OF4OSM
A meta-model to semantically lift the OpenStreetMap folksonomy into a new ontology

Anthony Hombiat
anthony.hombiat@imag.fr

Laboratoire d'informatique de Grenoble
F-38402 Saint Martin d'Hères cedex

Abstract

Post-2000s web technologies have enabled users to engage in the information production process: Web 2.0 surfers are the new data sensors. Regarding Geographic Information (GI), large crowdsourced datasets emerge from the Volunteered Geographic Information (VGI) phenomenon through platforms such as OpenStreetMap. The latter involves more than two millions contributors who aim at mapping the world into an open geospatial database. This deluge of VGI consists of spatial features associated with tags describing their attributes which is typical of crowdsourced content categorization. However, this approach is also a major impediment to interoperability with other systems that could benefit from this huge amount of bottom-up data. Indeed, folksonomies are much less expressive data models than ontologies. In this thesis, we address the issue of loose OpenStreetMap metadata by proposing a metamodel for collaborative ontology engineering. This metamodel will help to semantically lift the OSM data while preserving the flexibility of the tagging activity.