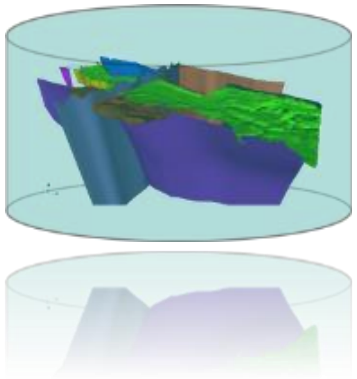
GiGa infosystems

GST Anwendertreffen

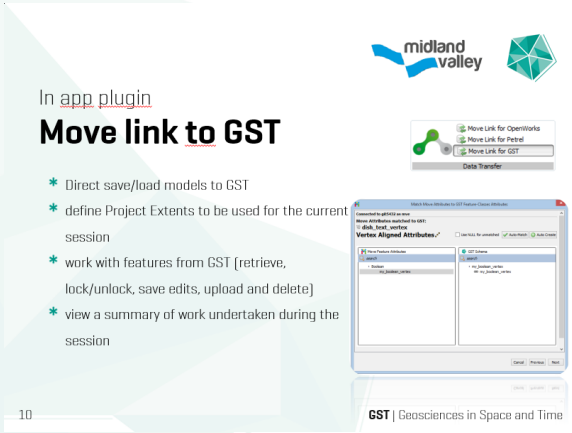
Agenda

* Entwicklungen 2019
* Eigene Entwicklungen für GST (Robert Pamer)
* Entwicklungen 2020/21

GiGa infosystems



* Team von 9
  (3 Backend, 1 Desktop, 2 Web, 1 DevOps,)
* **Oracle Partner, GIS Award**
* Zusammenarbeit mit
  * TU Bergakademie Freiberg
  * Petex (MOVE)



Entwicklungen Kunden in 2019

Nagra

BGE

GSI.IE

BGR (GIGS)

Finland (Test)

Software as a Service-Modell

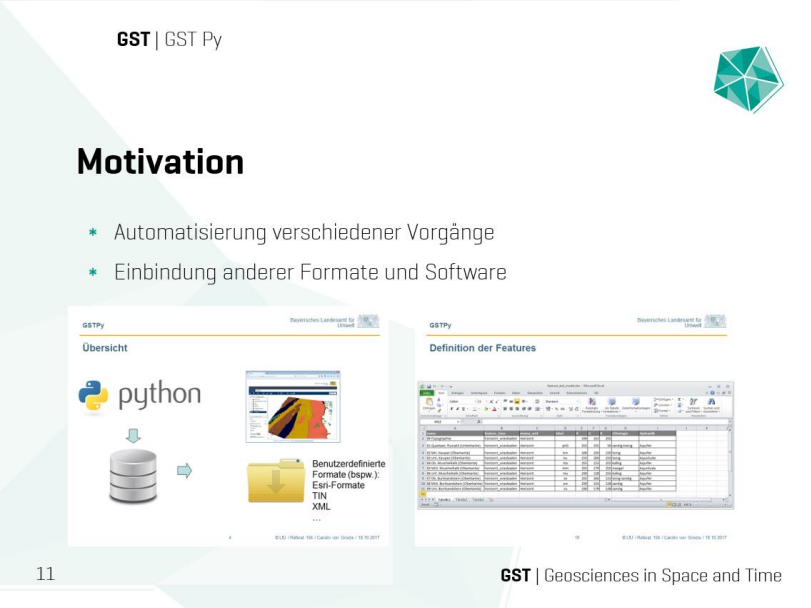
Entwicklungen GST 3 in 2019

* 135 Bugs gefixed
* 29 Verbesserungen
* 113 Neue Features
* 2 Releases
* 47 Issues im Servicedesk geschlossen, 67 erhalten ☹ (38 resolved, 6 waiting for customer, 6 in progress)

Entwicklungen 2019

Python API

* Zugriff auf fast alle **GST** API Funktionen
* Fertigstellung Q3/2017
* https://support.giga-infosystems.com/updates/gstpy/1.2.2/




```python
import GSTPy

owner = ni.get_current_gst_user()
levels = ni.list_levels()
models = ni.list_elements(owner, levels[0])
units = ni.list_elements(owner, levels[1])

augsburg_model = next((model for model in models if model.label == "Augsburg"))
inner_city_unit = next((unit for unit in units if unit.label == "InnerCity"))

model_links = ni.list_children()
augsburg_link = next(
    (link for link in model_links
     if link.target_id == augsburg_model.id
     and link.target_type == GSTPy.LinkAdjacencyTargetType.Element))

augsburg_child_links = ni.list_children(augsburg_link)
inner_city_link = next(
    (link for link in augsburg_child_links
     if link.target_id == inner_city_unit.id
     and link.target_type == GSTPy.LinkAdjacencyTargetType.Element))

moma_prop_description = ni.create_moma_property(
    "description", GSTPy.PropertyTypes.TypeText, owner)
moma_prop_revision = ni.create_moma_property(
    "revision", GSTPy.PropertyTypes.TypeInt)

ni.create_moma_property_value(augsburg_link, moma_prop_description,
                              "3D model of Augsburg.")
ni.create_moma_property_value(augsburg_link, moma_prop_revision, 1)

ni.create_moma_property_value(inner_city_link, moma_prop_description,
                              "The inner city area.")
ni.create_moma_property_value(inner_city_link, moma_prop_revision, 1)

# get revision value for inner city (option 1)
revision_values = ni.list_moma_property_values(moma_prop_revision)
revision_inner_city_value = next(
    (val for val in revision_values
     if val.moma_property.id == moma_prop_revision.id))

# get revision value for inner city (option 2)
inner_city_link_values = ni.list_moma_property_values_of_element(
    inner_city_link)
revision_inner_city_value = next(
    (val for val in inner_city_link_values
     if val.moma_property.id == moma_prop_revision.id))

ni.update_moma_property_value(revision_inner_city_value, 2)

ni.delete_moma_property_value(revision_inner_city_value)

ni.delete_moma_property(moma_prop_description)
```

GST Desktop

* Datenbankähnliche Funktionen
* Verbesserungen in der GUI
* SRS Transformation
* Discrete Color Maps

Änderung von mehreren Features

Browse feature class: EVERYBODY_pool.sax

Select	oname text	Lock	Geometry Hull	m_alias text	model_feature text	integer_attribute long	float_attribute double	bool_attribute bool
☐	01_ts_dd_geol_Kreide	free	no	Kreide	(NULL)	(NULL)	(NULL)	(NULL)
☐	02_ts_dd_geol_Doehlener_Becken	free	no	Doehlener Becken	(NULL)	(NULL)	(NULL)	(NULL)
☐	03_ts_dd_geol_Riesenstein-Granit	free	no	Riesenstein Granit	(NULL)	(NULL)	(NULL)	(NULL)
☐	04_ts_dd_geol_Markersbacher_Granit	free	no	Markersbacher Granit	(NULL)	(NULL)	(NULL)	(NULL)
☐	05_ts_dd_geol_Stolpener_Granit	free	no	Stolpener Granit	(NULL)	(NULL)	(NULL)	(NULL)
☐	06_ts_dd_geol_Gneise	free	no	Gneise	(NULL)	(NULL)	(NULL)	(NULL)
☐	07_ts_dd_geol_Porphyrite	free	no	Porphyrite	(NULL)	0	0	☑
☐	08_ts_dd_geol_Diorite	free	no	Diorite	(NULL)	(NULL)	(NULL)	(NULL)
☐	09_ts_dd_geol_Hauptgranit	free	no	Hauptgranit	(NULL)	0	0	☑
☐	10_ts_dd_geol_Monzonit	free	no	Monzonit	(NULL)	(NULL)	(NULL)	(NULL)
☐	11_ts_dd_geol_Monzodiorit	free	no	(NULL)	(NULL)	(NULL)	(NULL)	(NULL)
☐	12_ts_dd_geol_Elbtal-Schiefergebirge	free	no	Elbtal Schiefergebirge	(NULL)	(NULL)	(NULL)	(NULL)
☐	13_ts_dd_geol_Osterzgebirge	free	no	Osterzgebirge	(NULL)	(NULL)	(NULL)	(NULL)

Object name

Object appearance

Red: 0

Green: 0

Blue: 0

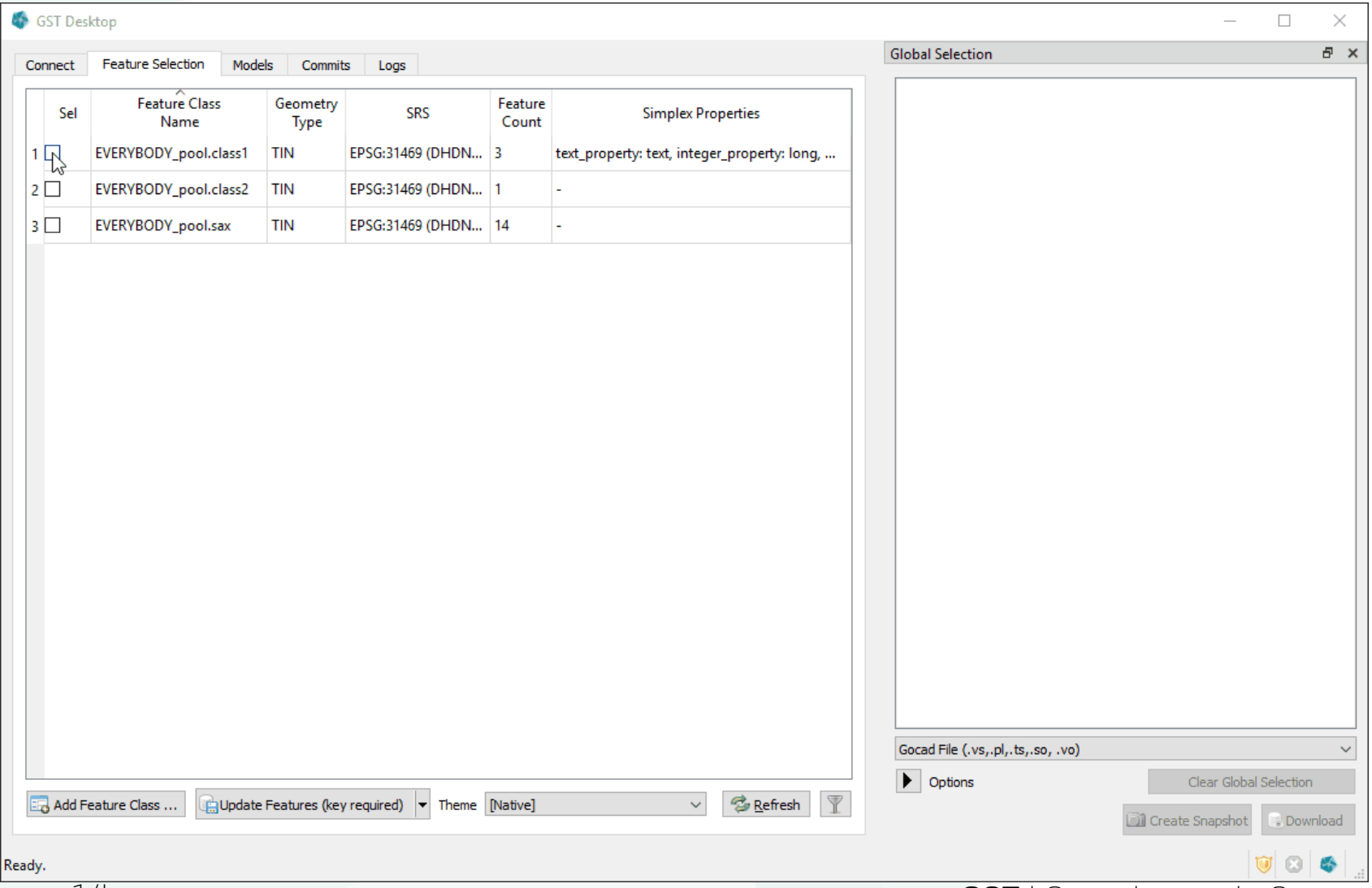
Transparency [%]: 0

☑ Hide default columns

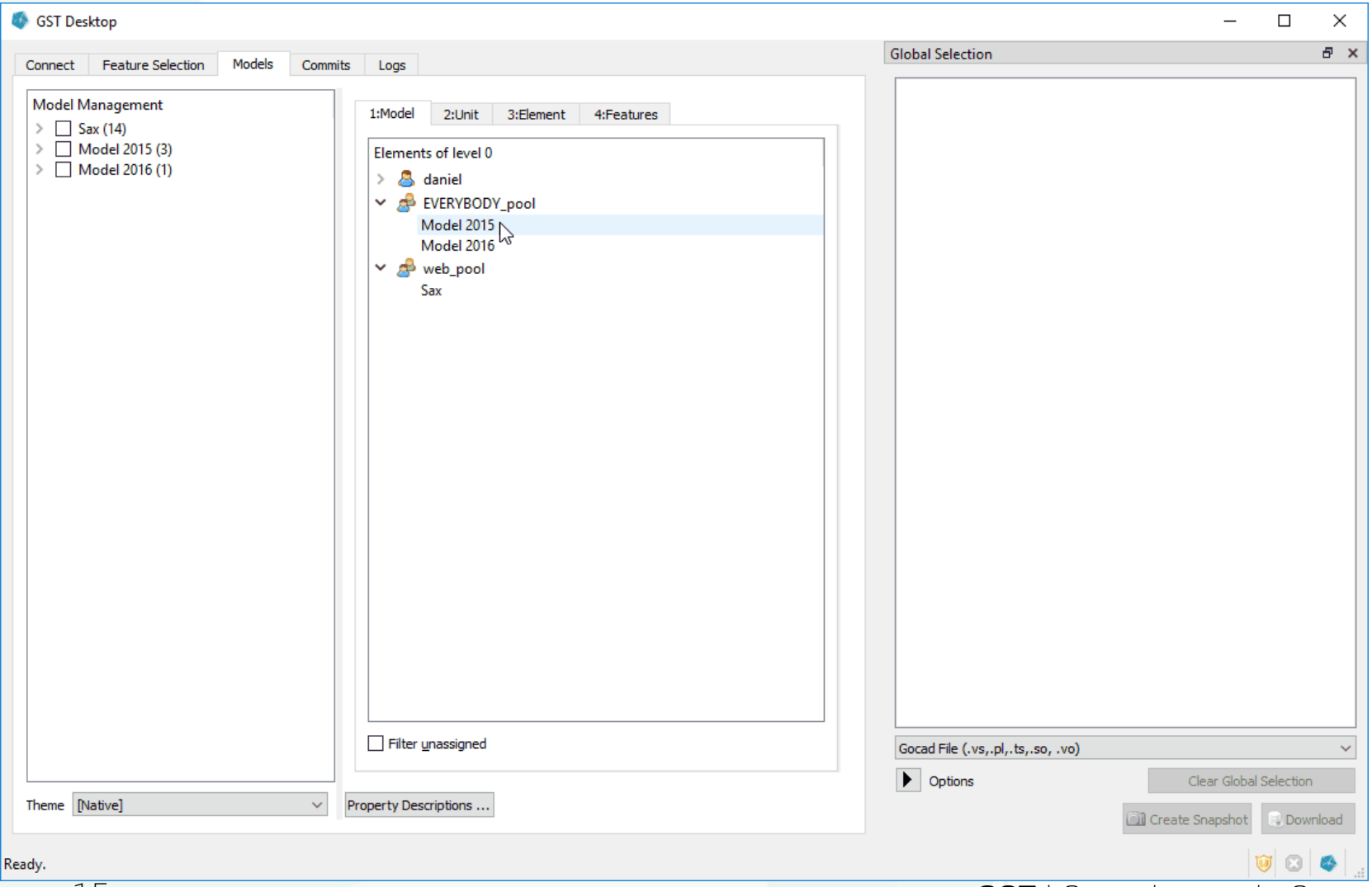
Edit via Clipoard ...

OK Cancel

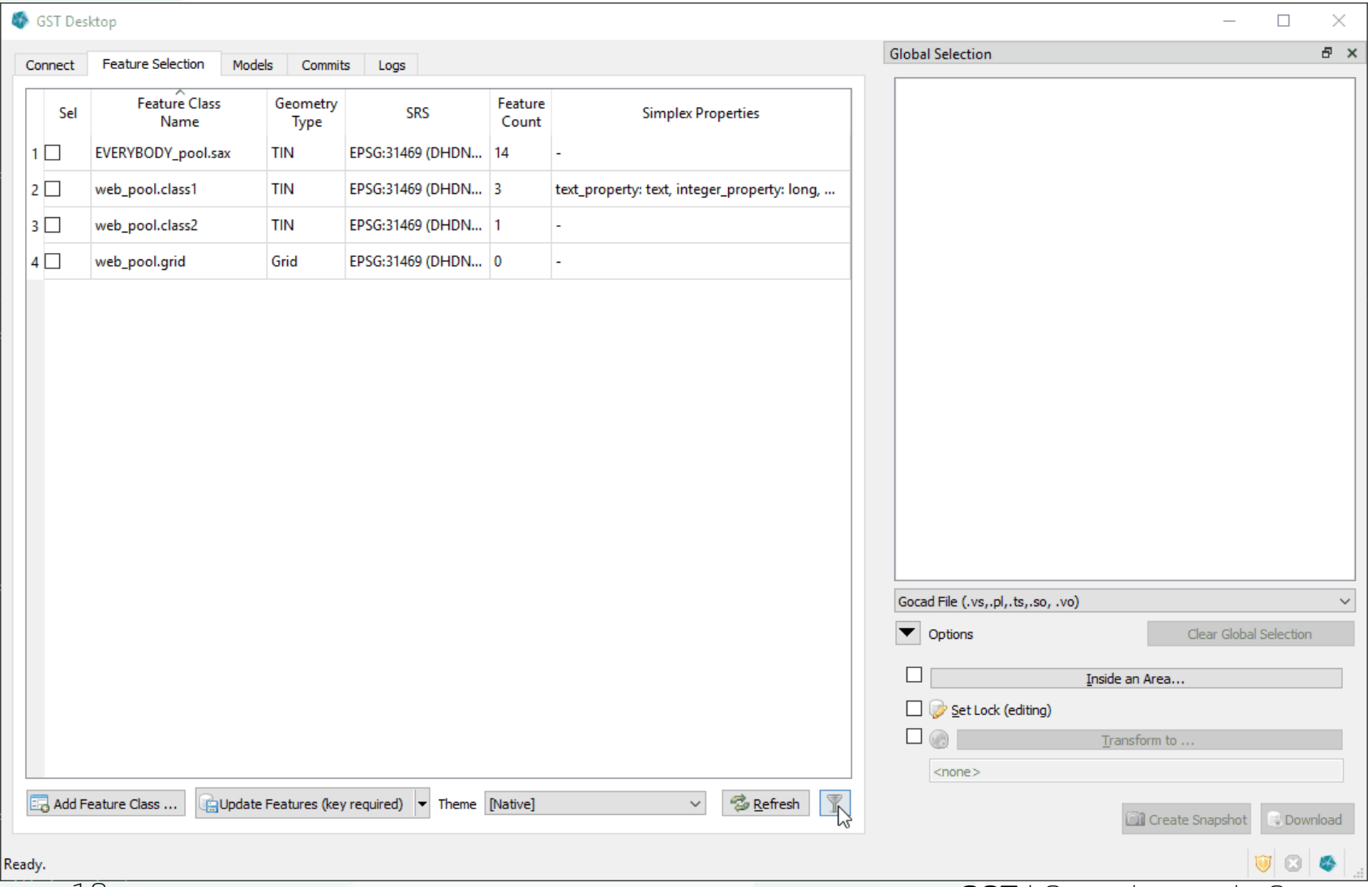
Änderung von Eigentümern von Featureklassen



Änderung von Eigentümern von Modellen



Filter Featurclasses



Filter Features

Browse feature class: EVERYBODY_pool.sax

Select	oname text	Lock	Geometry Hull	Alias: my_text_prop_aliassed my_text_prop_w_alias text	my_text_prop text	my_int_prop long	model_feature text
☐	01_ts_dd_geol_Kreide	free	no	c	ccc	2	(NULL)
☐	02_ts_dd_geol_Doehlener_Becken	free	no	bbb	ccc	2	(NULL)
☐	03_ts_dd_geol_Riesenstein-Granit	free	no	a	bbb	1	(NULL)
☐	04_ts_dd_geol_Markersbacher_Granit	free	no	bbb	bbb	2	(NULL)
☐	05_ts_dd_geol_Stolpener_Granit	free	no	a	aaa	1	(NULL)
☐	06_ts_dd_geol_Gneise	free	no	c	ccc	1	(NULL)
☐	07_ts_dd_geol_Porphyrite	free	no	bbb	bbb	3	(NULL)
☐	08_ts_dd_geol_Diorite	free	no	bbb	ddd	3	(NULL)
☐	09_ts_dd_geol_Hauptgranit	free	no	a	aaa	3	(NULL)
☐	10_ts_dd_geol_Monzonit	free	no	ab	bbb	1	(NULL)
☐	11_ts_dd_geol_Monzodiorit	free	no	ccc	bbb	2	(NULL)
☐	12_ts_dd_geol_Elbtal-Schiefergebirge	free	no	d	bbb	2	(NULL)
☐	13_ts_dd_geol_Osterzgebirge	free	no	d	ccc	1	(NULL)
☐	14_ts_dd_geol_Lausitzer_Granodiorit	free	no	qqq	d	1	(NULL)

Object name

Object appearance

Red: 0

Green: 0

Blue: 0

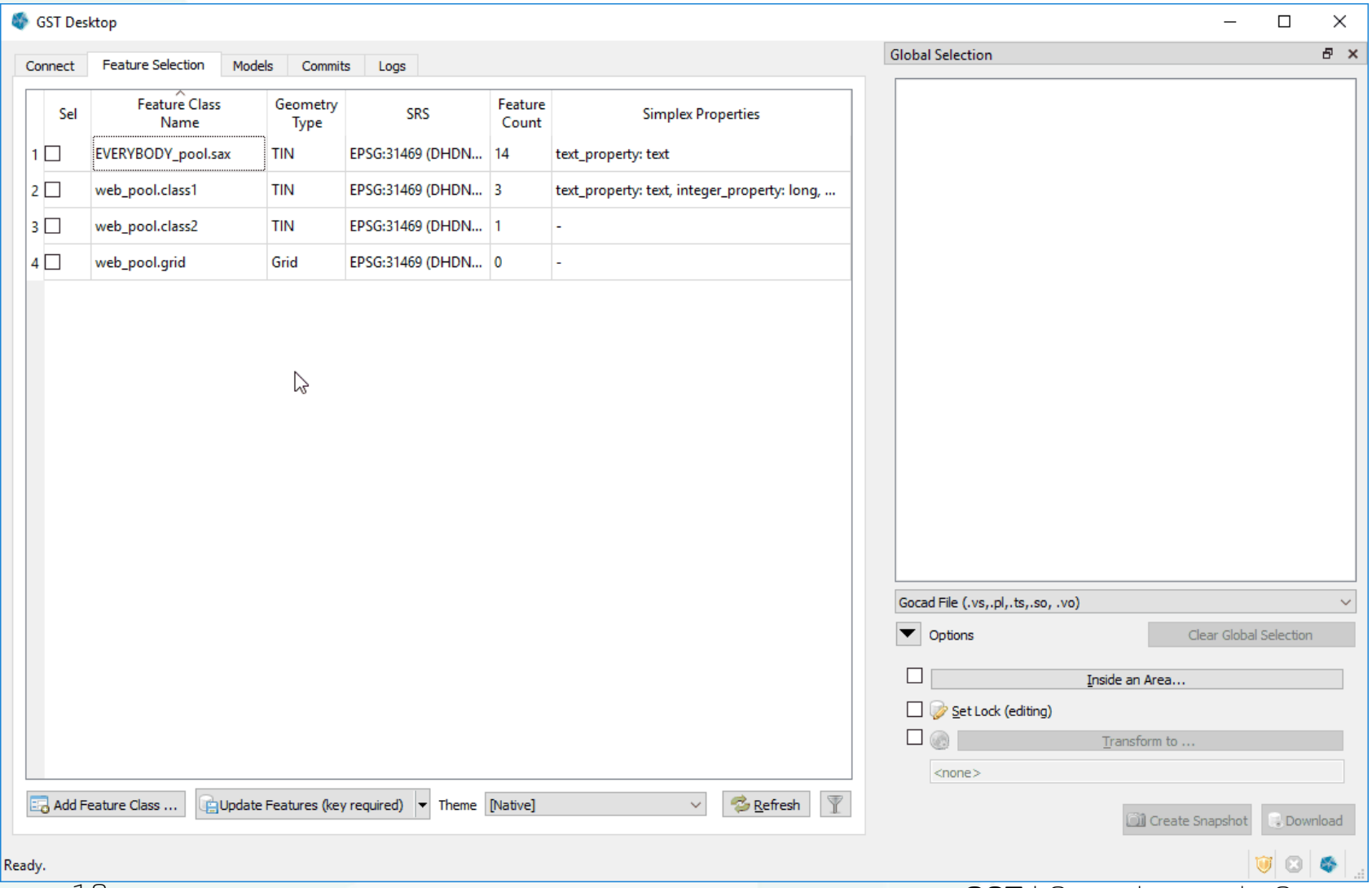
Transparency [%]: 100

☑ Hide default columns

Edit via Clipoard ...

OK Cancel

Erstellung von Snapshots



Erstellung von Snapshots

GST Desktop

Connect | Feature Selection | Models | Commits | Logs

	Sel	Feature Class Name	Geometry Type	SRS	Feature Count	Simplex Properties
1	☑	EVERYBODY_pool.sax	TIN	EPSG:31469 (DHDN...	14	-
2	☐	web_pool.class1	TIN	EPSG:31469 (DHDN...	3	text_property: text, integer_property: long, ...
3	☐	web_pool.class2	TIN	EPSG:31469 (DHDN...	1	-

Add Feature Class ... | Upload Feature to selection | Theme [Native] | Refresh

Global Selection

- ☑ 08_ts_dd_geol_Diorite
- ☑ 05_ts_dd_geol_Stolpener_Granit
- ☑ 03_ts_dd_geol_Riesenstein-Granit
- ☑ 04_ts_dd_geol_Markersbacher_Granit
- ☑ 07_ts_dd_geol_Porphyrite
- ☑ 06_ts_dd_geol_Gneise
- ☑ 09_ts_dd_geol_Hauptgranit
- ☑ 02_ts_dd_geol_Doehlener_Becken
- ☑ 10_ts_dd_geol_Monzonit
- ☑ 13_ts_dd_geol_Osterzgebirge
- ☑ 11_ts_dd_geol_Monzodiorit
- ☑ 14_ts_dd_geol_Lausitzer_Granodiorit
- ☑ 12_ts_dd_geol_Elbtal-Schiefergebirge
- ☑ 01_ts_dd_geol_Kreide

Gocad File (.vs,.pl,.ts,.so, .vo)

Options | Clear Global Selection

☑ Inside an Area...

☐ Set Lock (editing)

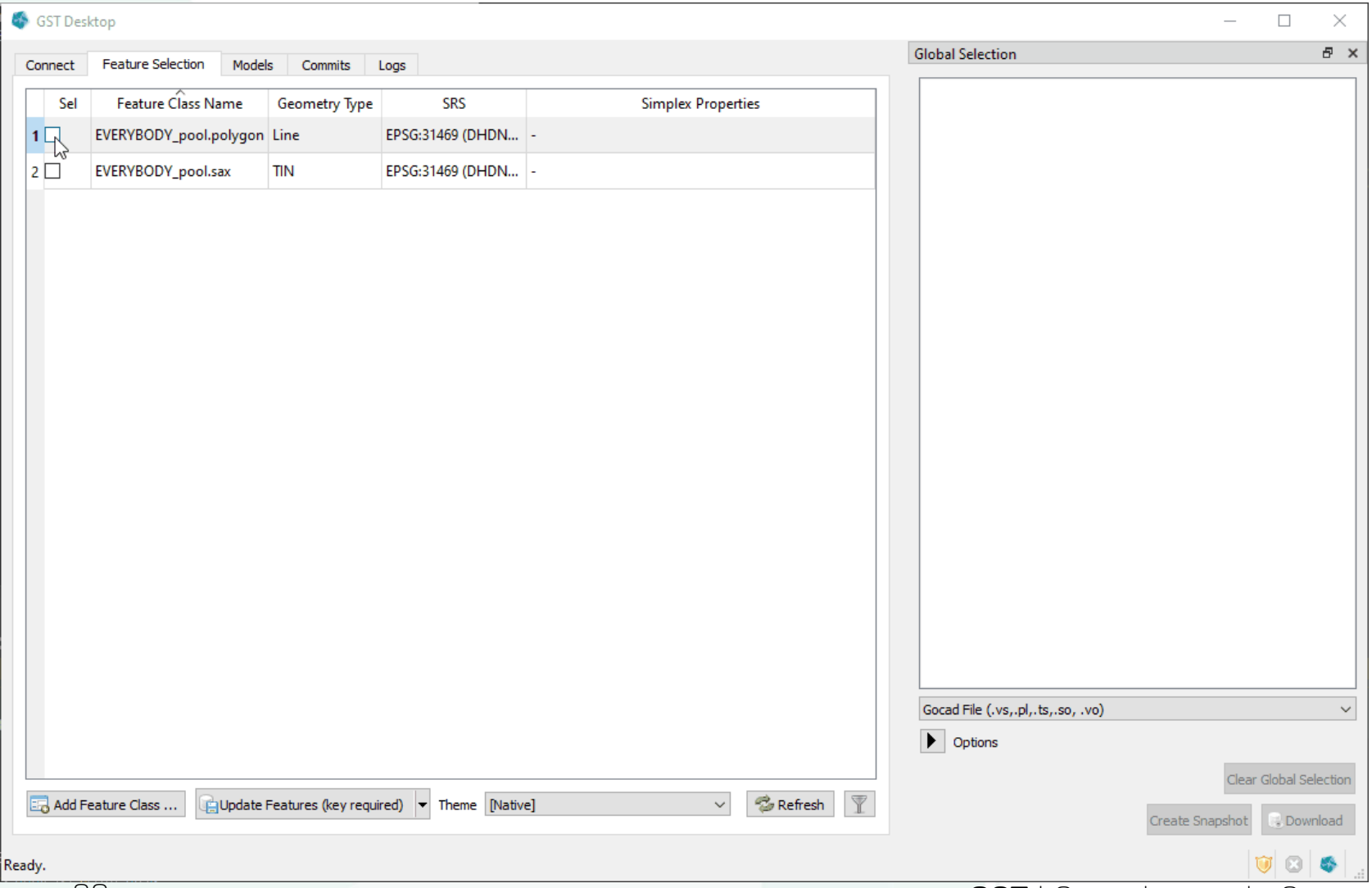
☐ Transform to ...

<none>

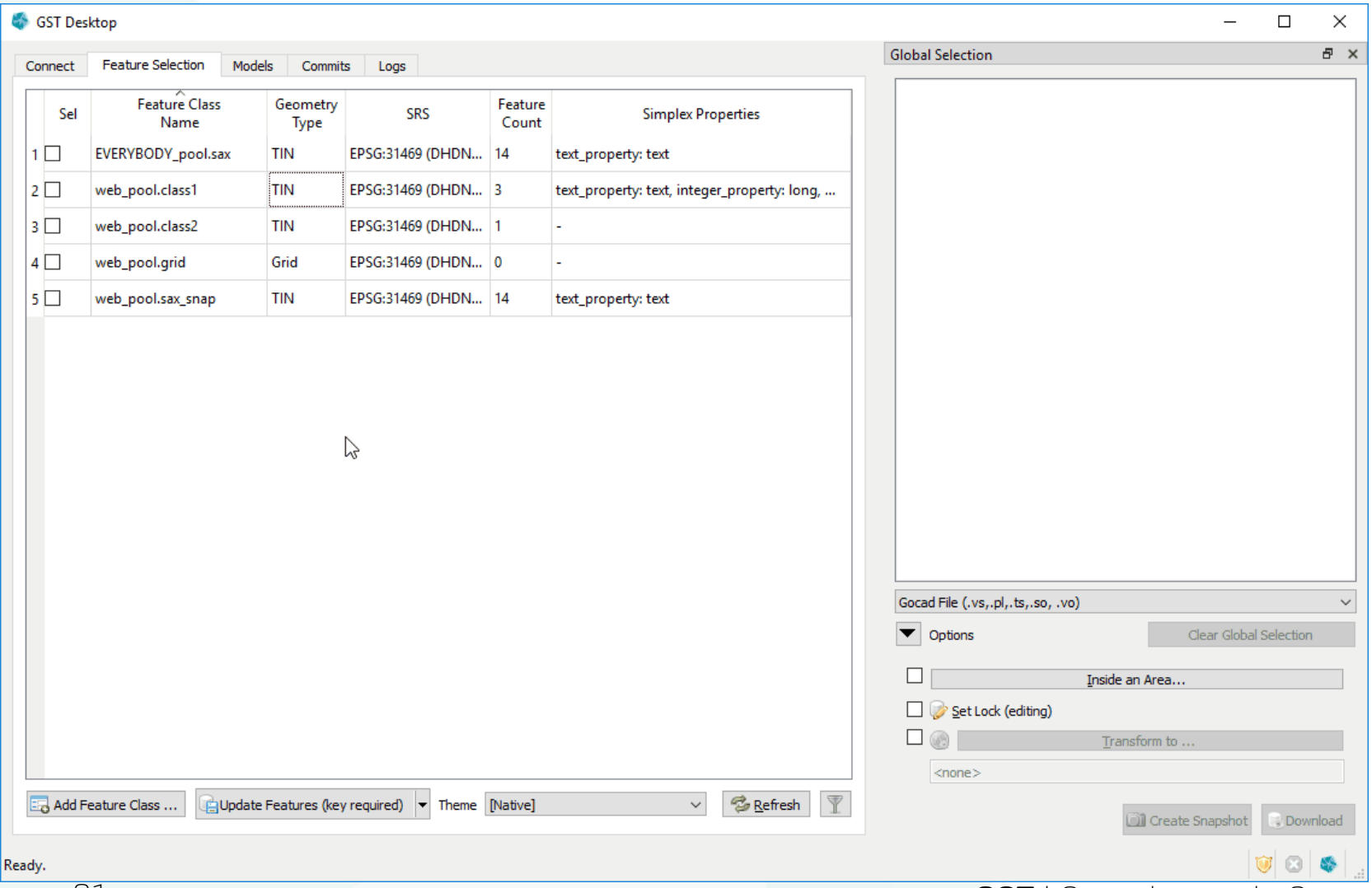
Create Snapshot | Download

Ready.

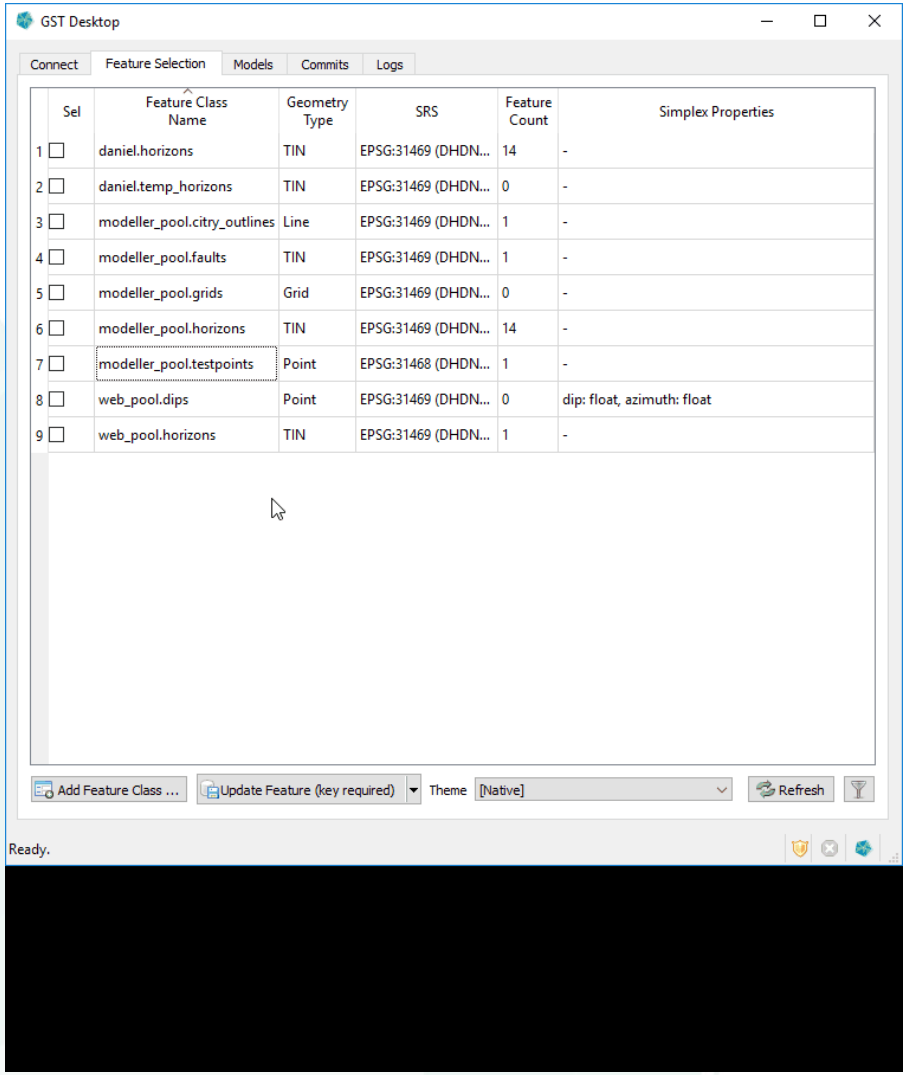
Aufheben der globalen Selektion



Discrete Simplex Color Maps

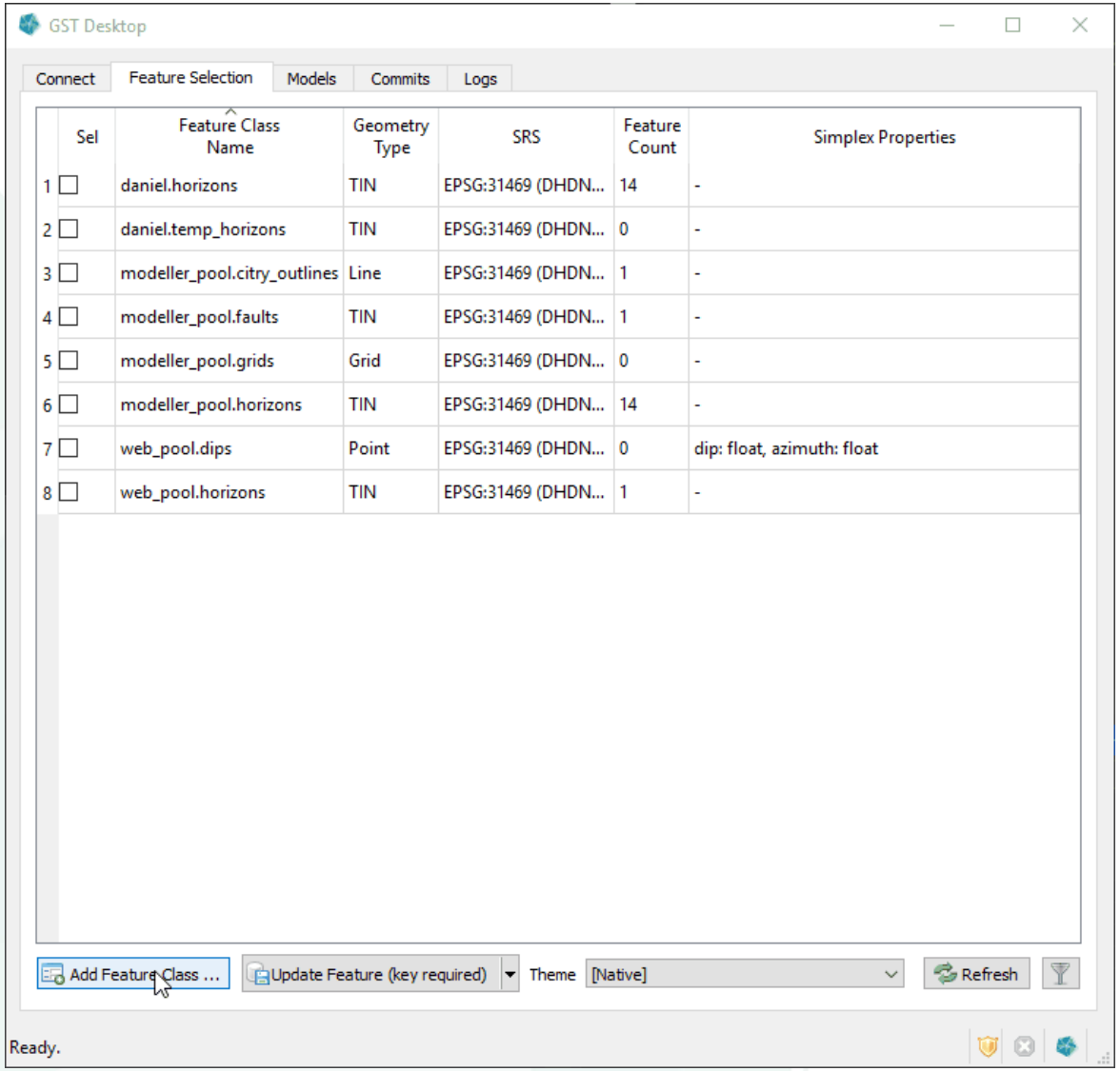


SRS Transformation für eine Featureklasse



	Sel	Feature Class Name	Geometry Type	SRS	Feature Count	Simplex Properties
1	☐	daniel.horizons	TIN	EPSG:31469 (DHDN...	14	-
2	☐	daniel.temp_horizons	TIN	EPSG:31469 (DHDN...	0	-
3	☐	modeller_pool.citry_outlines	Line	EPSG:31469 (DHDN...	1	-
4	☐	modeller_pool.faults	TIN	EPSG:31469 (DHDN...	1	-
5	☐	modeller_pool.grids	Grid	EPSG:31469 (DHDN...	0	-
6	☐	modeller_pool.horizons	TIN	EPSG:31469 (DHDN...	14	-
7	☐	modeller_pool.testpoints	Point	EPSG:31468 (DHDN...	1	-
8	☐	web_pool.dips	Point	EPSG:31469 (DHDN...	0	dip: float, azimuth: float
9	☐	web_pool.horizons	TIN	EPSG:31469 (DHDN...	1	-

Zeitobjekte



	Sel	Feature Class Name	Geometry Type	SRS	Feature Count	Simplex Properties
1	☐	daniel.horizons	TIN	EPSG:31469 (DHDN...	14	-
2	☐	daniel.temp_horizons	TIN	EPSG:31469 (DHDN...	0	-
3	☐	modeller_pool.citry_outlines	Line	EPSG:31469 (DHDN...	1	-
4	☐	modeller_pool.faults	TIN	EPSG:31469 (DHDN...	1	-
5	☐	modeller_pool.grids	Grid	EPSG:31469 (DHDN...	0	-
6	☐	modeller_pool.horizons	TIN	EPSG:31469 (DHDN...	14	-
7	☐	web_pool.dips	Point	EPSG:31469 (DHDN...	0	dip: float, azimuth: float
8	☐	web_pool.horizons	TIN	EPSG:31469 (DHDN...	1	-

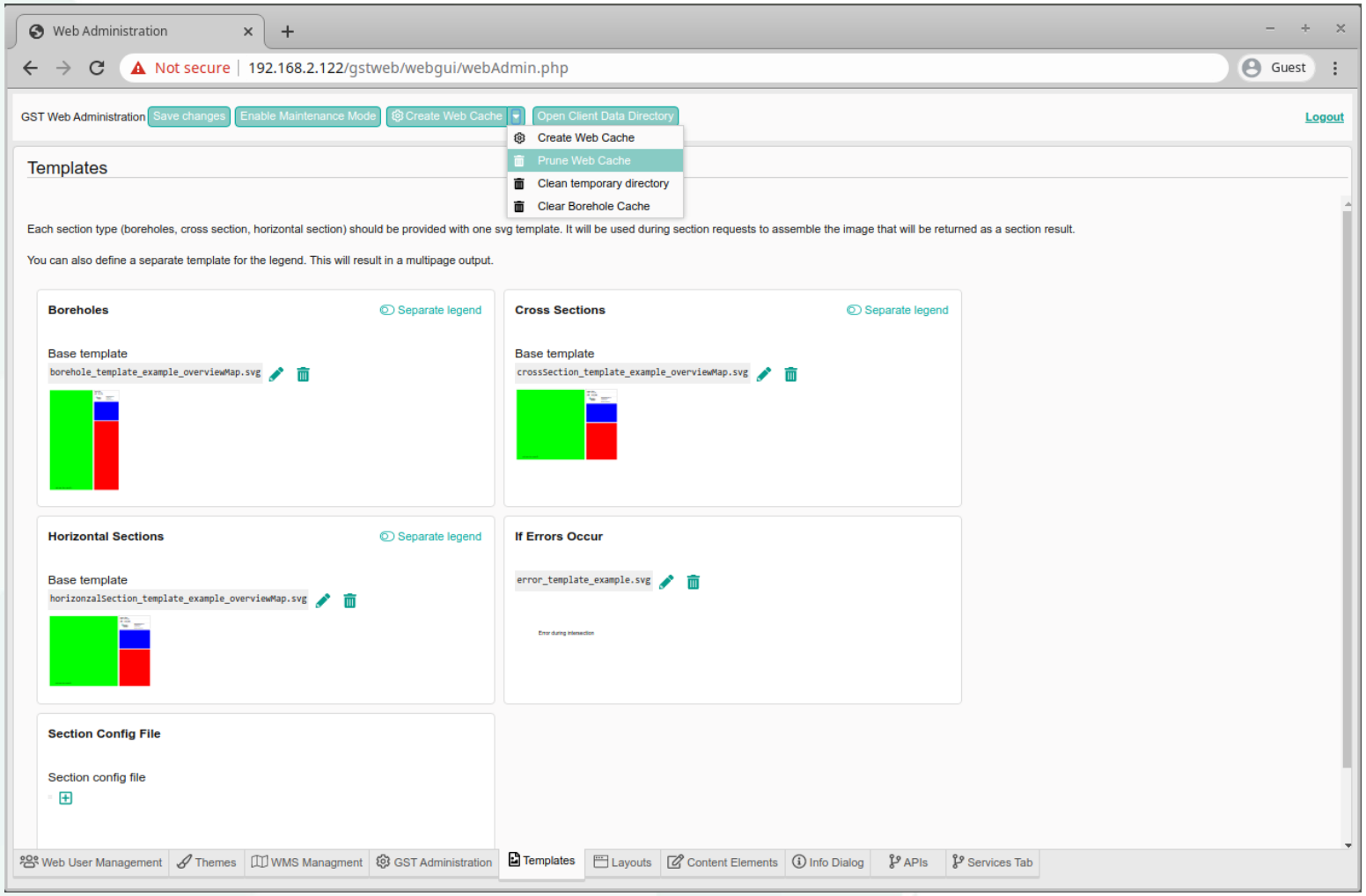
GST Desktop

* Grid Shift Files in SRS Definitionen
* Alias for feature names
* Feature Count
* Select Inside Polygon

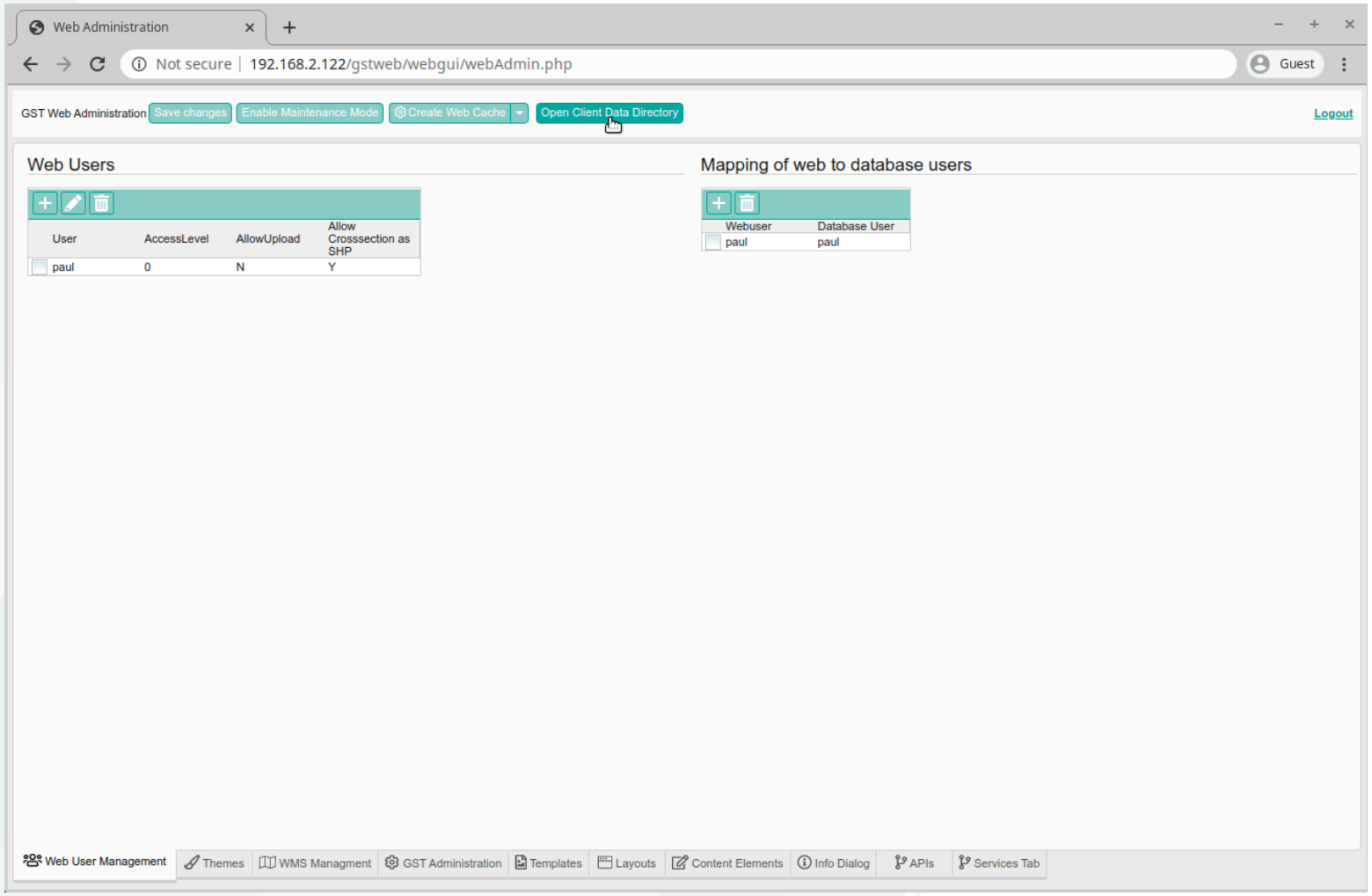
GST Web

* Web Cache
* Query Tool
* Discrete Color Maps

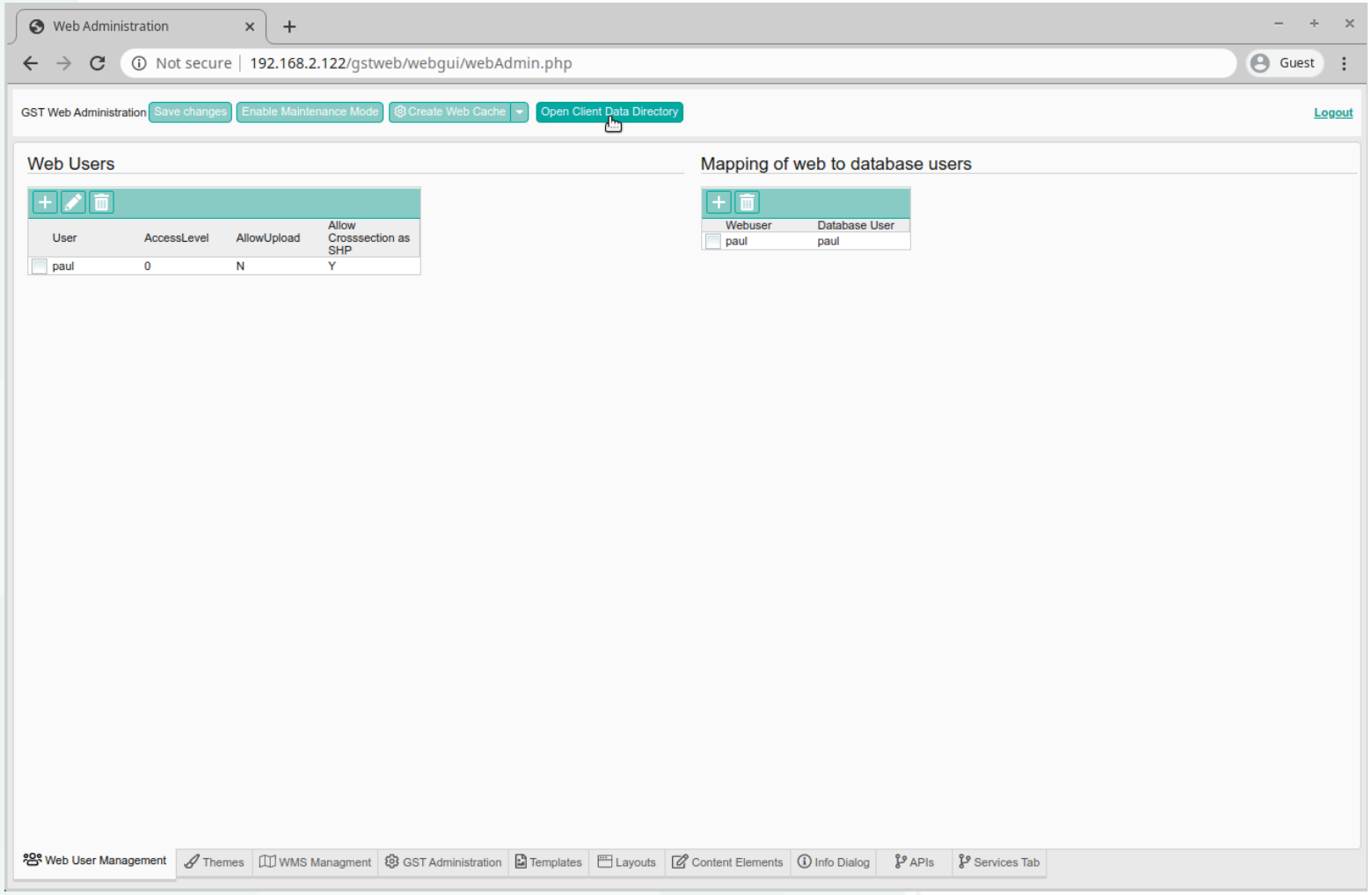
Web Cache, Templates, Admin Interface



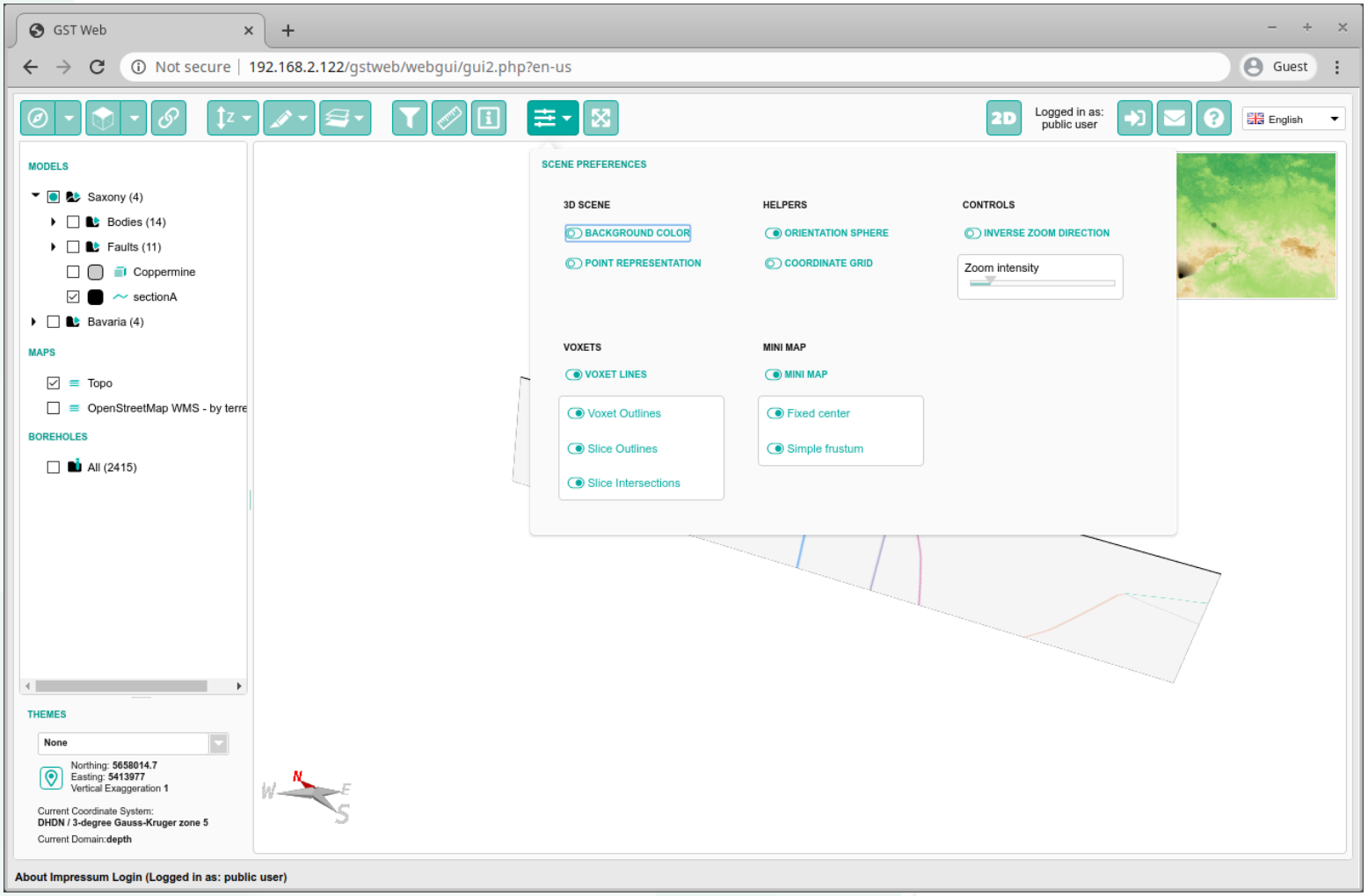
Web Cache, Templates, Admin Interface



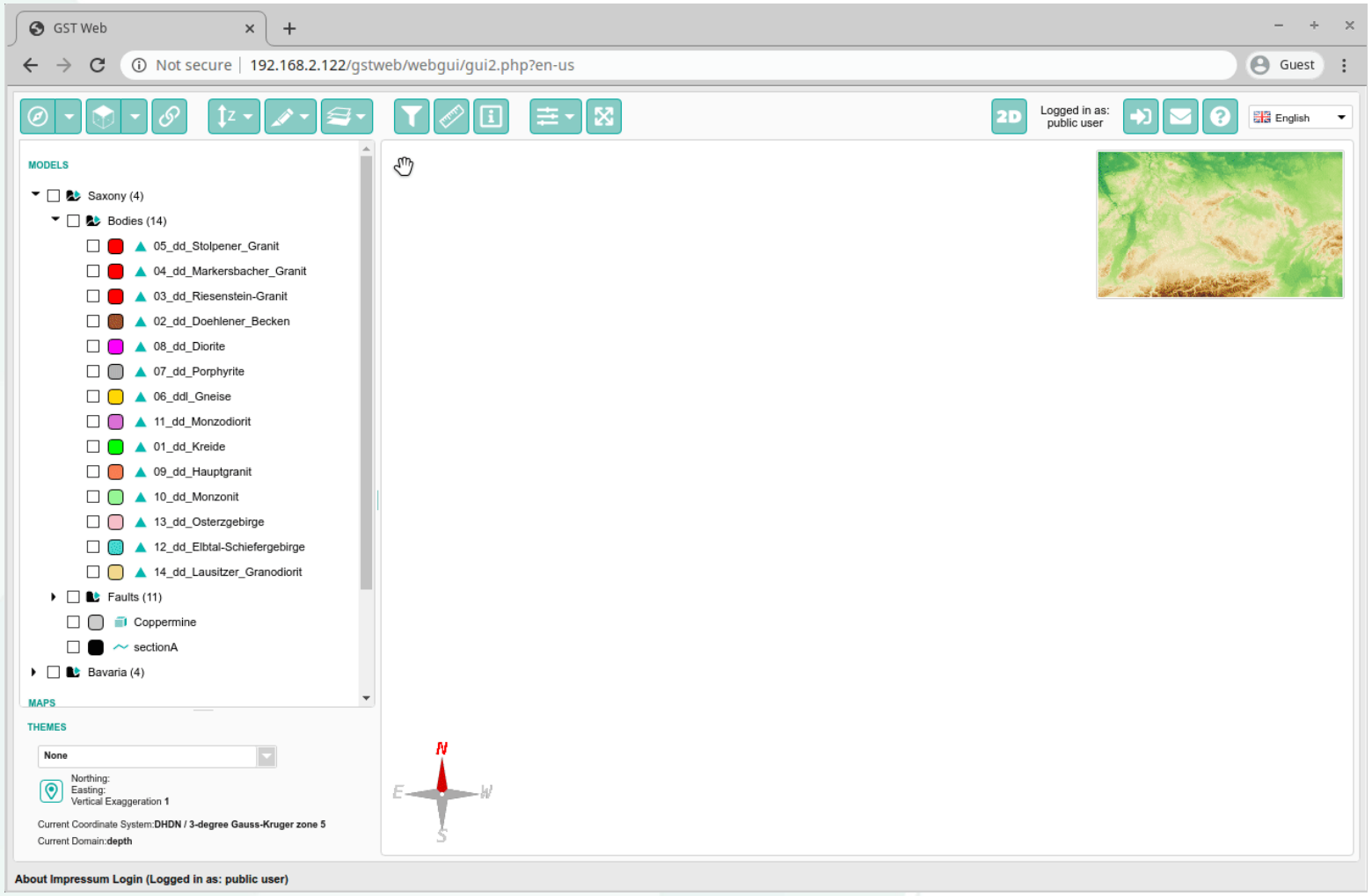
Web Cache, Templates, Admin Interface



GUI


GST Web
Not secure | 192.168.2.122/gstweb/webgui/gui2.php?en-us
Guest
2D
Logged in as: public user
English
MODELS
Saxony (4)
Bodies (14)
Faults (11)
Coppermine
sectionA
Bavaria (4)
MAPS
Topo
OpenStreetMap WMS - by terre
BOREHOLES
All (2415)
THEMES
None
Northing: 5658014.7
Easting: 5413977
Vertical Exaggeration 1
Current Coordinate System:
DHDN / 3-degree Gauss-Kruger zone 5
Current Domain: depth
SCENE PREFERENCES
3D SCENE
BACKGROUND COLOR
POINT REPRESENTATION
HELPERS
ORIENTATION SPHERE
COORDINATE GRID
CONTROLS
INVERSE ZOOM DIRECTION
Zoom intensity
VOXETS
VOXET LINES
Voxet Outlines
Slice Outlines
Slice Intersections
MINI MAP
MINI MAP
Fixed center
Simple frustum
N
W
E
S
About Impressum Login (Logged in as: public user)

Query Tool


GST Web
Not secure | 192.168.2.122/gstweb/webgui/gui2.php?en-us
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English
MODELS
Saxony (4)
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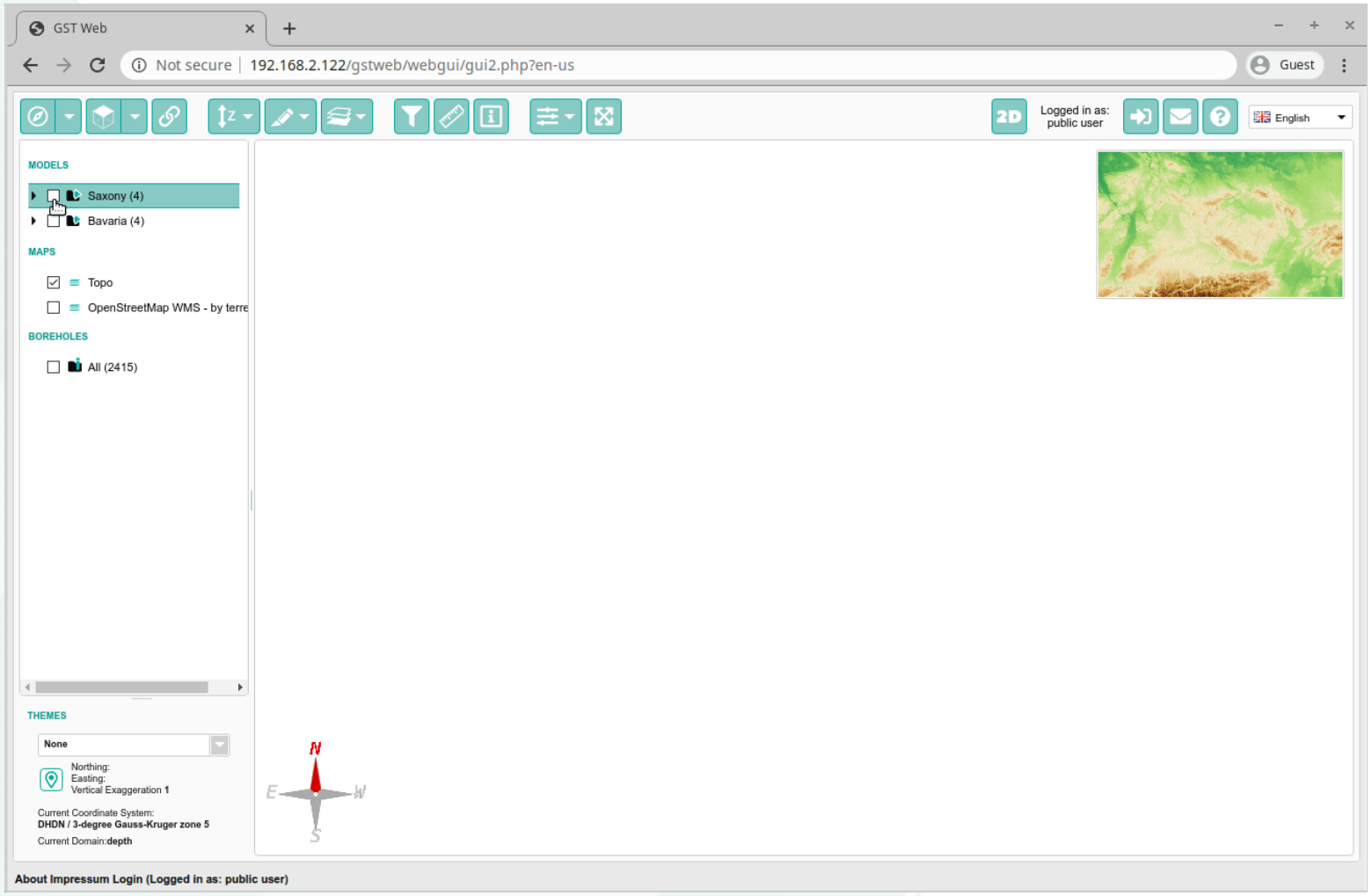
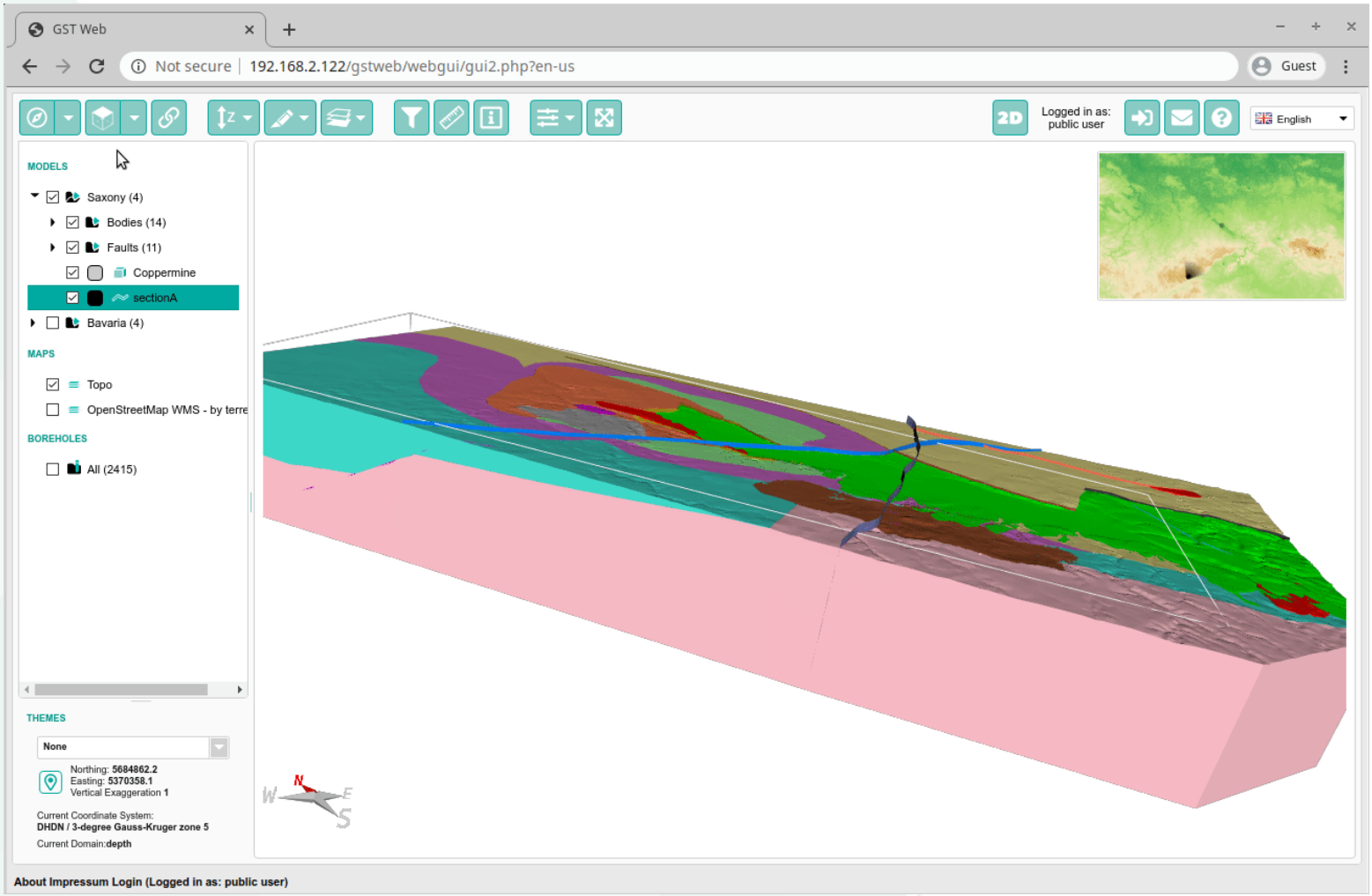
05_dd_Stolpener_Granit
04_dd_Markersbacher_Granit
03_dd_Riesenstein-Granit
02_dd_Doehlener_Becken
08_dd_Diorite
07_dd_Porphyrite
06_ddl_Gneise
11_dd_Monzodiorit
01_dd_Kreide
09_dd_Hauptgranit
10_dd_Monzonit
13_dd_Osterzgebirge
12_dd_Elbtal-Schiefergebirge
14_dd_Lausitzer_Granodiorit
Faults (11)
Coppermine
sectionA
Bavaria (4)
MAPS
THEMES
None
Northing:
Easting:
Vertical Exaggeration 1
Current Coordinate System:DHDN / 3-degree Gauss-Kruger zone 5
Current Domain:depth
N
E
W
S
About Impressum Login (Logged in as: public user)

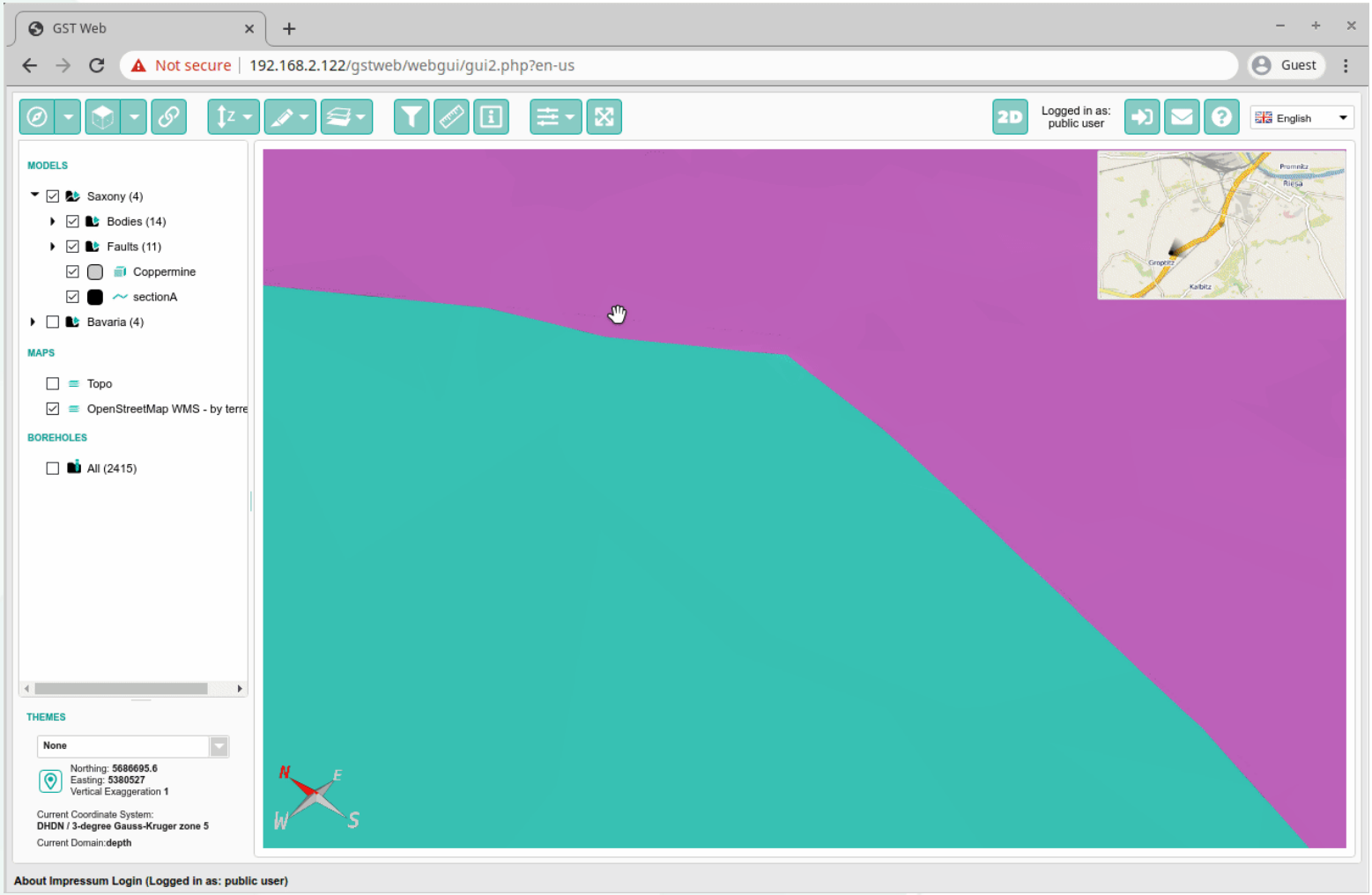
WMS Refinement



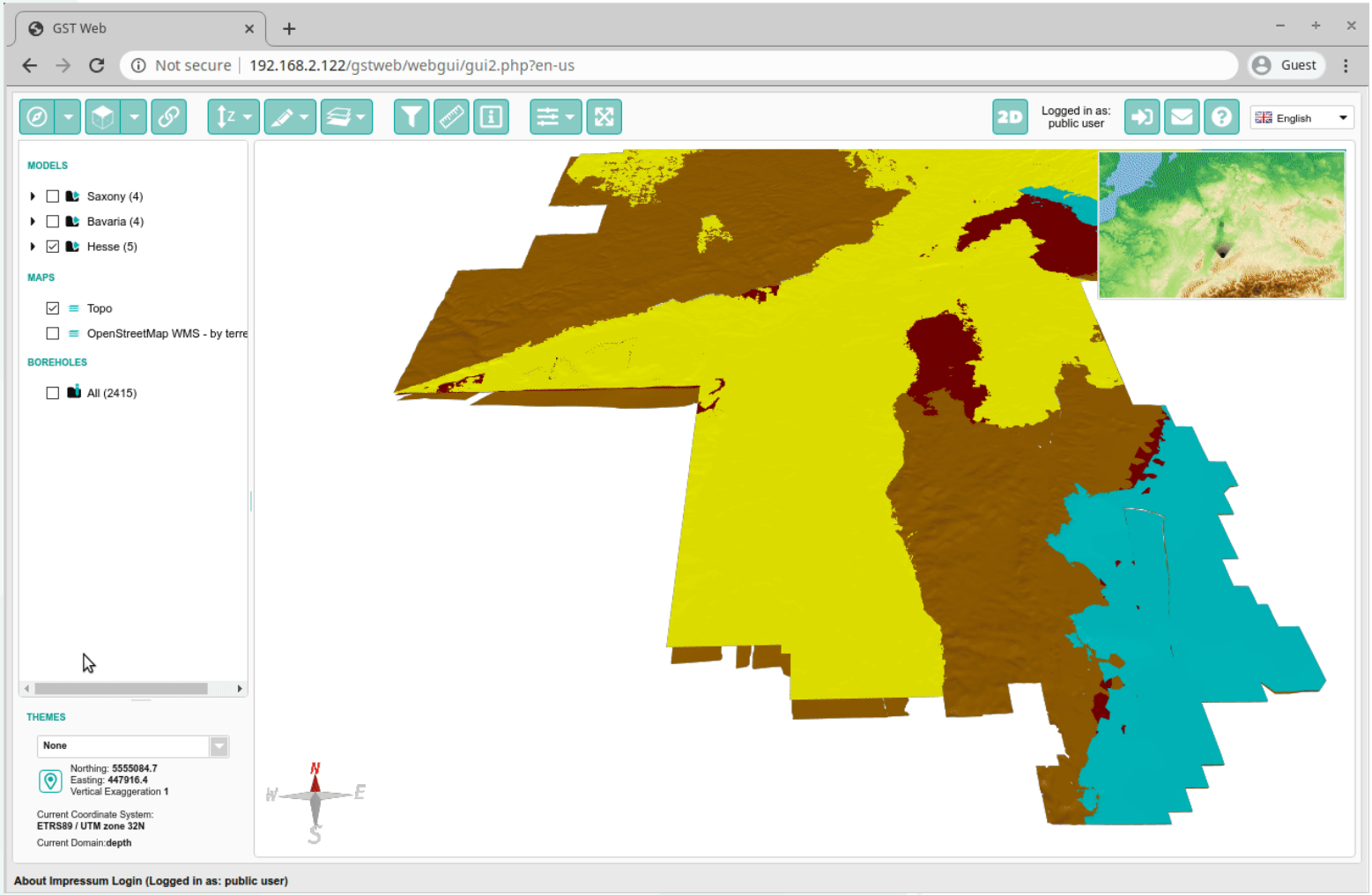
Display only



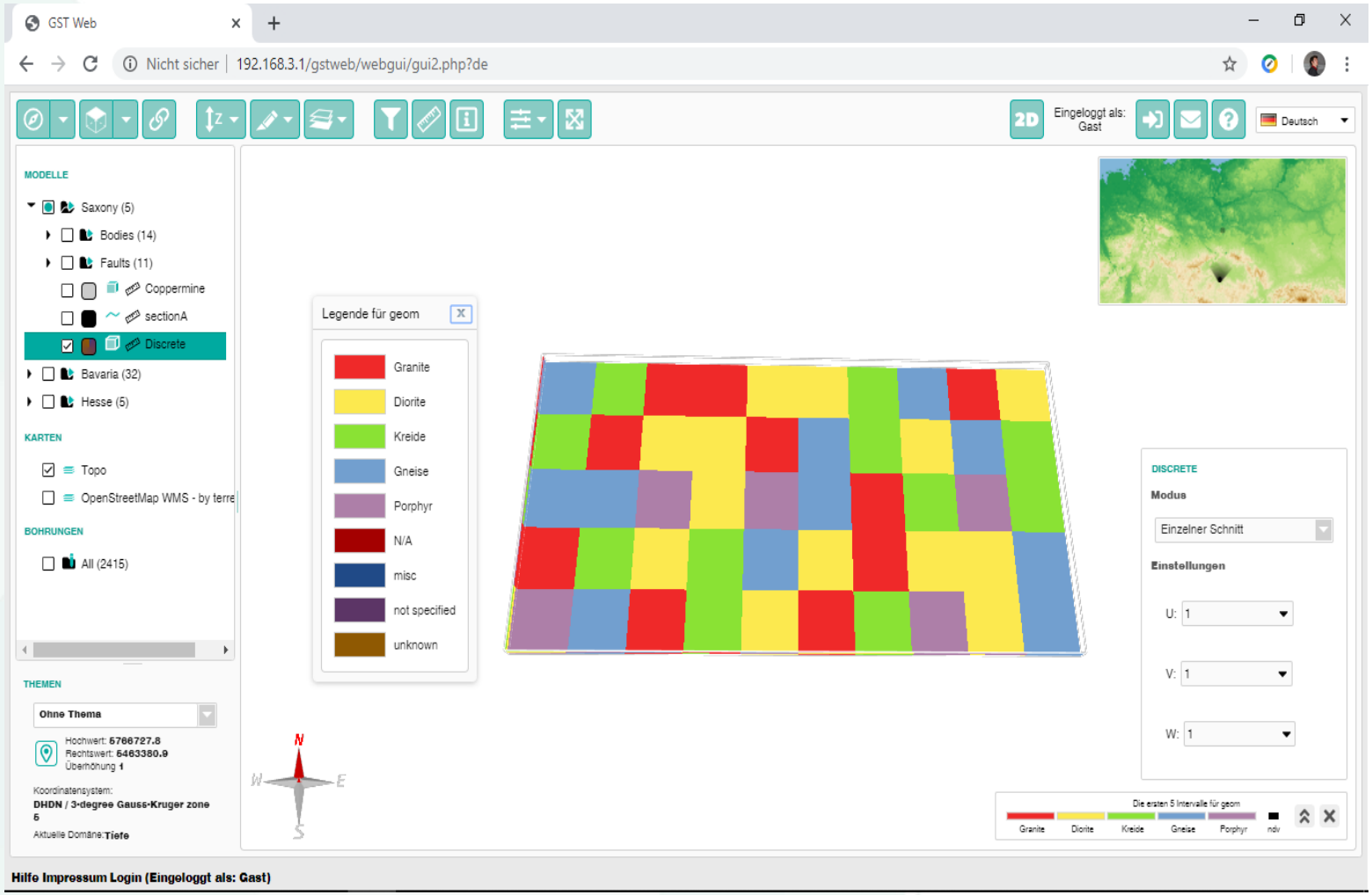
Address Search



Cadastre Search

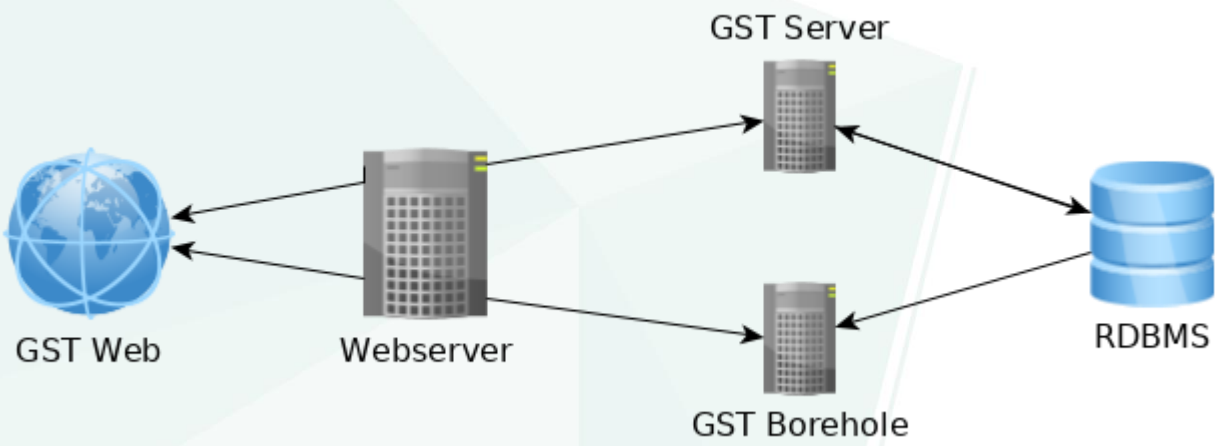


Discrete Color Maps

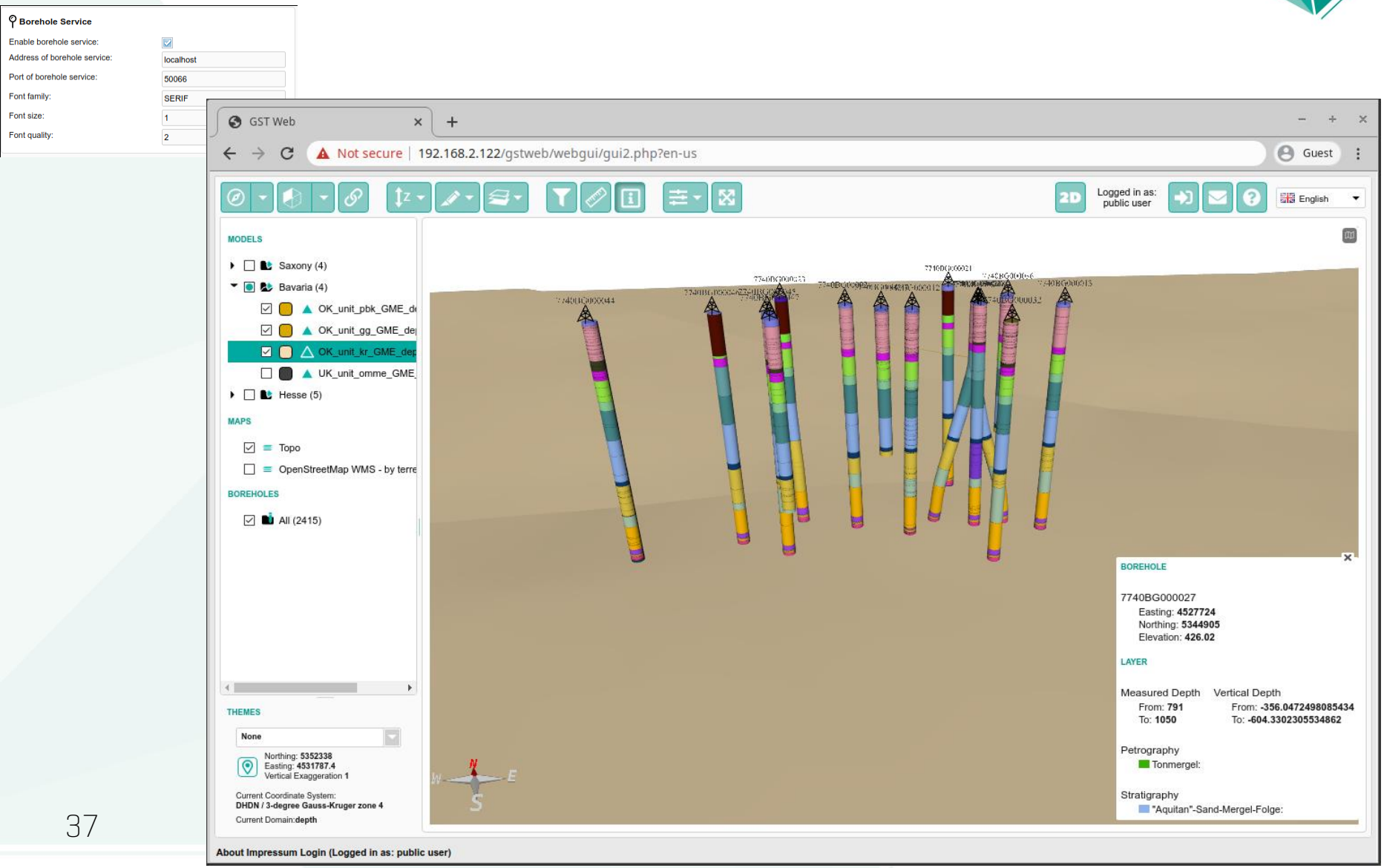


GST Boreholes

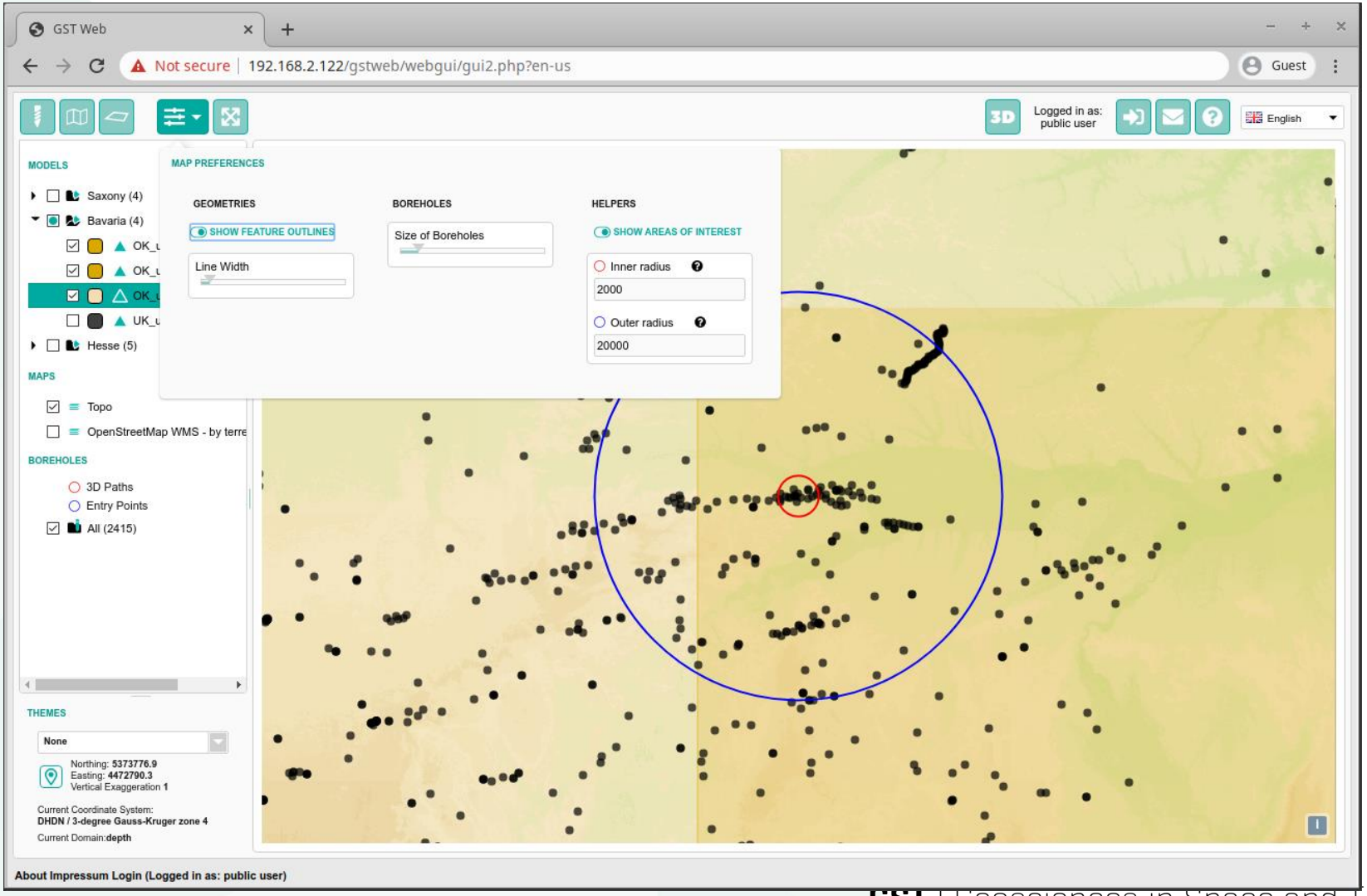
* Eigenständiger Dienst zur Verbindung mit Bohrungsdatenbank
* Basiert auf View
* Stratigraphie, Petrographie, Ablenkung



GST Boreholes



GST Boreholes



GEOPLASMA-CE

* EU-Projekt von August 2016-Oktober 2019
* Wissensaustausch, Entwicklung eine Geothermieauskunftsystems

Geologische Bundesanstalt

GeoZS Geološki zavod Slovenije

CZECH GEOLOGICAL SURVEY

AGH

geoENERGIE Konzept

LANDESAMT FÜR UMWELT, LANDWIRTSCHAFT UND GEOLOGIE | Freistaat SACHSEN

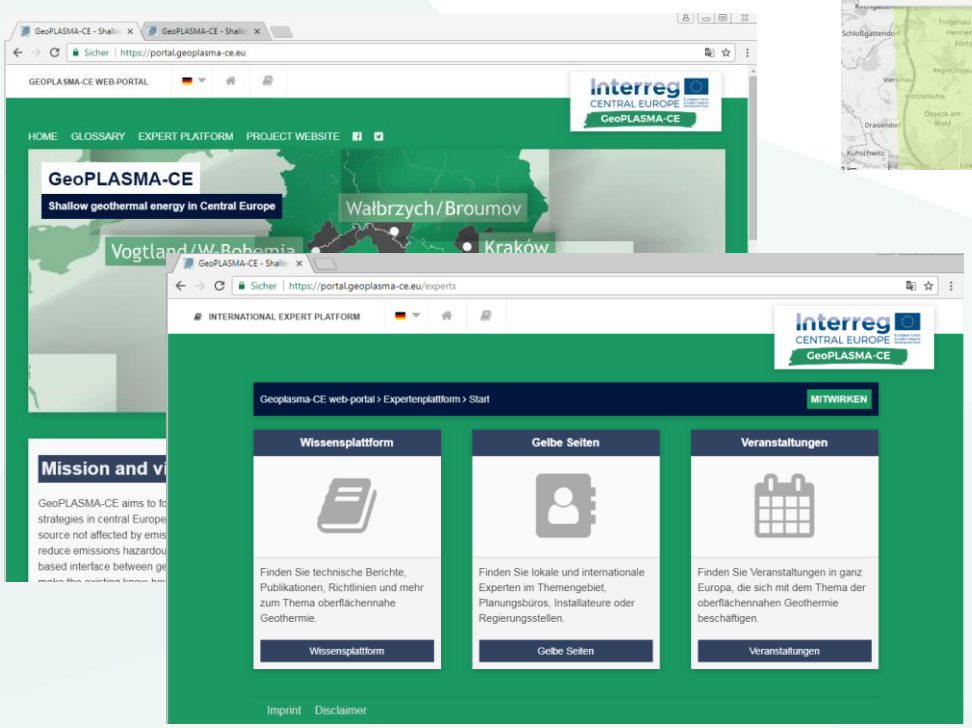
GiGa infosystems

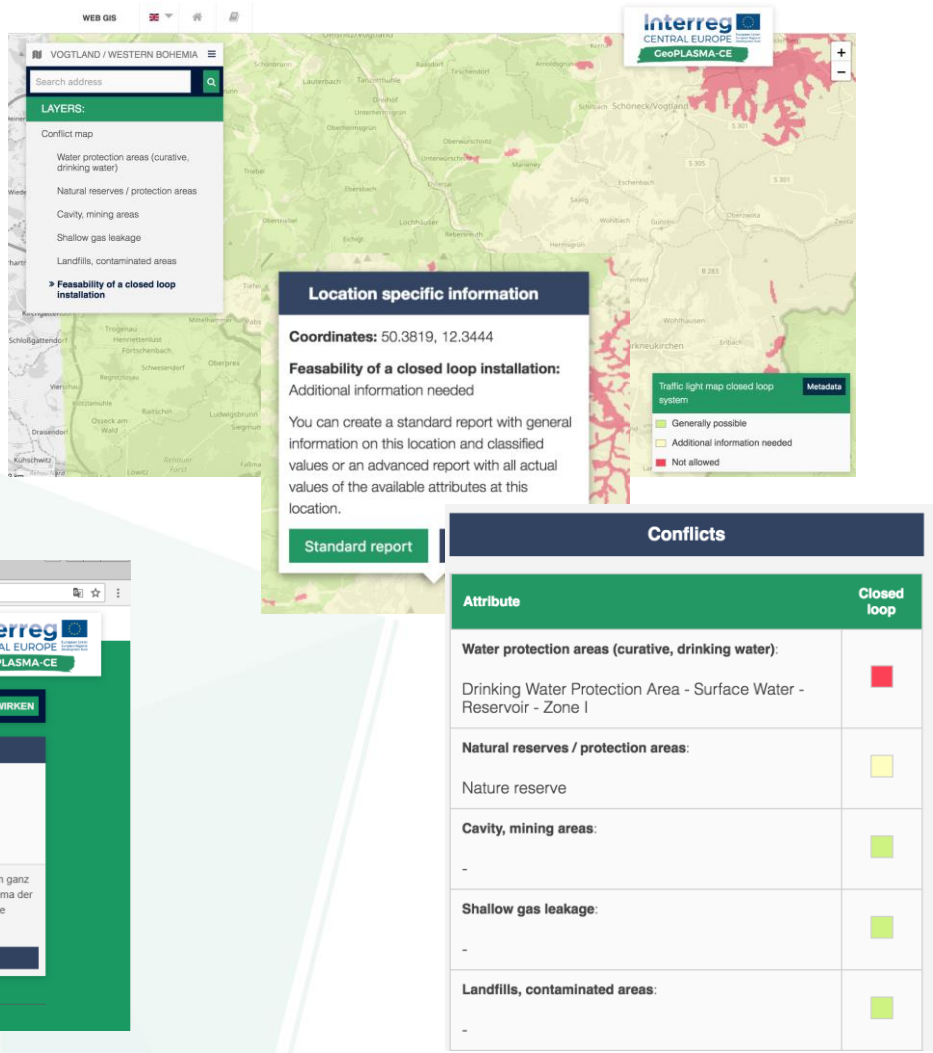
Bundesverband Geothermie

City of Ljubljana

GEOPLASMA-CE

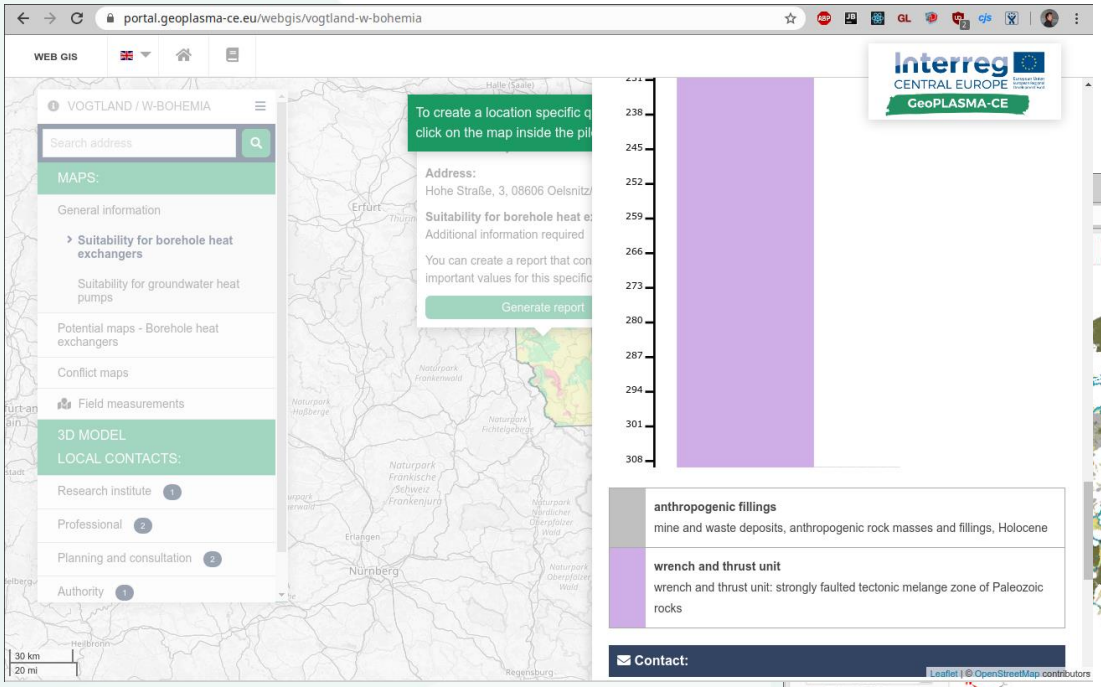
* https://portal.geoplasma-ce.eu

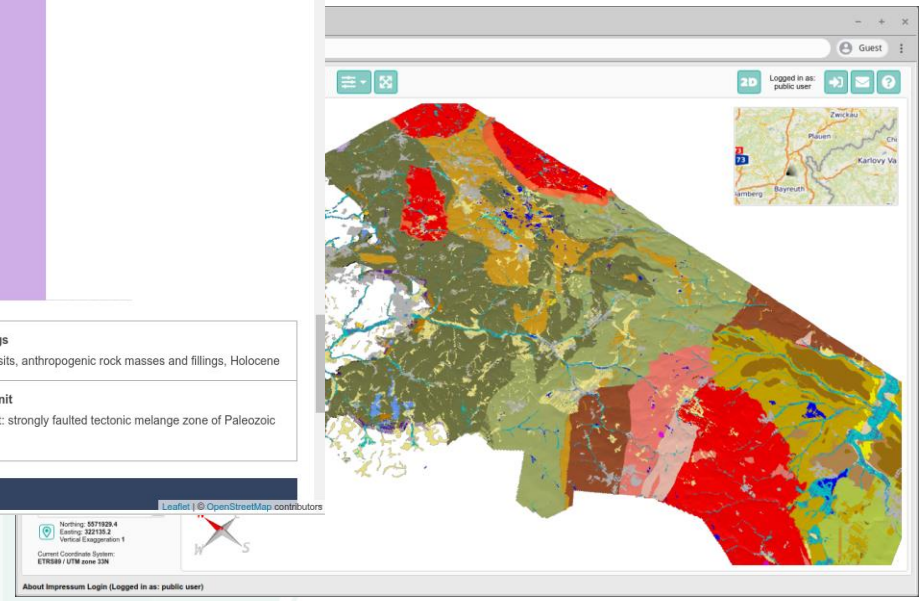




GEOPLASMA-CE

* https://portal.geoplasma-ce.eu





Fragen?

Anmerkungen?

Wünsche?

Robert Pamer (BayLfU): Eigene Entwicklungen für GST

Roadmap 2020

* Read and Write Gocad Voxet Integer Properties
* Up- and Download a subset of Feature Properties
* Read and Write Gocad Voxet Regions

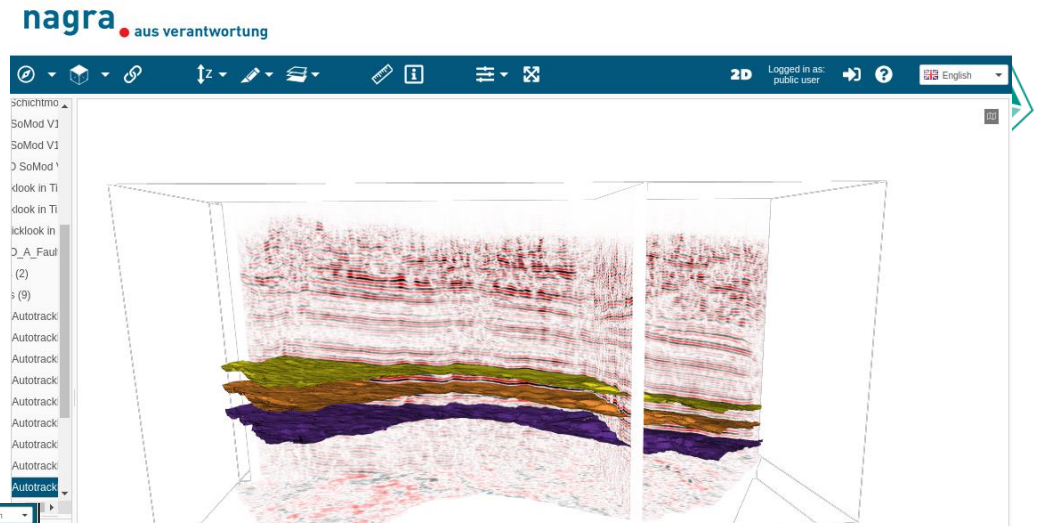
Roadmap 2020

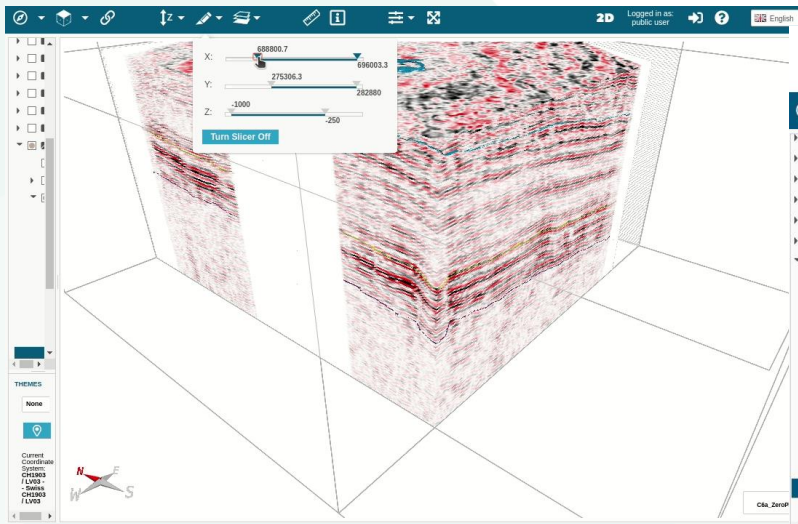
* GST[AR]
* Seismik
* SGRID
* Constrained Tables
* SaaS

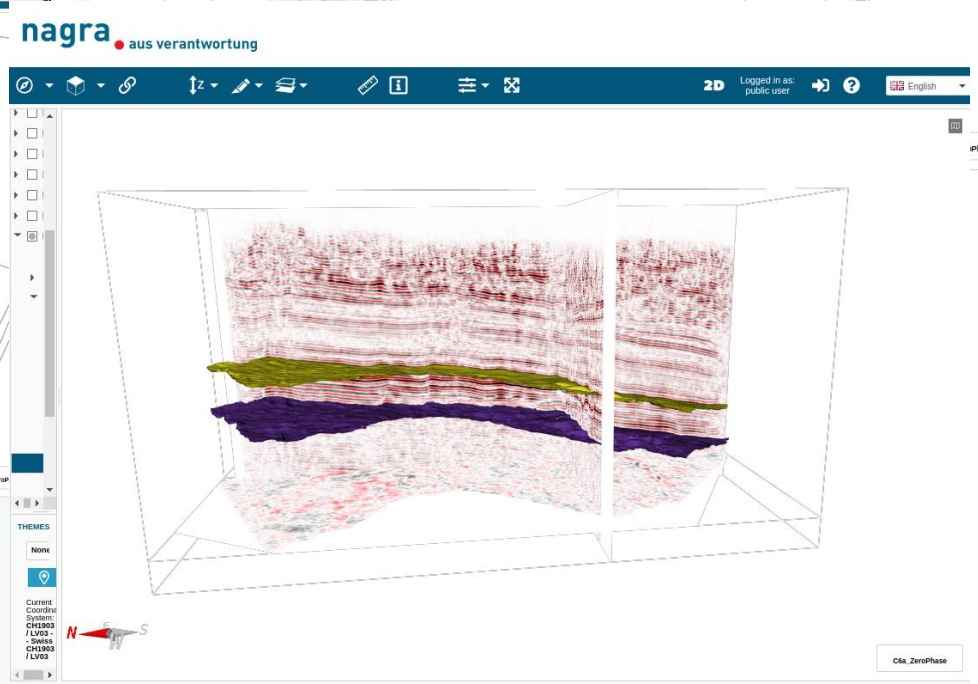
Roadmap 2020

* Formate (IFC)
* Performance
* **GST3** Release Q2 2020
* Usermeeting 2021

Roadmap 2020 - SEGY







Roadmap 2020 – SEGY / SGRID

* Direktes Lesen nach GST
* Schreiben aus GST? Welche Formate? Welcher Standard?
* Welche Arten von SEGY? (2D, 3D, 4D, ...)
* Operationen nötig?

Roadmap 2020 – SGRID

* Was soll visualisiert warden?

* Editieren von SGRIDs notwendig?

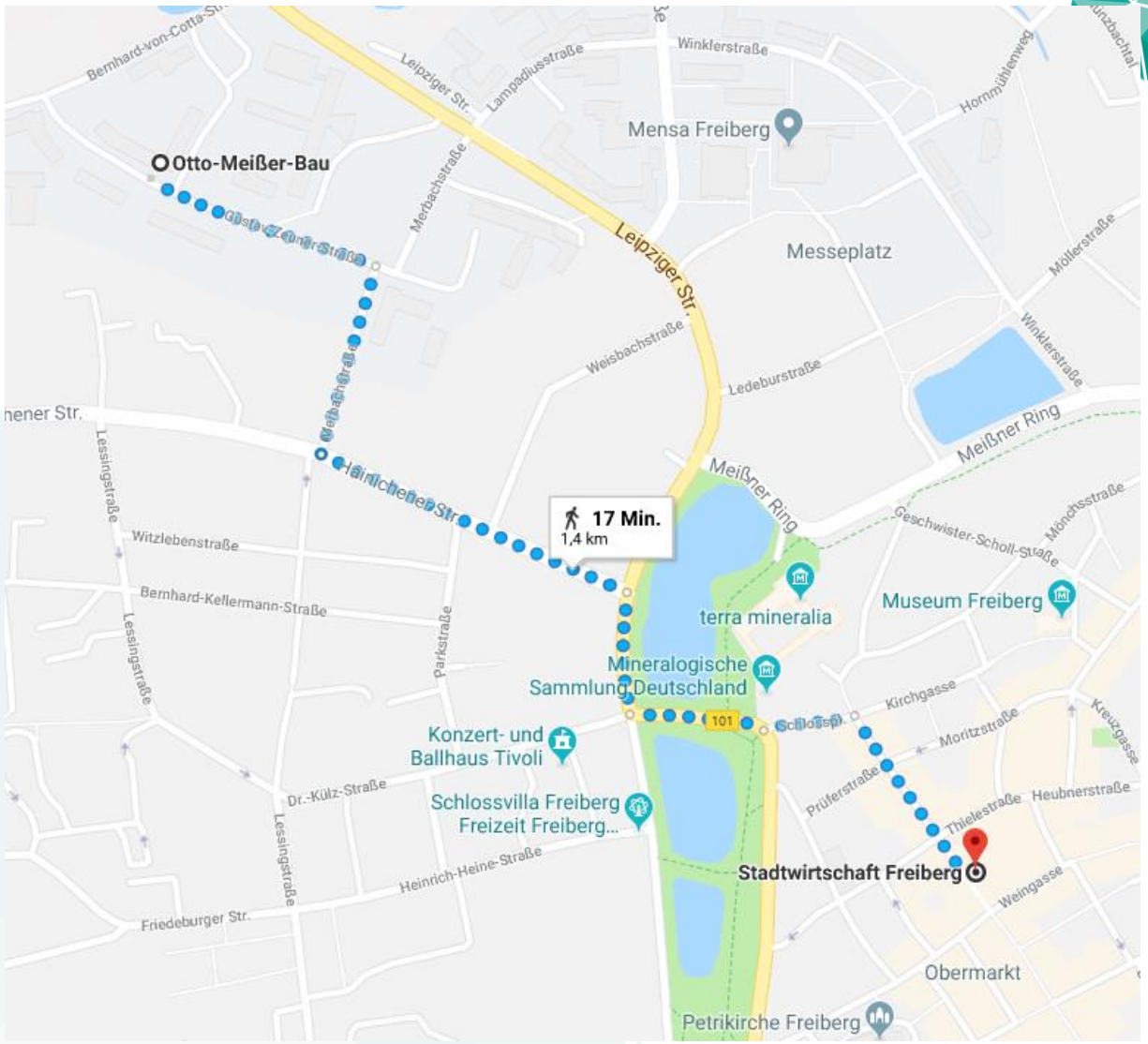
Fragen?

Anmerkungen?

Wünsche?

Roadmap

* Essen in der Stadtwirtschaft 18.30 Uhr



Thank you!

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