

Title: A Comparison of Volunteered Geographic Information (VGI) Collected in Rural Areas to VGI Collected in Urban and Suburban Areas of the United States

Volunteered Geographic Information (VGI) is being collected worldwide and may be a source for authoritative data providers such as national mapping organizations. In order to evaluate the usability of these data as part of an authoritative dataset, it is first necessary to understand the quality and reliability of the data. Several studies have been conducted in Europe to compare a volunteer-provided dataset, OpenStreetMap (OSM), to authoritative data sources over the same area. The methodology used in these studies was the basis for studying OSM data over rural, suburban, and urban areas in three regions of the United States. The methodology was adapted slightly, however, to compare the volunteer-provided data in OSM to TIGER data from the U.S. Census Bureau which was used as the baseline data to initially populate OSM in the United States. The results showed that road network lengths in all areas studied were increased by volunteers. The increases were greater in more densely populated areas. The types of features collected by volunteers were very similar to the baseline dataset, but, showed increased percent feature content for pedestrian transportation features over the baseline TIGER dataset in some of the study areas. These results are consistent with previous studies which compared OSM data to authoritative data sources.

Key words: Volunteered Geographic Information, authoritative data sources, OpenStreetMap

