

Layer-Management für Oracle Spatial/Locator mit JGISShell

Andreas W. Bartels

DOAG Kassel 22.09.2017



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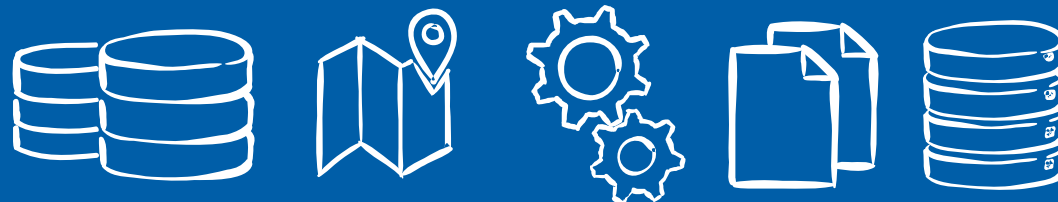
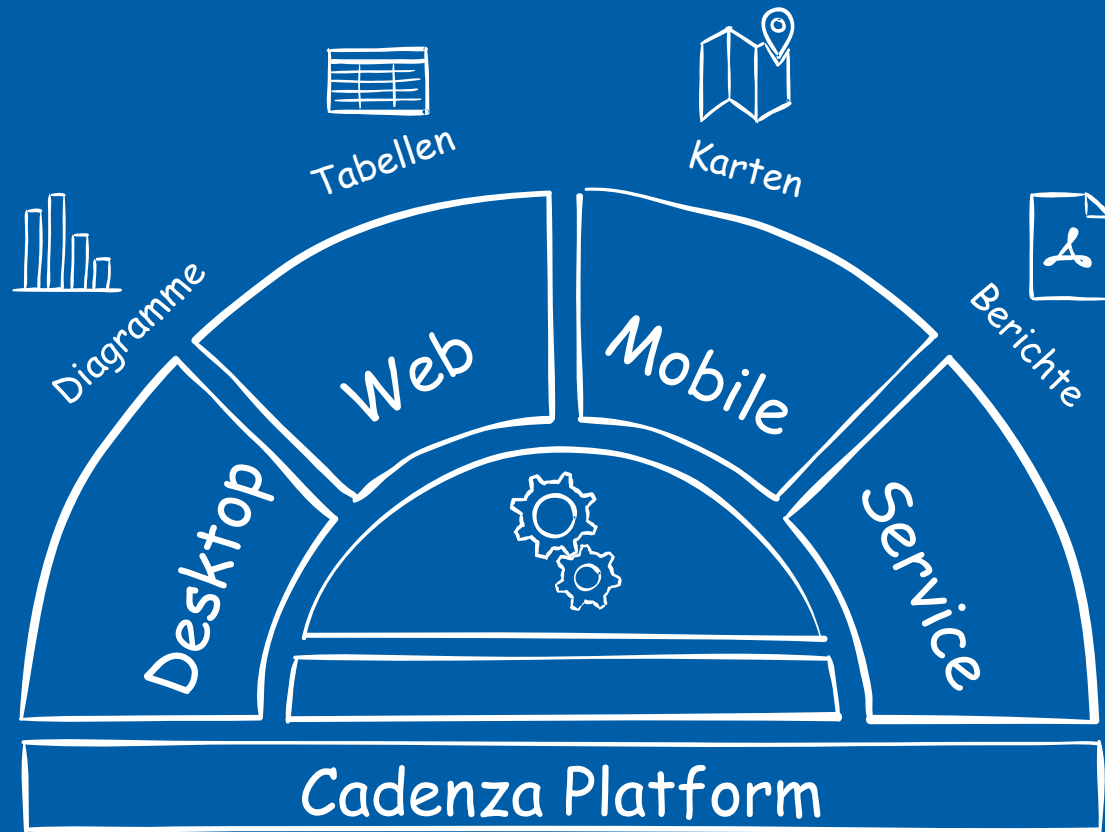
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**Disy Informationssysteme
GmbH
Software Architekt**

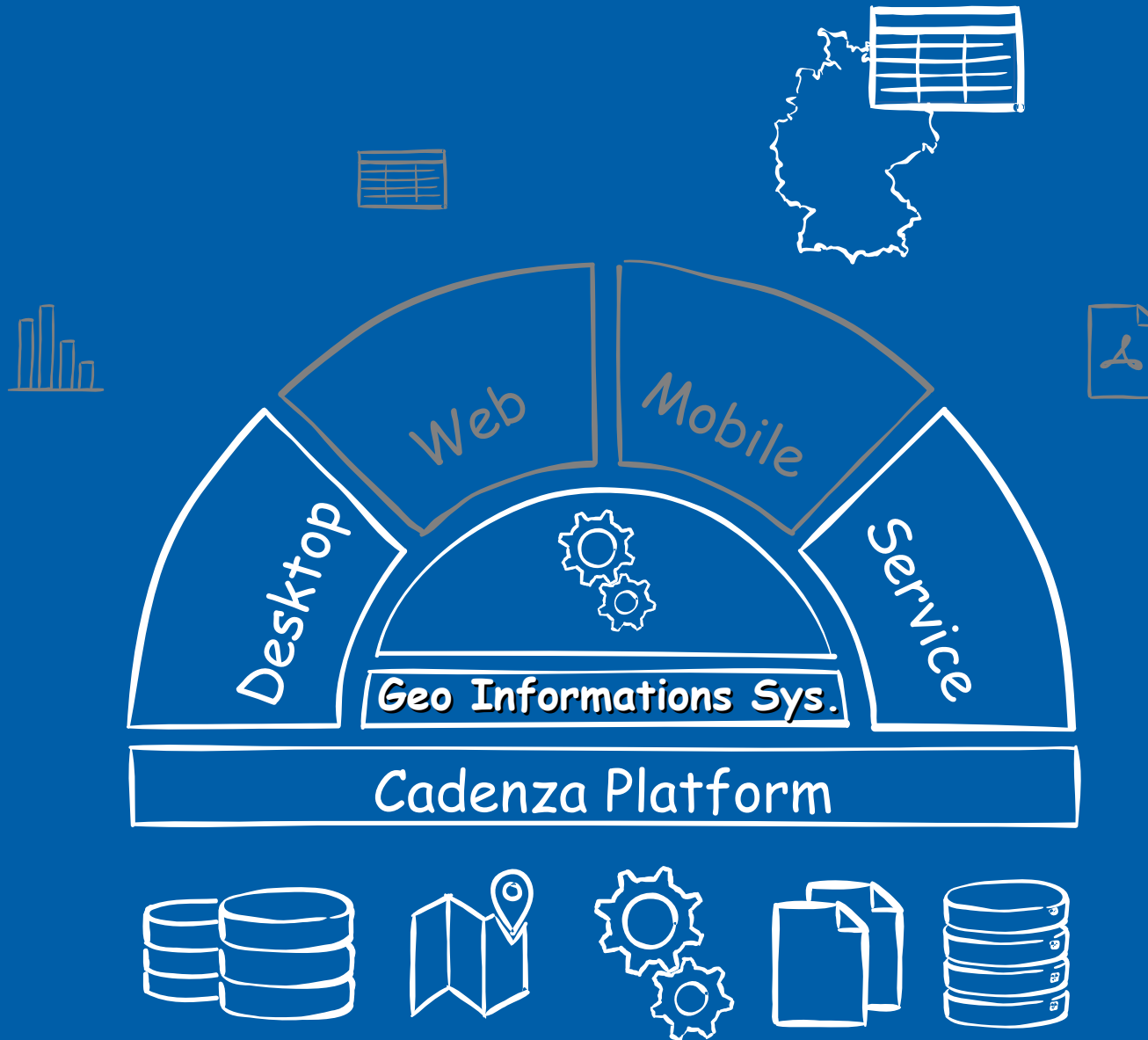
*andreas.bartels@disy.net
<https://github.com/AndreasWBartels>*



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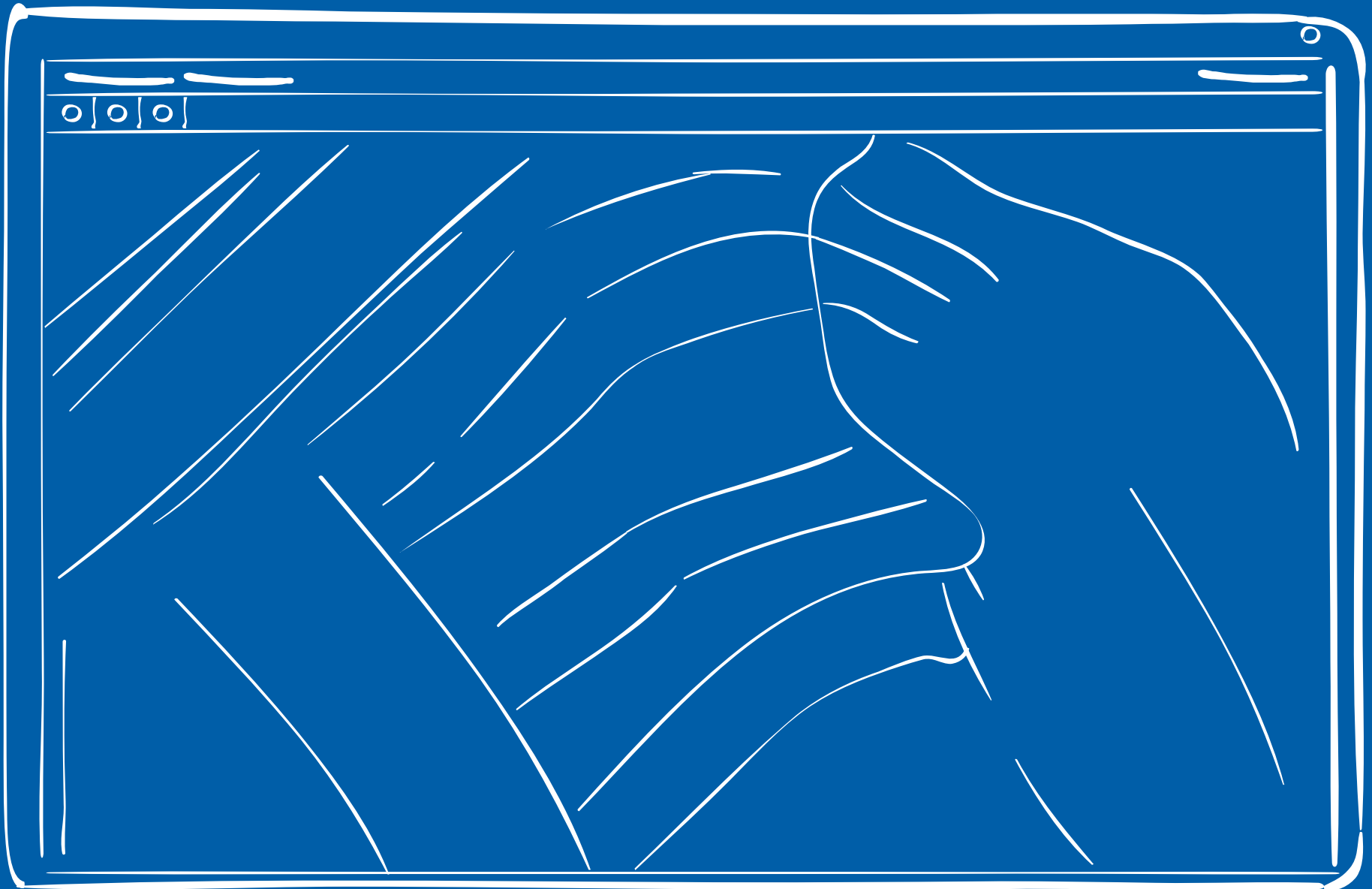
Ich bei  Disy



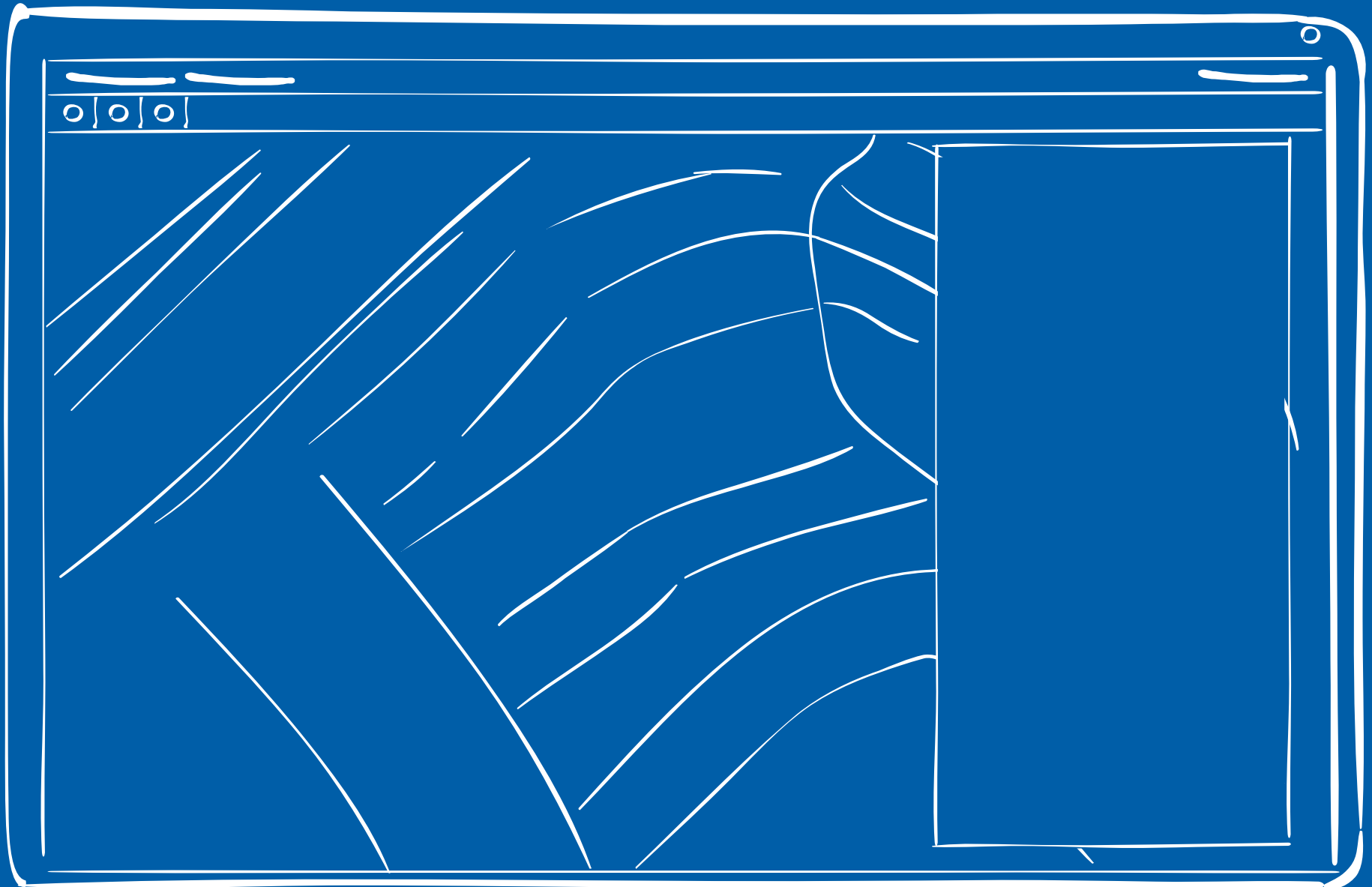
JGISShell

Was ist
das ???

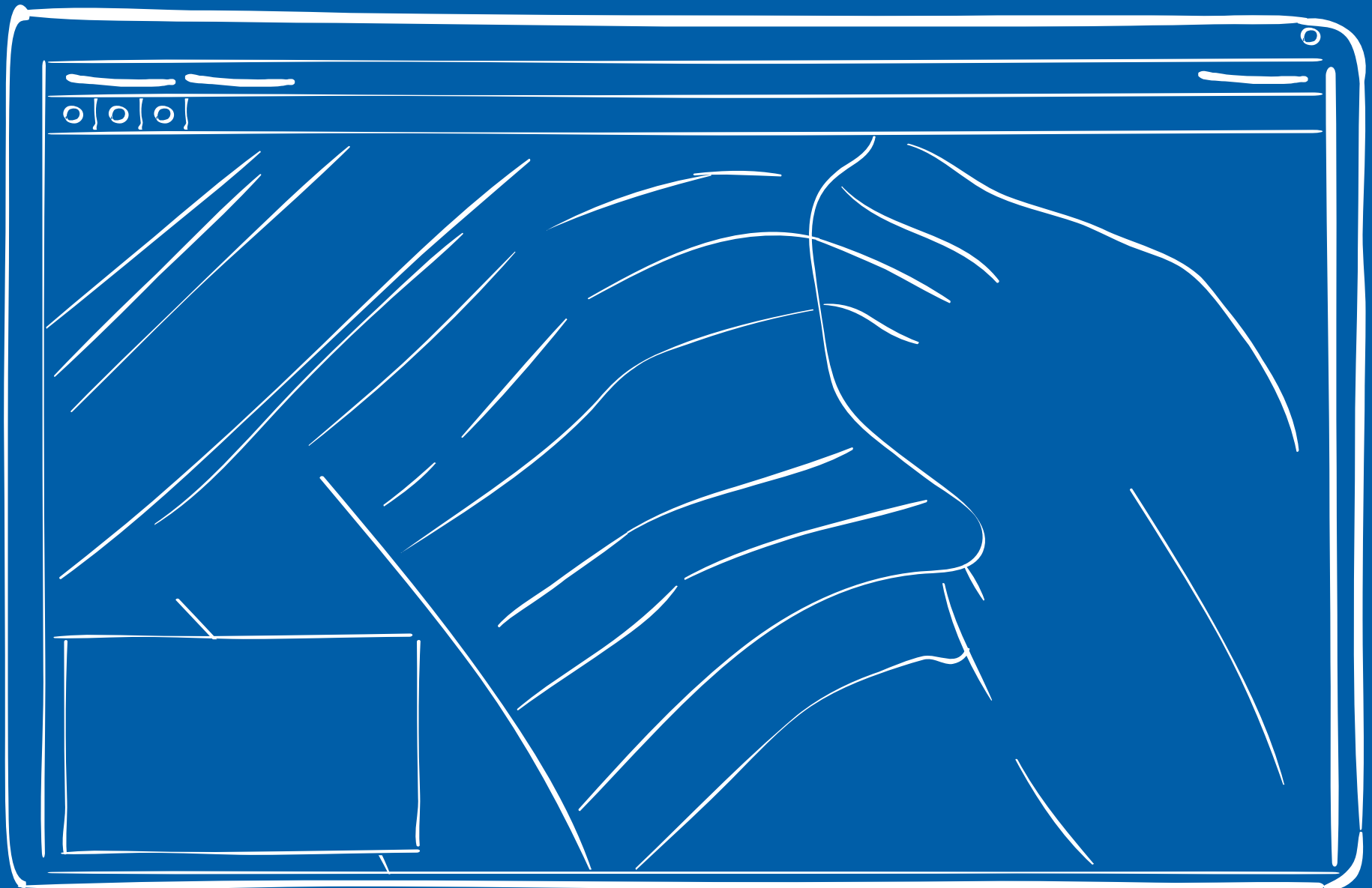
JGISShell - ist - ein - Mapviewer



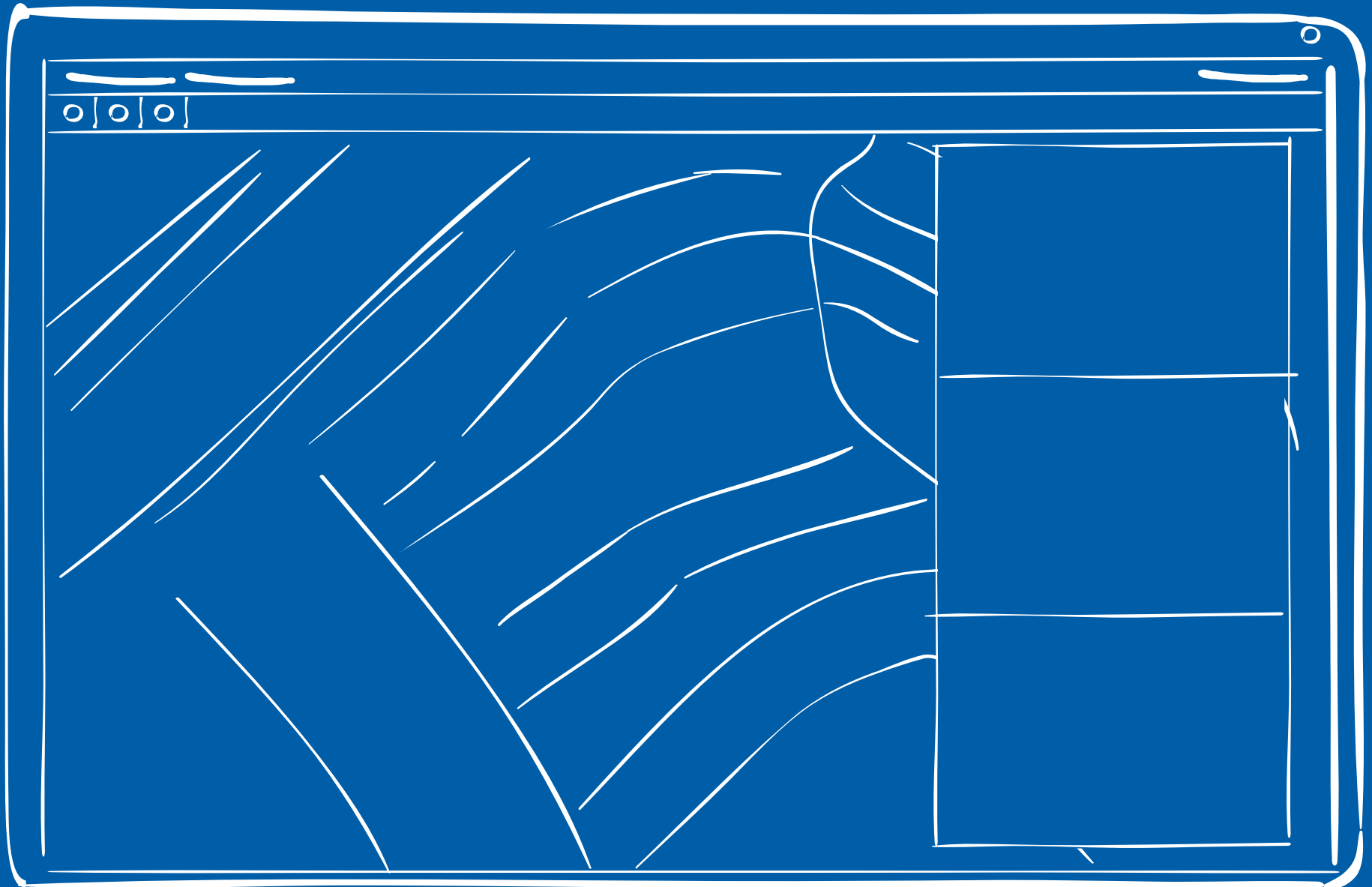
JGISShell - mit - Legende



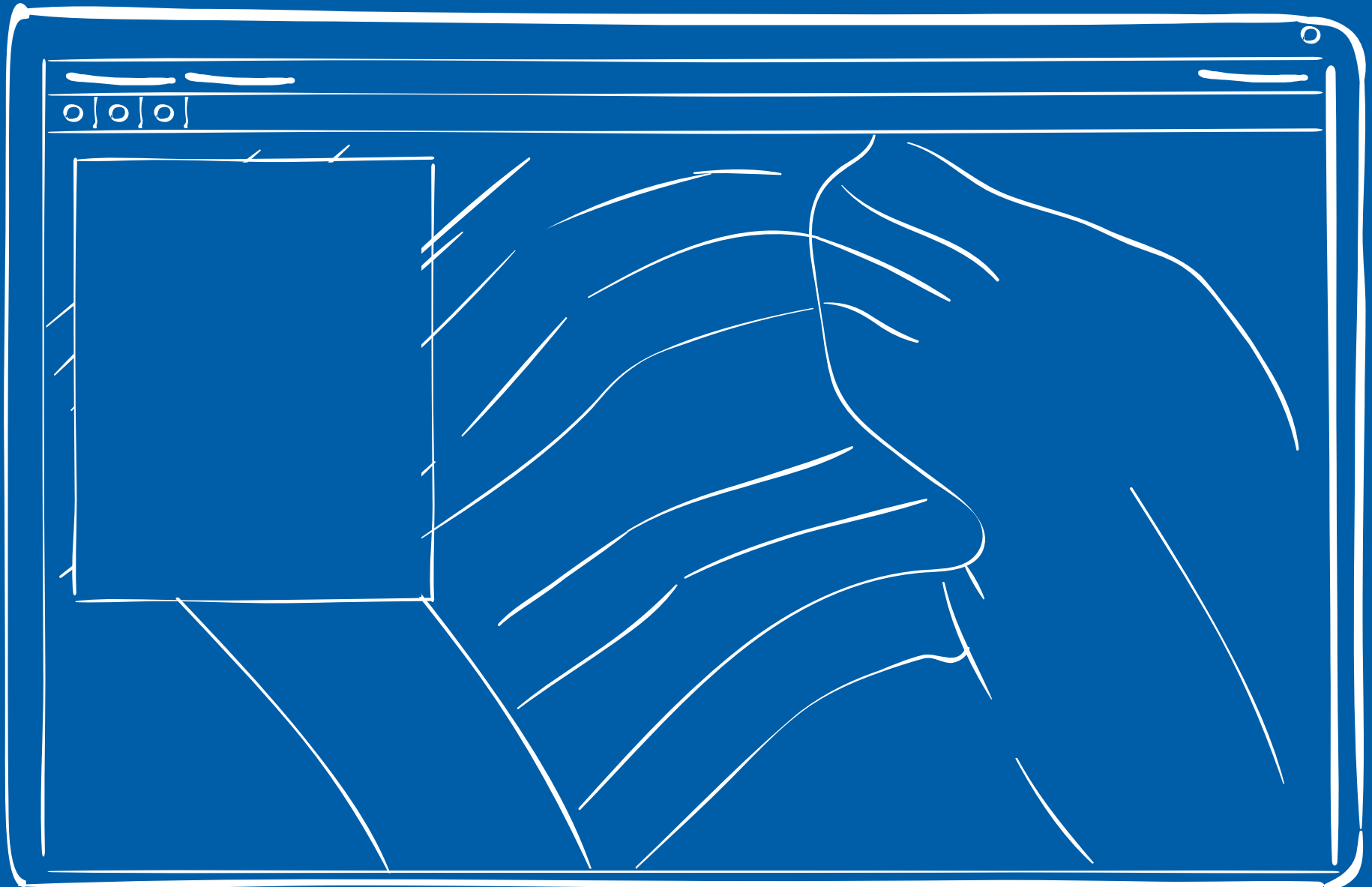
JGISShell - mit - Locator



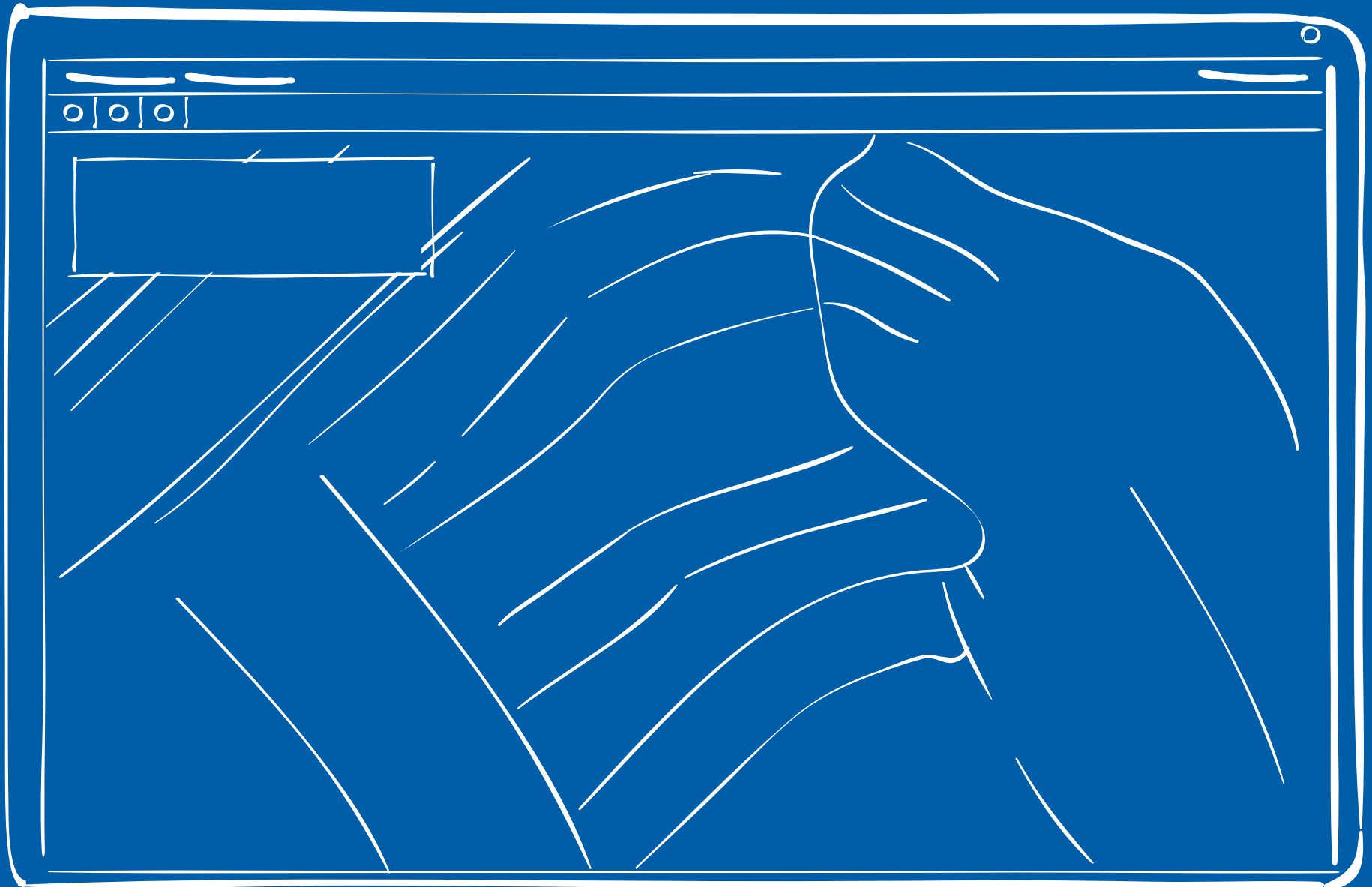
JGISShell - mit - Detail Maps



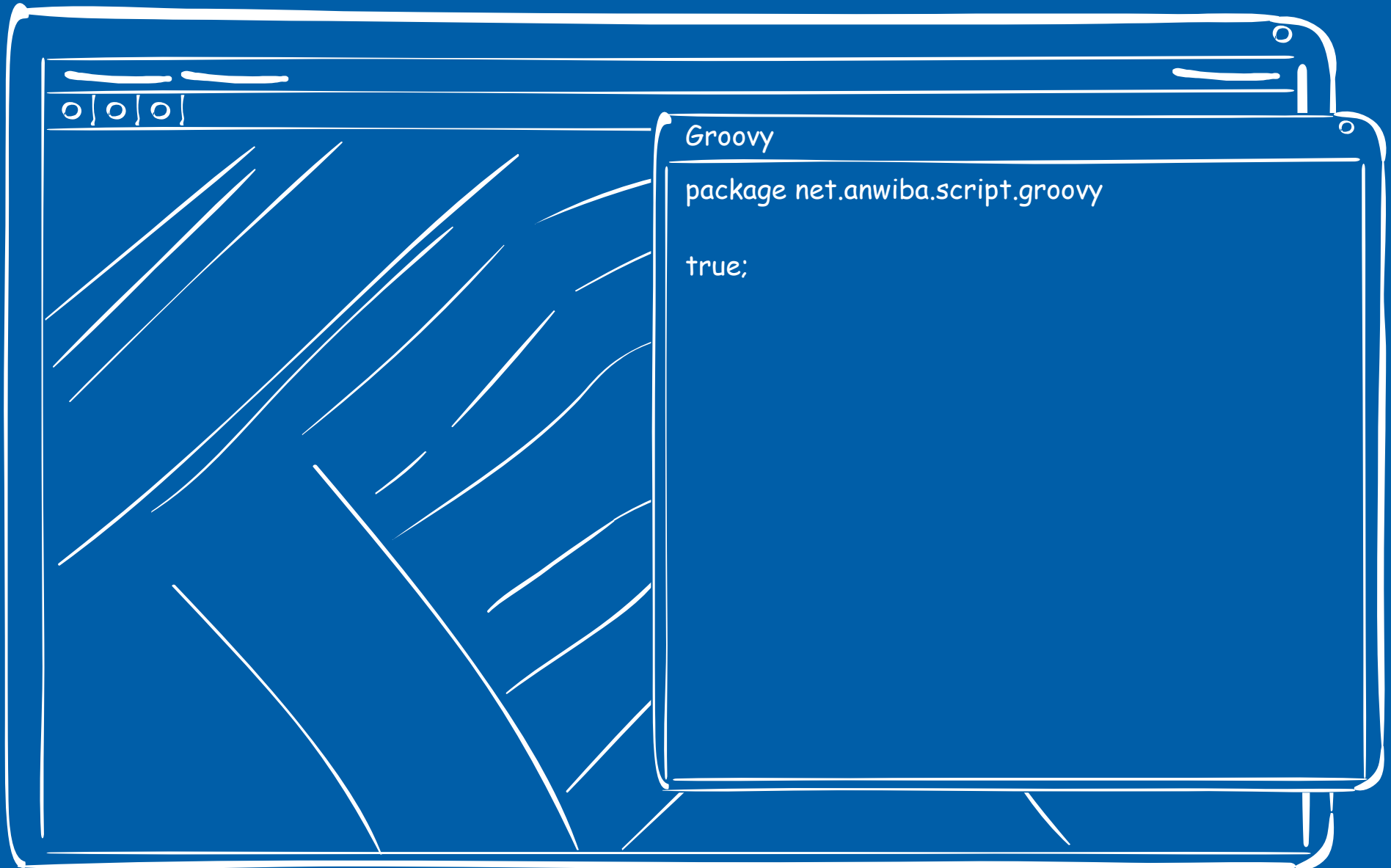
JGISShell - mit - Gazetteer



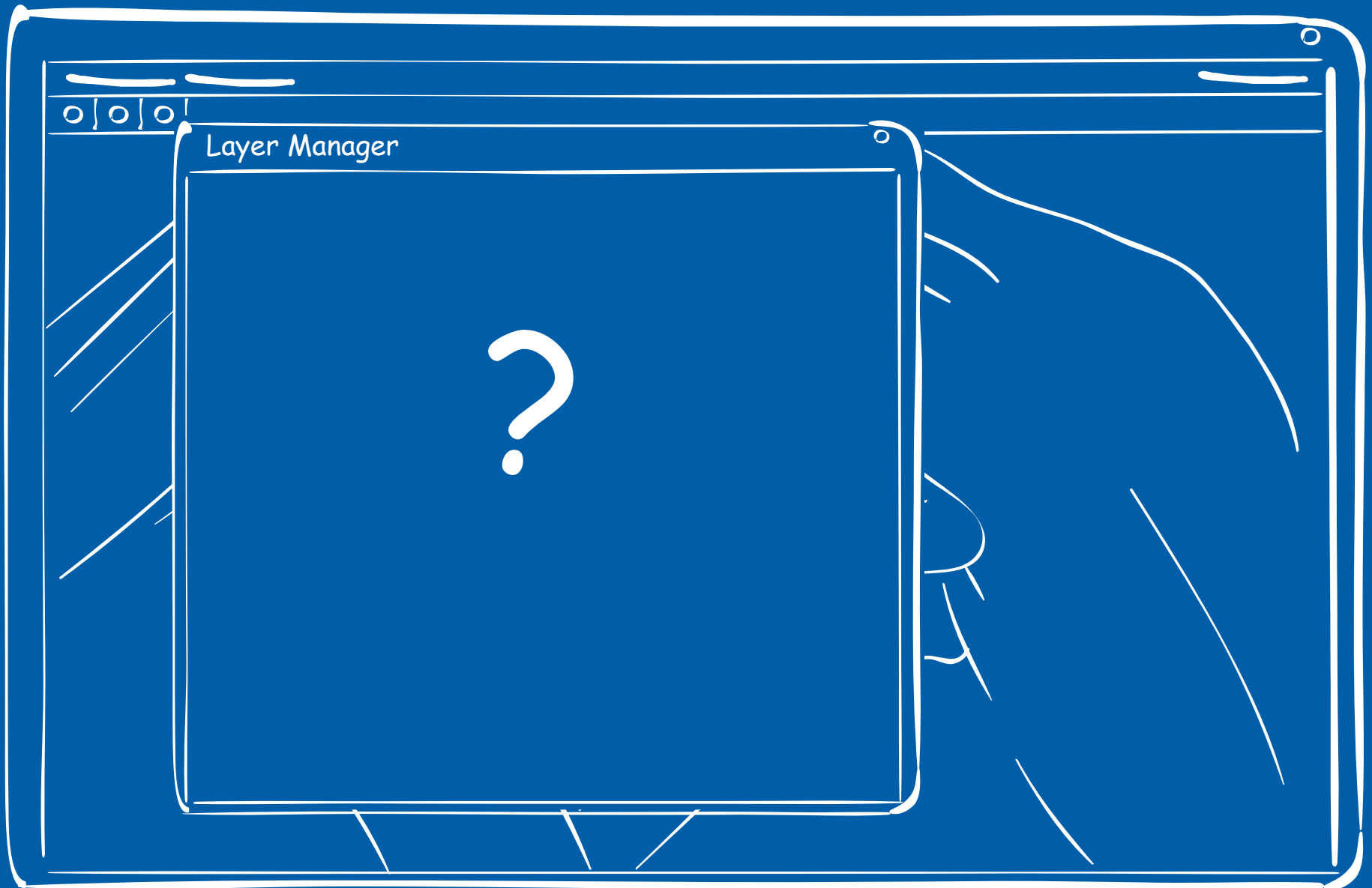
JGISShell -mit- Attributesuche



JGISShell -mit- Scripting



und - ein - Layer - Manager



und - für - den - Entwickler

Eine Forschungs- reise

Layer Management

Was ist
das ???

Layer - Management - google - findet

😊 *Photoshop Layer Management | Visualizing Architecture*

😊 *About Layer Management | AutoCAD Architecture*

😞 *Egg Layer Management Articles*

😞 ...

Layer Management

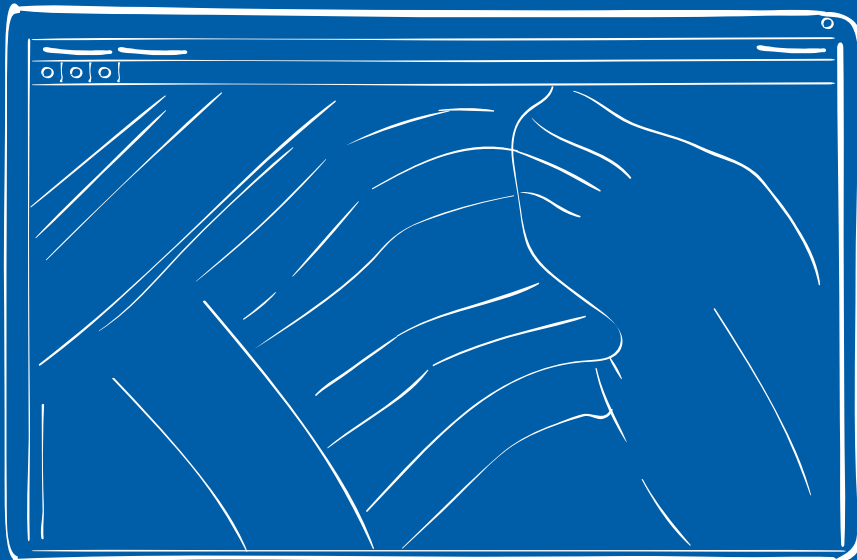


Layer Management



Layer Management / Architekturen

(Un)Organisierte Fachkraft



Layer Management / Architekturen

Service Deployment



Erfassung



Testbetrieb

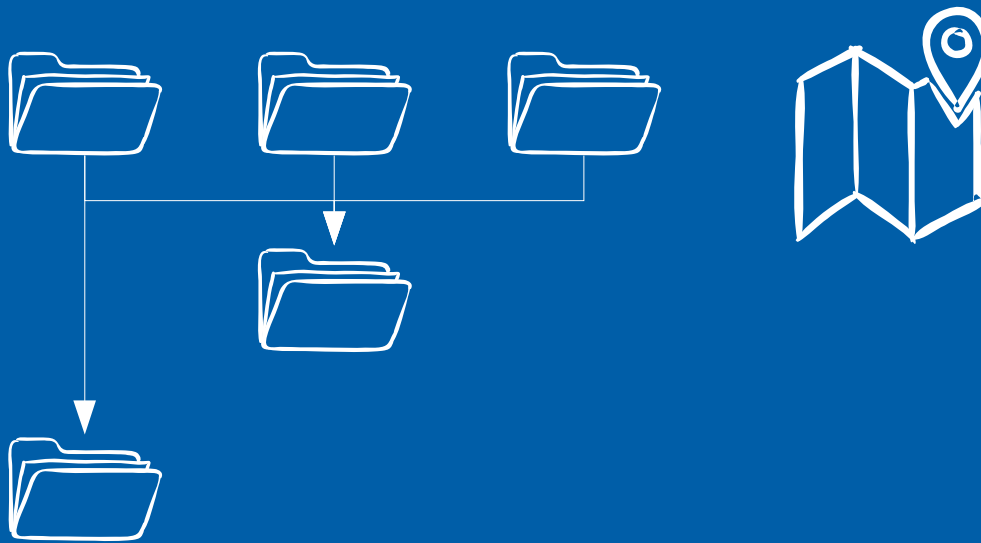


Produktion

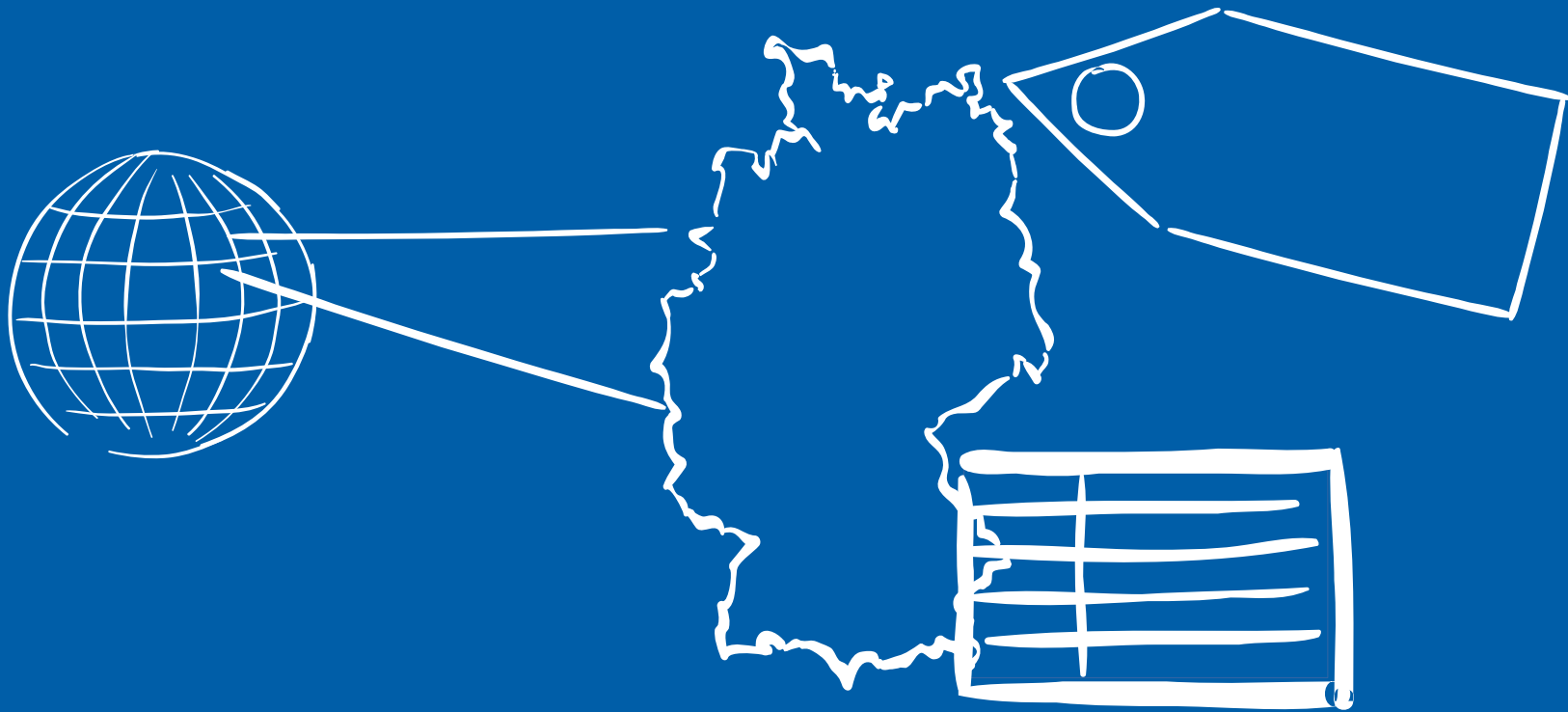


Layer Management / Architekturen

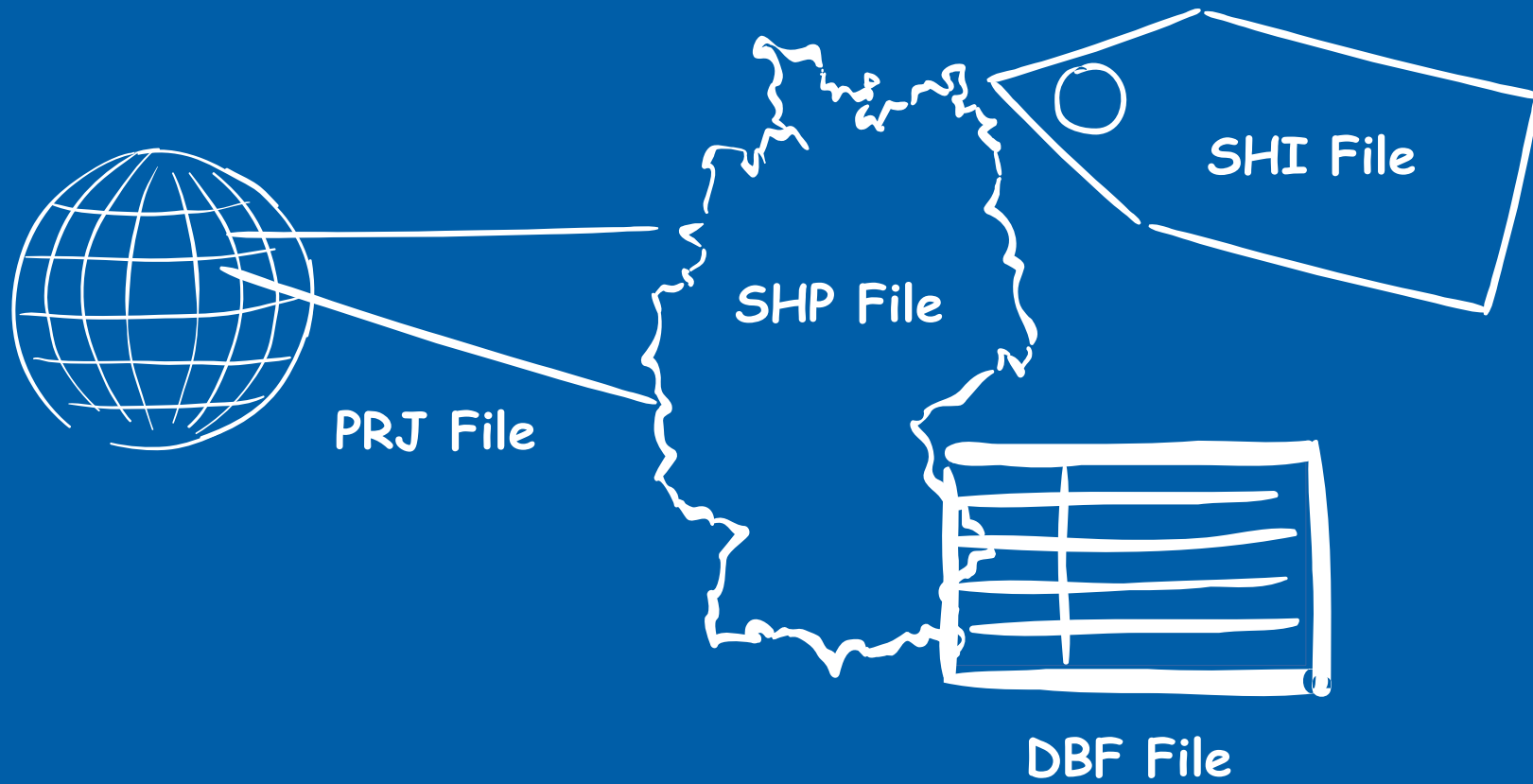
Anwendung plus Kartenansicht



Layer



Layer = Shapefile



Die Idee

```
LayerManager manager = Optional  
  .of(layer)  
  .filter(layer → layer instanceof ShapeFile)  
  .map(layer → (ShapeFile)layer)  
  .map(shapefile → shapefile.createDateiManager())  
  .get()
```

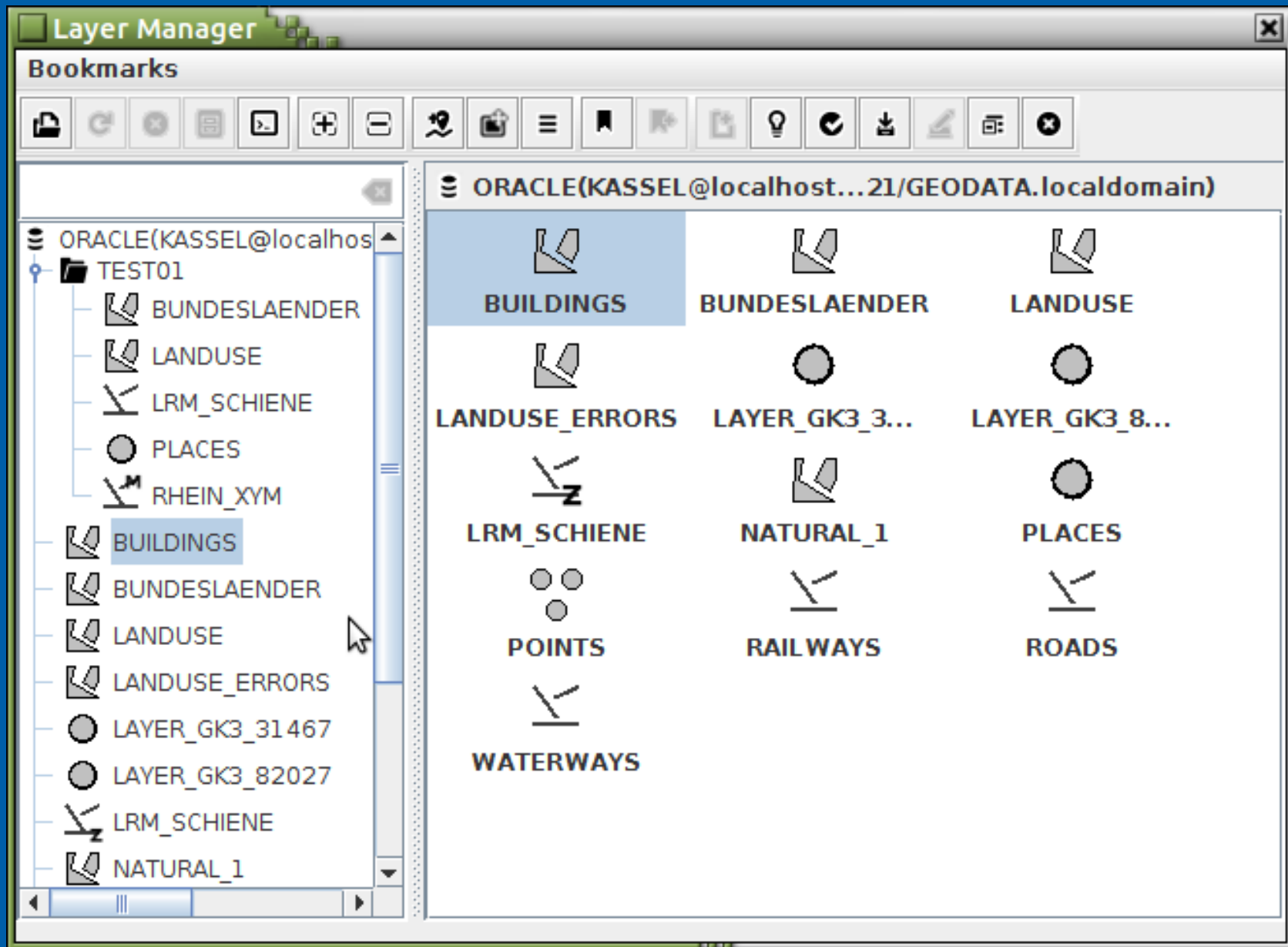

Layer Management

DEMON STRAT ION

of course with

ORACLE

Layer Management - Demo - Übersicht



Layer Management - Demo - Verwalten/Optimieren

jdbc:oracle:thin:@//localhost:1521/GEODATA.localdomain

layer management

Layer

Table	Column	Registered	Indexed	Type	Index state	Index quality
BUILDINGS	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	3.5757
BUNDESLAENDER	SHAPE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	1.0000
LANDUSE	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	1.1297
LANDUSE_ERRORS	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	1.0000
LAYER_GK3_31467	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	0.0000
LAYER_GK3_82027	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	0.0000
LRM_SCHIENE	GEOM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	1.1529
NATURAL_1	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	1.8960
PLACES	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	0.0000
POINTS	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	16726284.8906
RAILWAYS	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	1.0801
ROADS	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	0.9495
WATERWAYS	GEOMETRY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABLE	VALID	2.7514

Properties
Register
Deregister
Index
Rebuild Index

Close

Layer Management - Demo - Layer definieren

Adapt layer

Attributes
Please, define layer attributes

Name	Type	Key
OSM_ID	1,23 SERIAL	<input checked="" type="checkbox"/>
NAME	a STRING	<input type="checkbox"/>
TYPE	a STRING	<input type="checkbox"/>

+

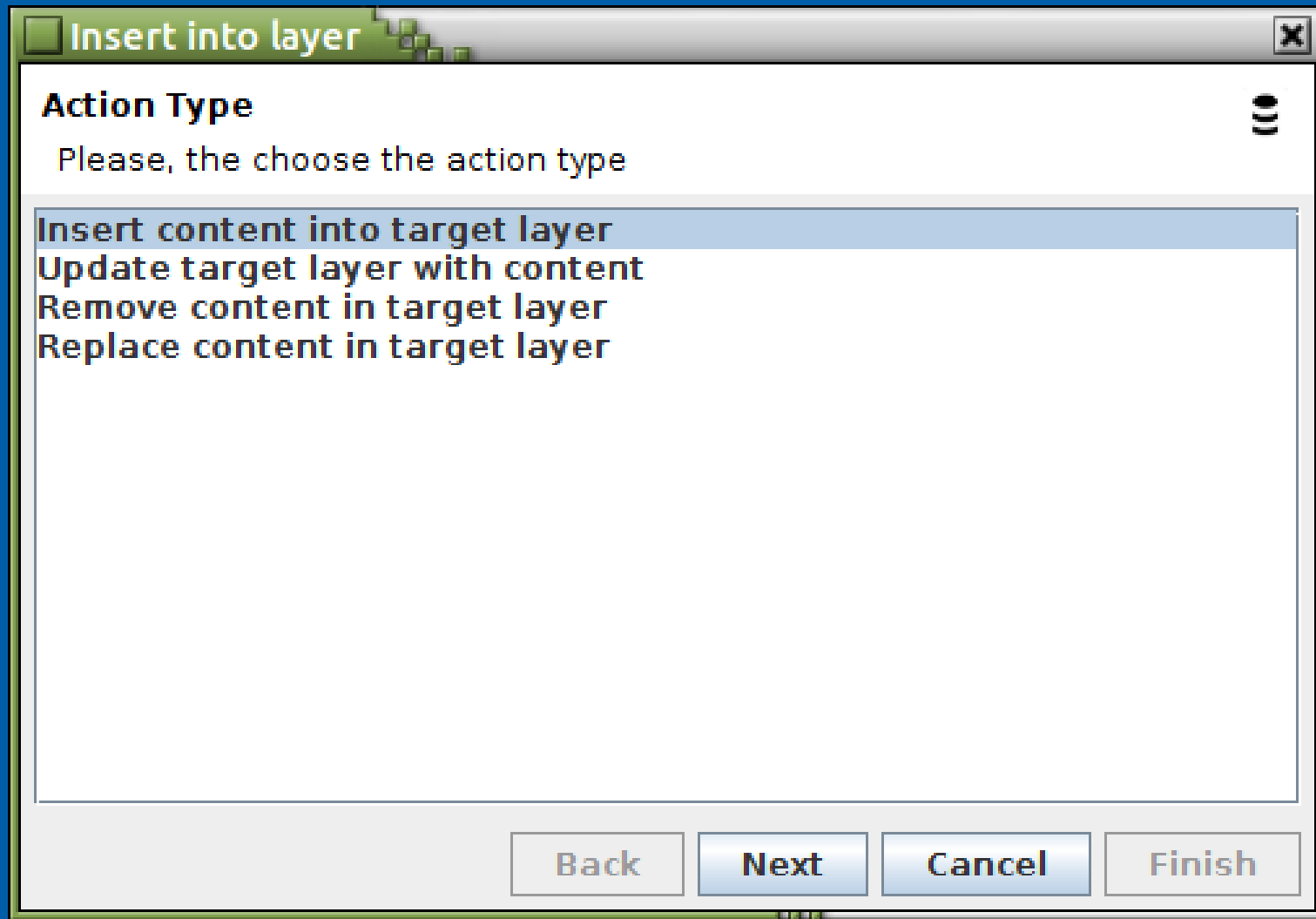
-

▼

▲

Back Next Cancel Finish

Layer Management - Demo - Import/Export



Layer Management - Demo - Transformieren

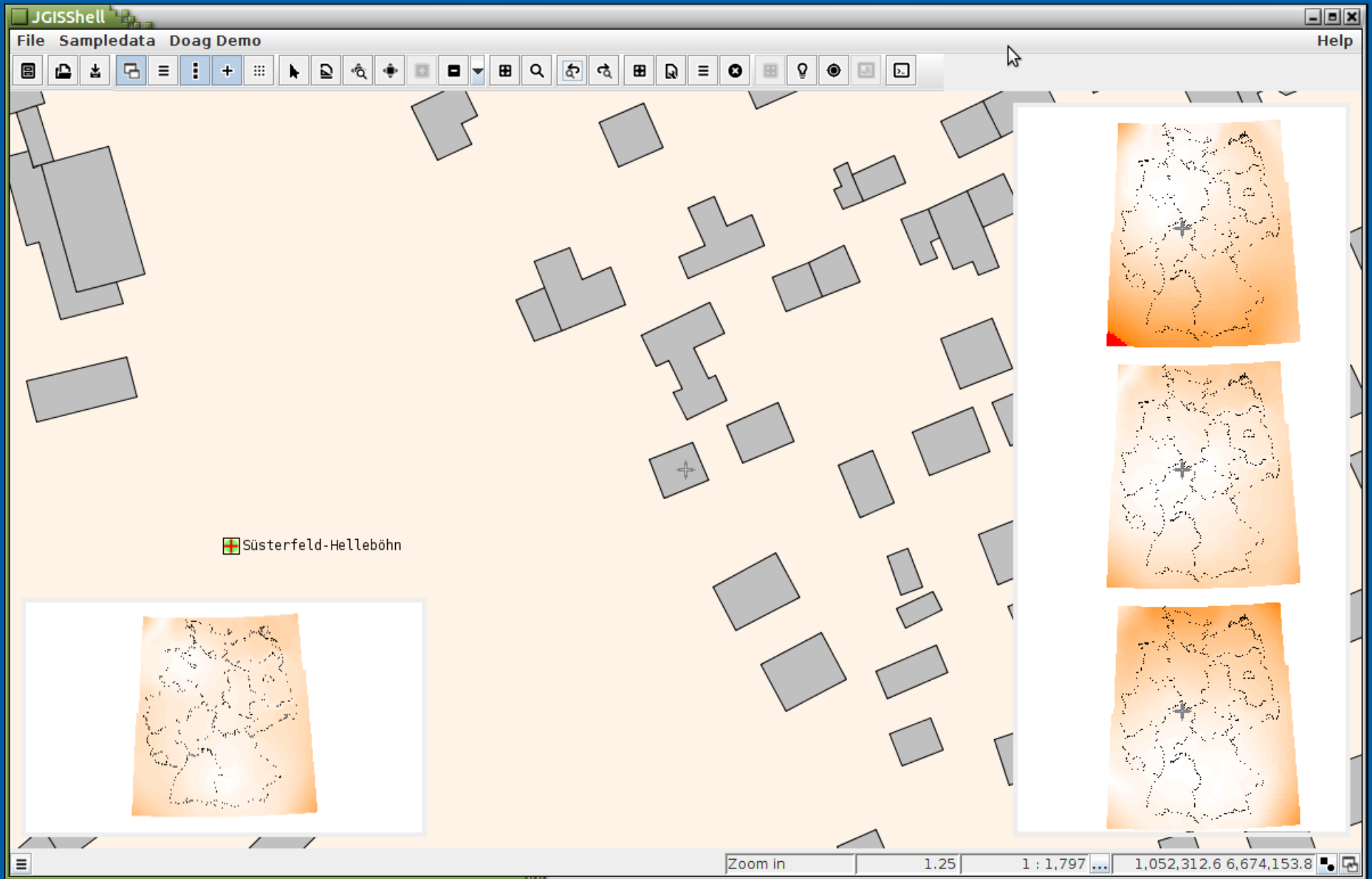
The screenshot displays the JGISShell application interface. The main map area shows a set of grey building footprints on a light tan background. A red crosshair symbol is positioned over a specific building footprint, with the label "Süsterfeld-Heilbrunn" next to it. In the bottom-left corner, there is a small inset window showing a map of the same area with a network of orange lines, likely representing a street network or utility lines.

The right-hand side of the interface features a layer management panel with the following layers listed from top to bottom:

- PLACES
- LAYER_GK3_31467
- LAYER_GK3_82027 (highlighted)
- BUILDINGS
- Grenzen
- DHDN 2001 Zone 2
- DHDN 2001 Zone 3
- DHDN 2001 Zone 4
- DHDN 2001 Zone 5
- Streets

The status bar at the bottom of the window displays the scale "1 : 1,797" and the coordinates "1,051,976.0 6,674,081.1".

Layer Management - Demo - Transformieren (gridshift)



Layer Management - Demo - Validieren

The screenshot displays the JGISShell interface. The main map area shows a yellow polygon with a red dot at its top vertex. The 'Feature properties' window is open, showing the 'Geometry' tab. The geometry is a LINEARRING with 22 points. The first two points are highlighted: 531166.0181832, 5685113.76163517 and 531157.869861323, 5685064.75593817. Below the geometry list is a table with columns 'Name' and 'Value'.

Name	Value
Type	LINEARRING
Points	22
Length	370.50193735652755
orientation	counterclockwise

Below the map is the 'Layer attribute table' for 'LANDUSE_ERRORS'. It shows a table with columns: SID, CODE, ERROR, MESSAGE, and GEOMETRY.

SID	CODE	ERROR	MESSAGE	GEOMETRY
5009	13349	13349 [Element <1>] [Ring <1>][Edge <2>][Edge <21>]	Der äußere Ring des Polygons überschneidet sich	MULTIPOLY...

Layer Management - Demo - Wiederholbar

```
package net.anwiba.script.groovy.doag
// Copyright (c) 2017 by Andreas W. Bartels
import net.anwiba.spatial.scripting.groovy.api.JGISShellGroovyScript
@groovy.transform.BaseScript JGISShellGroovyScript facade

def sourceReference = facade
    .layerReference("sqlite:spatialite://\${SYSTEM}{jgisshell.workingpath}/data/doag/doag.osm.sqlite?table=places&column=geometry")

def user = facade.variable("user", "KASSEL")
def pw = facade.variable("password", "xxxx")
def database = facade.variable("database")
def targetLayerResourceUrn = "oracle:service:sdo://\${user}:\${pw}@\${database}?schema=\${user}&table=LAYER&column=GEOMETRY";
def targetReference = facade.layerReference(targetLayerResourceUrn)

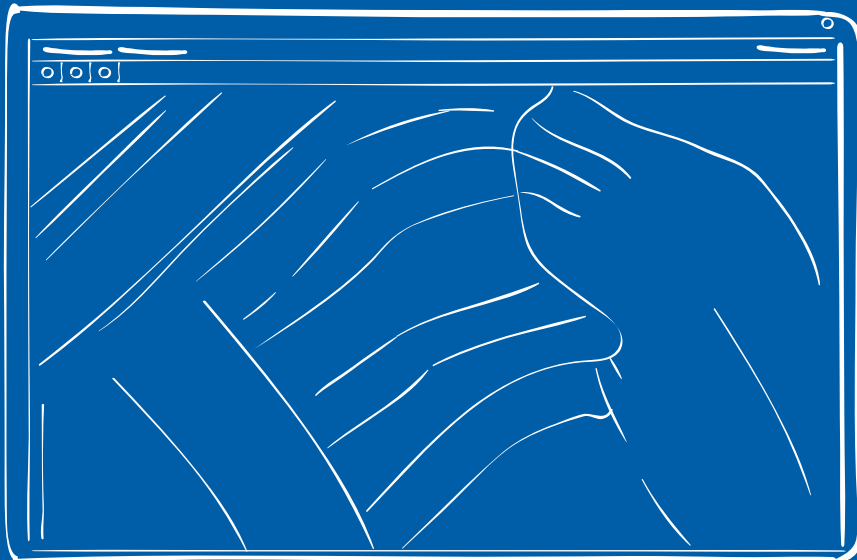
facade.layerUpdater(sourceReference
    , targetReference
    , facade.nameMappingsBuilder()
        .add("osm_id", "IDENTIFIER")
        .add("name", "NAME")
        .add("type", "TYPE")
        .add("population", "COUNT")
        .add("geometry", "GEOMETRY").build()
    , facade.nameMapping("osm_id", "IDENTIFIER"))
    .update()
```


Layer Management



Layer Management / Architekturen

(Un)Organisierte Fachkraft



Layer Management / Architekturen

Service Deployment



Erfassung



Testbetrieb

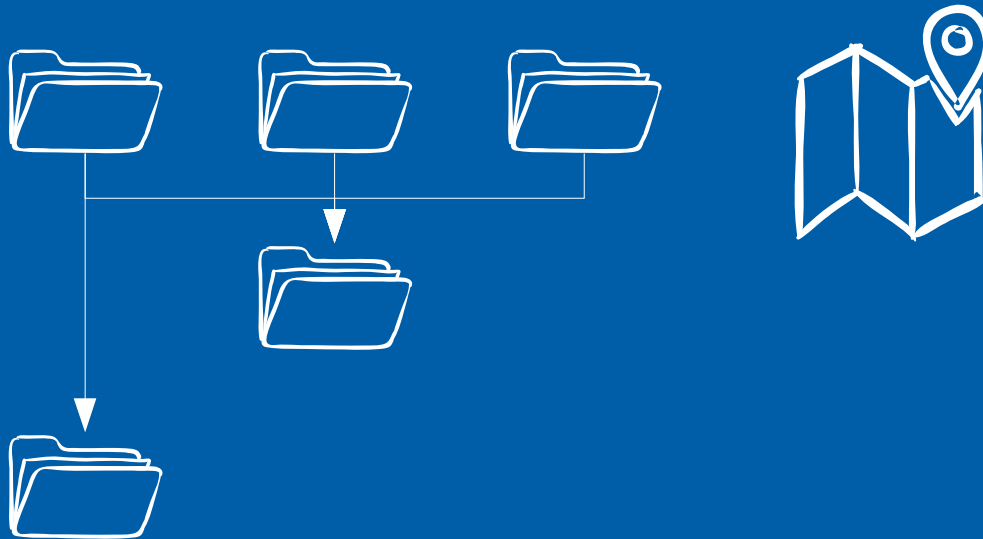


Produktion



Layer Management / Architekturen

Anwendung plus Kartenansicht



Fazit - Layer Management - JGISShell

- ✓ *Übersicht bekommen*
- ✓ *ist Zustand verwalten
aktivieren/deaktivieren*
- ✓ *Optimieren*
- ✓ *Datenaustausch (import/export)
(nicht jede Datenquelle ist gleich
ESRI vs OGC)*
 - ✓ *Drag and Drop*
 - ✓ *Wizard*
 - ✓ *Scripting*
 - x *Workflow*
- ✓ *Wiederholbar*
- x *Nachvollziehbar*
- ✓ *Daten Definition*
 - ✓ *Identifizier / Sequence*
 - ✓ *Datentypen*
 - ✓ *Geometry*
 - ✓ *Koordinaten Dimension*
 - ➔ *Typen (Curves, Custom Types)*
 - ➔ *Koordinaten Referenz Systeme*
- ✓ *Validieren*
 - ✓ *Syntaktisch
(nicht jede Datenquelle ist gleich
ESRI vs OGC)*
 - x *Semantisch*
 - x *Fachlich*

JGISShell - License

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-
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-
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-
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- SUCH DAMAGE.



Referenzen

Link JGISShell

<https://github.com/AndreasWBartels/JGISShell>

Link GeoSpatial Integration für Talend

<https://www.disy.net/produkte/geospatial.html>

Links zu besprochenen Themen

Validierung

<http://www.opengeospatial.org/standards/sfa> (Version 1.2.1, 6.1.11.1)

<http://desktop.arcgis.com/en/arcmap/10.3/manage-data/using-sql-with-gdbs/geometry-validation.htm>

<https://docs.oracle.com/database/121/SPATL/polygon-hole.htm#SPATL520>

Transformation

<http://crs.bkg.bund.de/crseu/crs/eu-countrysel.php?country=DE#StartCE>

A photograph taken from the perspective of someone on a boat, looking out over a body of water towards a lush, green island. The boat's structure, including a teal-colored roof and a dark vertical post, is visible in the foreground. The water is a deep blue, and the sky is clear and bright. In the bottom right corner, there is a scuba diving tank and regulator.

Danke

Fragen ?

Anregungen ?

Anmerkungen ?