The 36th International Symposium on Remote Sensing of Environment,
11 – 15 May 2015, Berlin, Germany, ISRSE36-735

ASSESSMENT OF THE ADDED VALUE OF OPENSTREETMAP FOR LAND COVER/LAND USE MAPPING

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THEME: Airborne and Innovative Remote Sensing Platforms and Techniques in the special session: Sourcing the Crowd - EO in Partnership with Citizens

KEY WORDS: OpenStreetMap, Crowdsourcing, Land cover, Land use

ABSTRACT:

OpenStreetMap (OSM) has become a very successful example of mapping by the crowd, covering a range of feature types that includes land cover and land use. These digital maps are freely available and have been used in a number of different applications including post-disaster mapping, vehicle tracking and gaming. Many of the comparisons of OSM with authoritative data from mapping agencies have considered positional accuracy of point and line features and conflation of differences but there has been relatively little work on exploring how OSM compares with land cover or land use maps. In this paper we convert OSM features to land cover/land use types for Slovenia and Austria and examine how well OSM compares with authoritative products of land use/land cover from these countries. In this comparison we consider the degree of completeness of OSM, the ease of translation of OSM nomenclature to land use/land cover classes from two different countries and the added value that OSM could provide to land use/land cover maps produced by national and regional authorities. In particular, we consider how OSM could be used in the future for calibration and validation of remotely sensed land cover, especially given the need for in-situ data collection at a time when less resources are available for this activity and more remotely sensed data are coming online (e.g. Sentinel satellites).

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