

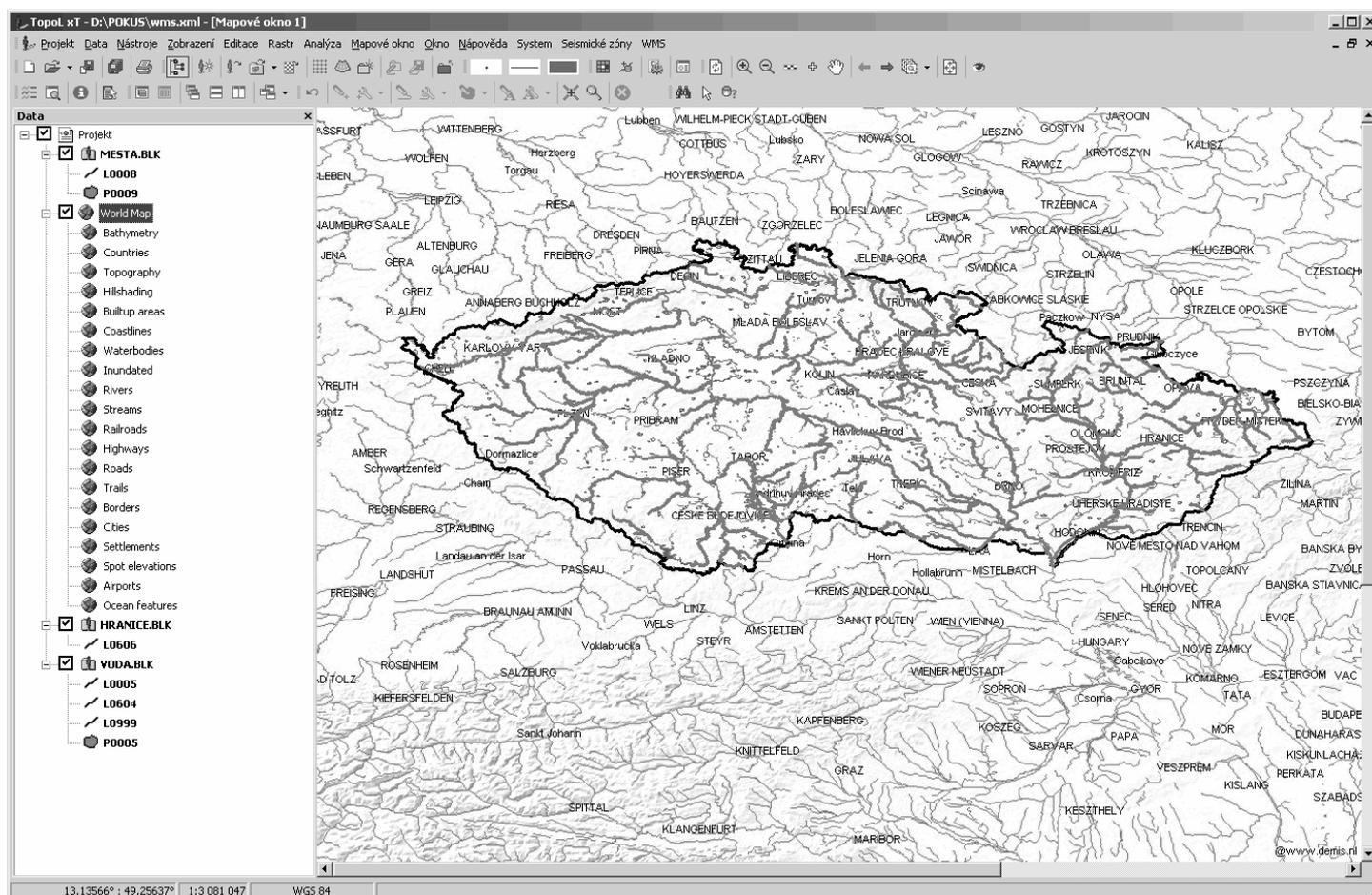
# TopoL xT, WMS

TopoL xT as WMS client



Organizations and companies have been providing online mapping services for years. These Web mapping systems have been implemented as a set of proprietary systems. As a result of this isolated development, online mapping services from different vendors cannot interoperate. The opportunity the Web provides for broad access is not realized if each server has a different proprietary implementation with no published interface specification. To address this problem, the Open GIS Consortium, Inc. (OGC) developed a non-proprietary Web mapping approach based on open interfaces, encodings and schemas. This achievement enables users to immediately overlay and operate on views of digital thematic map data from different online sources offered though different vendor software. The set of interfaces is known as the OpenGIS Implementation Specification, and includes the **Web Map Server (WMS)** interface implementation specification. Each map server implements a common interface, a messaging protocol such as the WMS interface for accepting requests and returning responses.

This approach allows, among other things, the user to run a single client that accesses all the capabilities of each server. This enables a more open application environment where the best features of available Web services can be flexibly combined in innovative and previously unimagined ways to solve novel and increasingly complex problems. WMS clients can specify requested layers, layer styles, the geographic area of interest or bounding box, the projected or geographic coordinate reference systems (called the Spatial Reference System by OGC), image file format including width and height size, and also background transparency. When the WMS client makes requests from multiple WMS services using the same bounding box, Spatial Reference System, and output size, the returned image files can then be overlaid to create an infused or composite map. It is important that the map requests specify transparency in order to see lower map images.



TopoL xT works as WMS client and supports this service. It enables to display the data, which are available through this service and to combine them with local vector and raster data. When TopoL xT makes requests to obtain information about data offered by the WMS server, the user can define the layers to display in map window. The "image" generated by WMS server can be downloaded when ever the viewport of the map window is changed or only on the user request. It depends on the speed of internet connection.

We have to add, that the WMS specification is very wide and not all map servers implement it correctly. So sometimes it might happen, that the system has got some limitations.