THE DATAVIEWER MODULE – A NEW PERSPECTIVE ON SPATIAL DATA (ILLUSTRATED BY MAP SHEET 88 ACHENKIRCH)

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As geoscientific data cannot be used successfully if the basic structure and interpreted results are not understandable for everyone within a certain community, a comprehensible (transparent) knowledge representation is an important precondition. The Thesaurus of the Geological Survey of Austria [2)] – the "GBA-Thesaurus" – represents a controlled vocabulary and fulfills this functional requirement (as presented at the Pangeo 2016 by Vicky Haider). The available open access service interface allows building external applications that evolve from the GBA-Thesaurus.

Therefore, it was possible to develop the GBA DataViewer module. It is a tool - based on the INSPIRE data model for geology[1)] - designed specifically to search and analyze harmonized geoscientific spatial data. It consists of: (1) a map display shown via ArcGIS web services and an attached leaflet to show the geometry, (2) a concept area with semantic data from Thesaurus queries using SPARQL endpoint, (3) a filter bar with SQL queries directly from the relational data base using an ashx-handler. The purpose of this application is to provide geologists a possibility to explore the database, to understand the advantages of a sophisticated structured database, and to move from the display of geological maps towards a view of geodata. Ultimately, its benefits are the improvement of both, the quality and the harmonizing process of datasets. In addition, by providing a live access to the process of harmonizing geological data, it may be useful for a compilation of geological data all over the country and for error identification in geological map data. In future prospective, it should be possible to detect, define, and visualize cross-bordering geological features by using the GBA-Thesaurus and DataViewer to support a common transboundary cooperation regarding geoscientific challenges.

This poster presentation visualizes the possibilities and advantages of querying structured geoscientific spatial data, shown by the example of the dataset concerning the map sheet 88 Achenkirch.

[1)] INSPIRE Thematic Working Group Geology (2013): D2.8.II.4 INSPIRE Data Specification on Geology – Technical Guidelines. European Commission Joint Research Centre.
[2)] GBA-Thesaurus link: http://resource.geolba.ac.at/