## Spatial History of the Czech-German Ethnic Border (1840–1940)

The paper deals with the process of the cartographic depiction of the Czech-German ethnic border from the first attempts at the beginning of the 19th century to the outbreak of World War II. The visualisation of ethnic and language borderlines, especially in the multinational Central and Eastern European regions became a gradually frequented topic in the thematic maps published in this period and can be held as one of the important tools used in the purposes of modern national movements. Nevertheless, ethnographical (and another relevant thematic) maps depicting the Czech-German language/ethnic border have not yet received much attention. The main peaks of this genre were connected with the social or more specifically ethnic conflicts in 1848, 1918 (creation of many maps related to the Paris Peace Conference negotiations) and in the late 1930s (separatism of Sudeten German minority). Furthermore, the number of maps has increased significantly after the introduction of regular statistical surveys from the 1880s. Although the Czech-German language borderline changed only a little in the examined period, its "neutral" cartographic depiction is scarce. On the contrary, Czech- and German-speaking nationalist cartographers tried to modify its depiction on maps in various ways.

By applying the technology of GIS as one of the key tools in spatial humanities research, we analysed the dataset of these important cartographic sources to visualize, how the maps of Czech, German and Austrian provenience differed in the depiction of the ethnic/language borderline in comparison with each other and over time, and to quantify the area of German/Czech territory delineated by these borderlines. For the analysis, more than 20 maps were selected to be georeferenced and vectorized in GIS. The selection included both maps that depict the ethnic border correctly and maps that are highly manipulative to demonstrate the degree of manipulation within the cartographic production of each nation. Selected maps were divided into four time periods (1840-1850, 1880-1910, 1918-1930, 1934-1939), that reflect both the important historical milestones and the available cartographic material. The results were visualized in the form of thematic web maps using a map overlay concept to show the differences not only in the delineation of the Czech-German ethnic/language border but also in the extent of German language territory. Based on the thematic web maps, interactive web mapping applications were designed to enable the user to interactively compare the maps across all time periods. Furthermore, the main web mapping application presents the subset of selected maps to illustrate the development of the delineation of the language border within the observed period (1840–1939). The web mapping applications also allow the users to optionally show the administrative borders of regions and districts of the given period to get a broader historical context. Users can also display the pop-up window with additional information about depicted maps such as the area of Czech lands (both relative and absolute) that was settled by the chosen ethnic group or the link to the preview of the digitized version of the map.

Application of the map overlay concept in the visualization of thematic web maps and the quantification of the area of the territory delineated by the borderlines allowed to confirm the theories about the fundamental differences in the delineation of the national territory in selected maps not only on the basis of the visual comparison of thematic map layers but also on the basis of the comparison of specific numbers. The used approach can be applied in similar research on conflict boundaries.

As a part of the research, a database of more than 280 maps depicting the Czech-German ethnic border was created and later published as an interactive web application. The web database provides the detailed bibliographic information (year of publication, title, author, publisher, country of origin, language, geographical area, scale, place of deposit, link to the digitised version) for each record and allows the user to search or filter records by a predefined set of attributes or to show the digitized version of the map.

The main outputs of our research are available at: <u>https://cha.fsv.cvut.cz/web/NarodnostniMapy/indexEN.html</u>

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