The GIS Web Map Portal of the Historical Town’s Atlas of the Czech Republic: an access to the historical cartographic and iconographic heritage of Prague

Although Prague is one of the most significant European metropolises and its history is extensively documented in all types of historical sources including the iconographic ones, it still lacks systematically compiled overviews of plans, maps and town views. Since 1992, when the Czech team joined the international project “Historical Town Atlases”, the urban development of particular towns and cities in the Czech Republic has been studied, stressing the importance of cartographic and iconographic sources. In the case of such a large city characteristic of complex urban development and a huge amount of preserved historical sources, it was impossible to depart from the structure of the Historical Town’s Atlas of the Czech Republic, and the web map portal of the Historical Town’s Atlas of the Czech Republic was thus established in 2010. Employing the GIS system seems especially appropriate for compiling an atlas of a metropolitan area.

The web map portal includes:

- texts (bibliography of Prague urban history)
- modern maps, including cadastral and orthophoto maps, which are appended from various map portals by means of WMS
- georeferenced old maps and plans
- digital 3D models of Prague landmarks
- photos and town views organized as a virtual topographical handbook

The application offers basic tools like zooming in and out, readout of coordinates, fast conversion to particular coordinates (Go To, etc). Georeferenced old maps and modern layers can be layered over and the transparency level of each one can be adjusted on a scroll bar. This allows for watching the housing development and studying land use. Moreover, maps of growth show the development of built-up areas during specific periods which can be seen either one by one or in the form of animation. Localized photos and views represented by an active symbol in a map layer are easily accessible and they all well supplement the situation depicted on maps.

The background of the map environment contains a database of old maps and plans of Prague. More than 20 parameters were used to describe the listed maps and plans, and can be divided into the following groups:

1. Basic information (title, date and place of origin, author(s), depicted area, type of map)
2. Information on keeping a particular document (institute, collection, shell, inventory number etc.)
3. Analysis of the map content (map features: coordinate grid if any, map scale [scale bar and natural scale], map orientation, planimetry, altimetry, map lettering, decoration)
4. A physical state (number of times and condition of the preserved document)
5. Related archive documents – manuscripts and printed documents, professional literature, editions etc.

The description also includes a small-dimensional image. The maps which can be georeferenced can be viewed as single layers in the web GIS environment.

Prague – town development from 1794, when the four historical towns of Prague were united, to 1794, when the last significant expansion of Prague occurred.

With the aim to maintain the structure of the Historical Town’s Atlas of the Czech Republic and the interdisciplinary approach, the area of Prague, covering almost 488 km², was processed according to individual districts. The first ones were the areas located immediately inside the city wall which enclosed the four historical Prague towns. These areas originally represented autonomous settlements that developed independently until the second half of the 19th century. The atlas of the 19th neighborhood was completed in 2008, while the volume dedicated to the neighborhood of Radová Větvová was published in 2010 and the atlas of Žehrov will be published in 2012.

Prague from the Topographia Bohemiae, Moraviae et Silexiae by Martin Zeiller, published by Matthias Merian in 1648. Prague City Archives

These two photos allow for comparing the centre of Štítrov in various periods: the crossed “Adolf” during the 1930s and in 2011, with the new building “Střední Anglicky” by architectJosef Novák. Private collection and Dana Vondrůvová

Opening page to the interactive atlas.

A detailed view of the map of Kralovská Vinohrady from 1685 by Michael Berecky combined with a contemporary layer showing the development of the built-up area in 1875, 1874 and 1891 and modern cadastral maps connected via WMS.