

GEOREFERENCER ONLINE SERVICE AND MAPRANK SEARCH

PRIDAL P.

Moravian Library Brno, BRNO, CZECH REPUBLIC

Memory institutions such as libraries and archives have begun a process of massive scanning of historical documents from their collections. Very often, the resulting high-resolution digital copies are published on the web. This paper is introducing an online service which comprises a set of tools that allow further processing of scanned old maps that are already available on the web.

The online service allows rapid collaborative georeferencing, 3D visualization, annotation and accuracy analysis directly in a web browser environment, without the need to install any software on a local computer. It is also possible to visually combine historical map layers and overlay them on top of Google Maps or equivalent base maps such as Microsoft Bing Maps, Yahoo Maps or OpenStreetMaps.

To georeference a map the user has to specify at least three control points on a modern map displayed in the web interface. Georeferencer retains a complete history of all modifications which were done in the system and allows backtracking (restoring of a particular revision of a georeference). The system also provides OGC WMS for further work with the georeferenced images in GIS applications - three for every revision: based on affine, polynomial and thin plate spline transformation for the control points.

All the tools run completely in the cloud - there is no need to install any software on the servers of participating institutions - the existing forms of image distribution used on the institution website are utilized. Supported systems include DeepZoom, Zoomify, MrSID, DjVu, Lizardtech, IIPImage, WMS rasters, TopView, ContentDM, DigiTool, Aware as well as standard images in formats such as JPEG. A beta version of the described online service is already available for testing by general public. The development continues as part of a R&D project OldMapsOnline.org, conducted by the Moravian Library in Brno.

The MapRank Search is a geographical search engine with support for spatial ranking. It can easily index maps georeferenced by Georeferencer or any equivalent system. MapRank Search was designed specifically for efficient and intuitive search in very large (millions of records) map collections and geodata catalogs in general. Users just browse a base map and choose a geographical area of interest and optionally also a time period, tags or a fulltext query while the system presents the most relevant records from the indexed metadata catalog instantly. MapRank Search was developed by Klokantec Technologies GmbH, Switzerland. The pilot web application is indexing a union catalog of maps from all Swiss libraries.