

Pins or Points? Cartographically Appealing Webmaps and Technical Challenges: the Example of “Landschaften in Deutschland Online”

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Extended Abstract

Why should a cartographer use pins when there are “better” ways to express the same data?

Consider new ways of multi-media production, for example an established book series that goes online: In June 2015 the volume “Leipzig” (No. 78) of the “Landschaften in Deutschland” book-series was published. Initially an accompanying web presentation with additional and multimedia content was prepared. For its publications – print and online (IfL 2000–2007, Meusburger/Schuch 2011, Hanewinkel/Losang 2013) – as well as for the transfer of geographic knowledge into a wider public (Lentz/Moser 2013) the Leibniz Institute for Regional Geography (IfL) always puts emphasis on high quality cartographic representation of spatial phenomena in forms of thematic maps and visualizations.

Cartographers are facing new challenges in transforming geographic knowledge into interactive webmaps. Although there are many different tools (software, API, programming languages) for webmapping even by non-experts in cartography the use of special cartographic forms of expression depends not only on the data used and the message desired. One faces technical limitations just as often. Especially the integration of different (technical) forms of visualization often depend on the website-system (CMS). Such limitation can be overcome more or less easily by programming experts, but for non-experts in cartography and programming it is hard to meet the different conditions to make “good” maps.

“Landschaften in Deutschland Online” uses different mapping solutions to visualize spatial information. Occasionally static maps are displayed in the printed book as well as in the Internet. Certainly the website focuses on interactive maps. These were developed using programming languages like

ActionScript and JavaScript as well as the programming libraries D3.js and Leaflet.js. Additionally the software Mappetizer was used to transfer ArcGIS-based projects into HTML5-based web applications. OpenStreetMap was used as basemap for different applications. The layers needed were specially designed with CartoCSS and delivered as vector tiles hosted by Mapbox.

We want to show special challenges and obstructions in the use of cartographic methods in webmaps on the basis of one specific example (fig. 1). Currently a special combination of different tools together with the website-CMS (static site generator based) supports only the use of pins with corresponding numerals. The pins are interactive and guide the user to the explanation below. From the text the user can come back to the maps and will need the numerals to remember the position of the point of interest. An alternative is the use of an interactive map that shows the houses as areas. Due to the diverse technical development it was impossible to connect the map with the corresponding text easily.

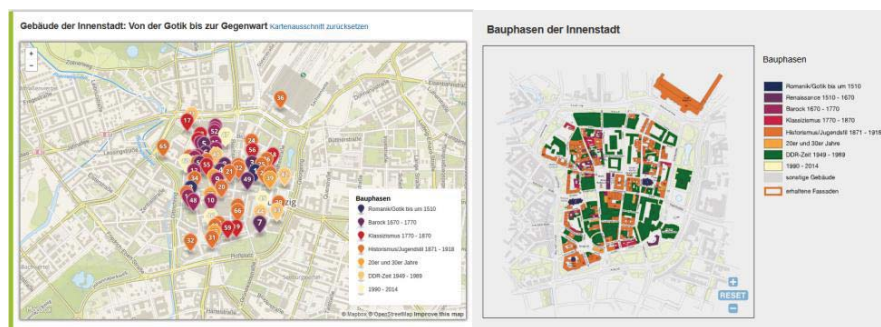


Figure 1. Left: Webmap made with Leaflet.js on specific buildings in the inner-city of Leipzig with indication of their construction phase and interactive links to the explanation below. Right: Interactive flash-converted html5 map, interactive by showing all buildings of the same construction phase but without links to the text (both: http://landschaften-in-deutschland.de/themen/78_B_104-bauphasen-der-innenstadt/).

We want to discuss possible approaches to solve these problems. The concept of a website-CMS is just as crucial as the applications and tools used. Facing these components the presentation also discusses these approaches in the context of the democratization argument that webmapping is easy to use by prosumers (non-experts in cartography, which produce (and use) maps using tools in Web 2.0). From our point of view a reflection on defined production approaches for creating webmaps in connection to forms of cartographic expression is called for.

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