

GeoStyler – Generic Styler for Geodata

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Abstract:

GeoStyler is an open-source software and OSGeo Community Project that provides a set of parser libraries which allow the conversion between different common styling formats used in cartographic software.

On top of this core functionality, GeoStyler provides a user interface (UI) component library that helps to integrate GeoStyler into web applications. Using these components, GeoStyler can be used for example to create a WYSIWYG style editor. The project also maintains a GeoServer-plugin [3], which includes styling UI-components within GeoServer.

Two more tools from the GeoStyler universe should be mentioned: A commandline interface (CLI) and a REST interface. The CLI provides a tool for server-side style conversion for an arbitrary number of style files – completely automated. The REST interface can be used to create webservice which do the conversion between formats on-the-fly. With these tools, it is possible to convert a huge amount of style files from one supported styling format into any other format and vice versa – e.g. QGIS styles from/to SLD, Mapfile or any other supported file based styling format.

GeoStyler is based on a plugin concept, so the whole engine and UI works with any of the supported parsers and can thereby be used for projects that use any of the formats GeoStyler currently supports: OGC SLD, OpenLayers Styles, Mapfiles, QML and Mapbox. For assistance, when styling by attributes, the geodata formats GeoJSON, OGC WFS and Shapefile are supported too.

Common Query Language (CQL) for filtering is understood as well as expressions written in the Filter Encoding standard (OGC FE).

There are a number of new features planned for this year, such as a responsive card layout, enhanced support of expressions, filter UI enhancements/overhaul and an ArcGIS style parser. While still in early stages, first steps have been taken to style Cesium 3D-Tiles with GeoStyler. Also, further improvements on various documentation resources such as the GeoServer plugin, the UI and the translation of tutorials are on the roadmap. A Code Sprint in June this year also enables interested people to participate in and contribute to the many facets of the project in person or virtually.

With this talk, we want to explain the core concepts of GeoStyler and present the current project status. We hope to get feedback from the audience and enhance the attractivity of the project to other users and developers. In order to show a real-life example, we will present the results of actual projects where GeoStyler was used to e.g. convert a big amount of UMN Mapserver based styles to QGIS.

References

- [1] <https://geostyler.org/>
- [2] <https://www.osgeo.org/projects/geostyler/>
- [3] <https://docs.geoserver.org/latest/en/user/community/geostyler/index.html>