



An SLD+OWSContext extension for GeoPackage to migrate between GIS platforms

geocat.net/bridge

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GeoServer



MapServer

open source web mapping



GeoNetwork

opensource

PostGIS



HOW TO MIGRATE TO QGIS?

WHAT ABOUT GEOPACKAGE?

- Self contained single file package
- OGC standard
- Wide support on software and devices
- Extension mechanism
- Has an accepted metadata extension
- Already used on bridge to transfer data to Geoserver

STYLED LAYER DESCRIPTOR

- OGC standard
- Supported in QGIS, Geoserver, deegree and OpenLayers
- SLD generation already available in Bridge

OWS-CONTEXT

- OGC standard for capturing TOC information
- 3 encodings (XML, Atom & json (draft))
- Needs tweaking to support referencing content in tables

OWC EXTENSION

- ▶ gpkg_contents
- ▶ gpkg_geometry_columns
- ▶ gpkg_metadata
- ▶ gpkg_metadata_reference
- ▶ gpkg_spatial_ref_sys
- ▼ owc_context
 - name
 - abstract
 - author
 - timestamp
 - language
 - mime_type
 - content
- ▼ owc_style
 - name
 - abstract
 - mime_type
 - content
 - timestamp

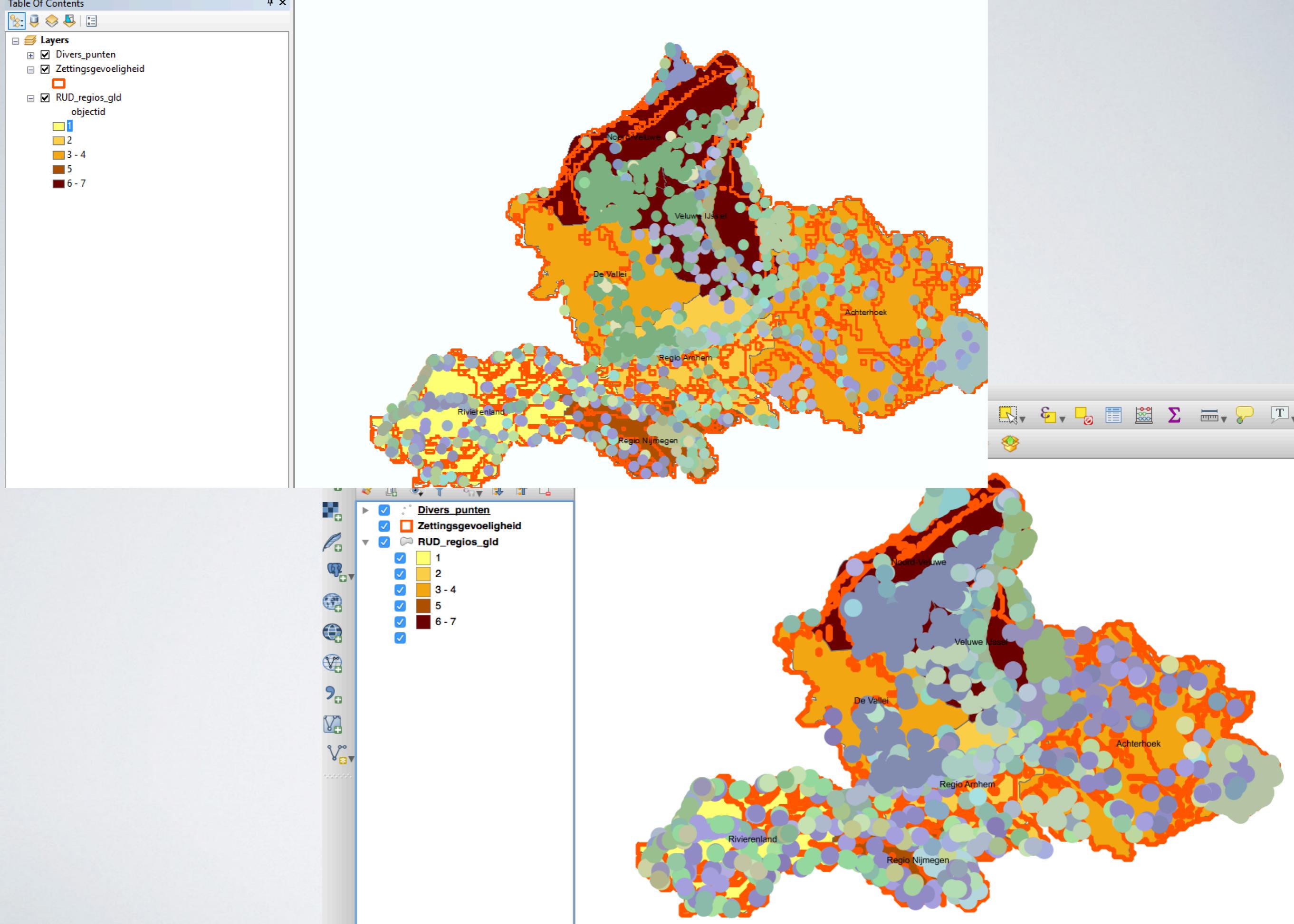
QGPKG

- QGIS plugin started by Pirmin Kalberer
- Extended to include support for the OWC extension
- Pull request pending

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<entry>
  <id>http://www.geocat.net/maps//layers/Zettingsgevoeligheid</id>
  <title>Zettingsgevoeligheid</title>
  <updated>2017-07-19T20:28:44</updated>
  <category
    scheme="http://www.opengis.net/spec/owc/active"
    term="true" />
  <owc:offering
    code="http://www.opengis.net/spec/owc-atom/1.0/req/gpkg">
    <owc:content
      type="application/x-sqlite"
      href="#table=Zettingsgevoeligheid" />
    <owc:styleSet>
      <owc:name>Zettingsgevoeligheid</owc:name>
      <owc:title>Zettingsgevoeligheid</owc:title>
      <owc:content
        href="#table=owc_style&name=Zettingsgevoeligheid"
        type="application/sld+xml" />
    </owc:styleSet>
  </owc:offering>
</entry>
```

DEMO

<https://www.youtube.com/watch?v=CM9LSnMUfQU>



POTENTIAL USE CASES

- GeoNetwork; export a map as a GeoPackage including data/styling/context for use in a Desktop GIS or mobile device
- QGIS; Package a QGIS project for use on a mobile device
- QGIS; Package a QGIS project for publication on GeoNetwork/GeoServer
- OpenLayers; Display a map based on GeoPackage content

CHALLENGES

- SLD Implementation in Geoserver and QGIS is a bit different and/or incomplete.
- Interaction with OGC
- How to manage fonts

OGC TESTBED 12/13

- Current OGC testbeds include a topic that engages with this topic
- Report testbed 12 <http://docs.opengeospatial.org/per/16-037.html>

REFERENCES

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- github.com/geocat/qgpkg
- geopackage.org
- owscontext.org
- opengeospatial.org/standards/sld