

Home > Journal > Earth & Environmental Sciences > JGIS

[Indexing](#) [View Papers](#) [Aims & Scope](#) [Editorial Board](#) [Guideline](#) [Article Processing Charges](#)

JGIS > Vol.4 No.6, December 2012

OPEN ACCESS

The Relevance of Web Mapping Infrastructures in a Web Portal for Desktop and Mobile Devices: A Case Study

PDF (Size: 1128KB) PP. 514-520 DOI: 10.4236/jgis.2012.46056

Author(s)

Kai Behncke, Manfred Ehlers

ABSTRACT

There exists a lack of detailed empirical studies to assess the relevance of WebMapping applications. Despite this fact, it is quite common to note that importance and influence of WebMapping applications have increased over the last years. This paper presents the result of an empirical study to analyze the importance of a Desktop-WebMapping application for a gastronomic web 2.0 portal for the city of Osnabrück. An exploratory focus is to evaluate how often geospatial information (in a broader information context) from this web portal is used and how important the WebMapping applications are for the users of the web portal. Furthermore, it is evaluated which WebMapping functions (e.g. routing, queries, printing) are of relevance to the users and what the order of importance is for the provided functions. To-date, just a few mobile WebMapping applications for handheld devices exist. Consequently, for OsnaGo we developed a mobile WebMapping component that can be used with mobile phones, PDAs and other handheld devices to access the web portal (<http://www.osnago-mobil.de>). Development and user based evaluation is presented in this paper.

KEYWORDS

WebMapping; WebGIS; Open Source; Mobile GIS

Cite this paper

K. Behncke and M. Ehlers, "The Relevance of Web Mapping Infrastructures in a Web Portal for Desktop and Mobile Devices: A Case Study," *Journal of Geographic Information System*, Vol. 4 No. 6, 2012, pp. 514-520. doi: 10.4236/jgis.2012.46056.

References

- [1] H. K.-C. Chang and M.-H. Tsou, " New Approaches for Integrating GIS layers and Remote Sensing Imagery for Online Mapping Services," In: M. P. Peterson, Eds., *International Perspectives on Maps and the Internet*, Springer, Berlin, 2008, pp. 73-87.
- [2] A. Christl, " Open Source: Trends auf der Fossgis," *GIS Business*, Vol. 3, 2009, pp. 46-47.
- [3] E. Simonné-Dombóvári, M. Schmidt and G. Gartner, " Mapapplications in the Web," *HMD: Practise of Economyinformatics*, Vol. 47, No. 276, 2010, pp. 59-67.
- [4] K. Hoffmann, " Usergenerated Maps and Cartographic Communication in the Web 2.0," *Cartographic News*, Vol. 61, No. 2, 2011, pp. 72-78.
- [5] F. Dickmann, " Effectiveness and Efficiency of Tourism Maps in the World Wide Web and their Potential for Mobile Map Service," In: L. Meng, A. Zipf and T. Reichenbacher, Eds., *Map-Based Mobile Services. Theories, Methods and Implementations*, Springer, Berlin etc., 2005, pp. 43-53.
- [6] M. Haklay, A. Singleton and C. Parker, " Web Mapping 2.0: The Neogeography of the GeoWeb," *Geography Compass*, Vol. 2, No. 6, 2008, pp. 2011-2039. doi:10.1111/j.1749-8198.2008.00167.x
- [7] P. L. Pulsifer, A. Hayes, J.-P. Fiset and F. D. R. Taylor, " An Open Source Development Framework in Support of Cartographic Integration," In: M. P. Peterson, Ed., *International Perspectives on Maps*

[JGIS Subscription](#)

[Most popular papers in JGIS](#)

[About JGIS News](#)

[Frequently Asked Questions](#)

[Recommend to Peers](#)

[Recommend to Library](#)

[Contact Us](#)

| | |
|------------|---------|
| Downloads: | 135,204 |
|------------|---------|

| | |
|---------|---------|
| Visits: | 287,517 |
|---------|---------|

[Sponsors, Associates, and Links >>](#)

- [8] M. Soutschek, " Usage of Geoweb-Technologies in Tourism," HMD: Practice of economy informatics, Vol. 47, No. 276, 2010, pp. 77-87.
- [9] M. Jansen and T. Adams, " OpenLayers, Web Development with Dynamic Maps," Open Source Press, München, 2010.
- [10] C. Baudson and A. Christl, " Eine Typisierung: OpenLayers, Mapbender und MapFish," In: FOSSGIS, Ed., Proceedings FOSSGIS—Conference for Free and Open Source Software for Geoinformatics, Osnabrück, 2-5 March 2010, pp. 30-36.
- [11] K. Behncke, " Gastronom Guide with Open Source Software and Free Geodata," GIS Science, Vol. 23, No. 1, 2010, pp. 22-25.
- [12] M. Wachowicz, L. Cui, W. Vullings and J. Bulens, " The Effects of Web Mapping Applications on User Satisfaction: An Empirical Study," In: M. P. Peterson, Ed., International Perspectives on Maps and the Internet, Springer, Berlin etc., 2008, pp. 397-415.
- [13] A.-M. Nivala, S. Brewster and L. T. Sarjakowski, " Usability Evaluation of Web Mapping Sites," The Cartographic Journal, Vol. 45, No. 2, 2008, pp. 129-138. doi:10.1179/174327708X305120
- [14] G. Newman, D. Zimmermann, A. Crall, M. Laituri, J. Graham and L. Stapel, " User-Friendly web Mapping: Lessons from a Citizen Science Website," International Journal of Geographical Information Science, Vol. 24, No. 12, 2010, pp. 1851-1869. doi:10.1080/13658816.2010.490532
- [15] <http://openlayers.org/blog/2011/02/25/mobile-sprint-day-five/>
- [16] <http://www.terrestris.de/2011/02/28/openlayers-mobile-code-sprint-in-lausanne-schweiz>
- [17] B. Fling, " Mobile Design and Development," O' Reilly, Beijing, 2009.
- [18] S. Christmann, R. Voigts and S. Hagenhoff, " Websiteoptimization for the Mobile Web," HMD: Practise of Economyguidance, Vol. 48, No. 277, 2011, pp. 109-117.
- [19] M. Firtman, " Programming the Mobile Web," O' Reilly, Beijing, 2010.
- [20] F. Angerer, " Mobile Services for the Free Time," In: R. Egger and M. Jooss, Eds., mTourism. Mobile Services in Tourism, Gabler, Wiesbaden, 2010, pp. 45-58.
- [21] <http://www.osnago.de>
- [22] K. Behncke, " Case Study to the Relevance of Webmapping-Applications within a Webportal—An Empiric Research of an Open Source Portal for the City of Osnabrueck," Ph.D. Thesis, University of Osnabrueck, Fachbereich Mathematik/Informatik, 2011.
- [23] <http://www.osnago-karte.de>
- [24] http://www.osnago.de/osnago_sourcecode.zip
- [25] S. Fühles-Urbach, " Online-Research in the Web—Overview of Methods," In: K. Scherfer, Ed., Webscience—An Introduction, LIT, Berlin, 2010, pp. 195-209.