25" type="OGC_WMS" url="http://www.geoserver.nrw.de/GeoOgcWms1.3/servlet/TK25"/>
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  <Service alias="LVA TH" type="OGC_WMS" url="http://www.webmap-test.thueringen.de/deegreewms/wms"/>
  <Service alias="BKG" type="OGC_WMS" url="http://gdz1.leipzig.ifag.de:80/servlet/com.esri.wms.Esrimap?servicename=dtk2000"/>
</Theme>
- <Theme name="Geofachdaten">
  <Service alias="LVA NW BK50" type="OGC_WMS" url="http://www.gis.nrw.de/wms/BK50?Service=WMS"/>
  <Service alias="LVA NW GEPNRW" type="OGC_WMS" url="http://www.geoserver.nrw.de/GeoOgcWms1.3/servlet/GEPNRW"/>
  <Service alias="LVA NW LEPNRW" type="OGC_WMS" url="http://www.geoserver.nrw.de/GeoOgcWms1.3/servlet/LEPNRW"/>
</Theme>
</ThemeList>
```

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