

# Cartographic visualisation of health data

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Particular health status of individuals is very important thing that a health services are focused on, but to better understand progress of health status of whole society we need to be able to analyse and put together results that come from statistics from long time observations. Such statistics shows a lot of dependencies that impacts people's health. One of very important property that has to be put together with health statistics is the spatial location and progress of frequency of particular diagnosis.

The aim of this paper is to describe technical aspects and results of project Visual Health that is focused on rich cartographic visualisation of complex statistical data that comes from various kinds of resources and health statistics. These statistics are usually provided by health ministry. The visualisation should be made on the form of electronic (web based) atlas. The outputs of this project are focused on needs of ordinary people as well as specialist from the government and medicine field.

Particular project results were focused on different GIS and cartography technologies to fulfil different demands on cartographic outputs. Basically we introduce two main approaches:

- \* SVG output generated by XSLT technology – this approach is easily integrable into the web page including the possibility to dynamically visualise statistical data in the form of cartograms. This paper includes technology description as well as examples and pros and cons of this method.

- \* KML based web service enabling more dynamic visualization using GoogleEarth and GoogleMaps including possibility to visualise time series. This approach is focused on advanced users that would like to combine the data with their own in the form of Mash-ups. This solution is based on off-the-shelf open source software like PostGIS, GeoServer and OpenLayers. General concept as well as particular examples will be demonstrated.

Cartographic visualization of health data is something very valuable for common people as well as specialists in medicine and civil services. On the other hand the complexity and time dependency of such data makes it also challenging issue for GIS specialists as well as cartographers. This paper describes the project with ambitions to fulfil this challenge.