

RESEARCH ARTICLE

Ripe for the Picking? Dataset Maturity Assessment based on Temporal Dynamics of Feature Definitions - Supplementary information

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1. Maturity trends for Nairobi, Kenya and Christchurch, NZ

We present additional summary data for the OSM datasets for Nairobi, Kenya and Christchurch, NZ. The time series of overall feature counts in both datasets is in Figure 1. As both datasets have a relatively low amount of conversions, the detailed discussion of the spatial patterns of conversions is not included in the main paper. These datasets are either settled on point based representations with a small number of conversions (Nairobi), or polygonal representations (ways) are standard for most concerned feature classes from the beginning (Christchurch).

The Nairobi dataset (Figure 2) covers also Kibera, the area intensively mapped by the Humanitarian OSM project Map Kibera project¹ which started in November 2009. We find that once the features are mapped, the majority remains stable and does not get converted to a different geometric representation. The consensus seems to be to map features as points, with the exception of parking, which are converted to ways. There are 524 parkings in OSM in Nairobi in 2015, out of which 444 are represented as ways. Note that we can not argue that point-based representation for the other feature classes in Nairobi would represent a desired mature state either, as we do not see an increasing amount of conversions from ways to nodes.

Christchurch is an area with good OSM coverage in OSM, also thanks to a large and comprehensive availability of authoritative mapping data donated to the project. The progression towards maturity is steady (Figure 3). The number of schools represented as points in the dataset in 2011 increased rapidly (from 61 in 2010 to 140 in 2011), leading to a temporary dip in maturity for this feature class. We speculate that this may be because the school features' dataset was incomplete and was re-mapped intensively as points during the response to the Christchurch earthquake in 2011.

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¹mapkibera.org

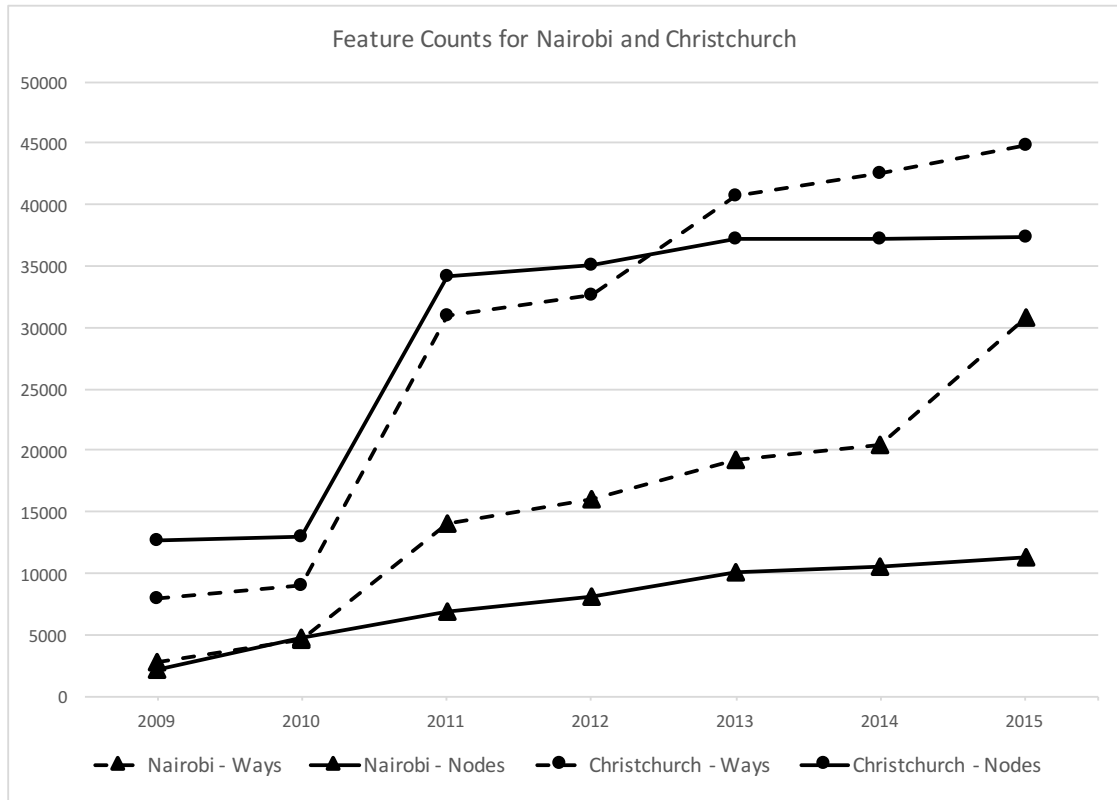


Figure 1. Temporal series of node and way counts in Nairobi and Christchurch.

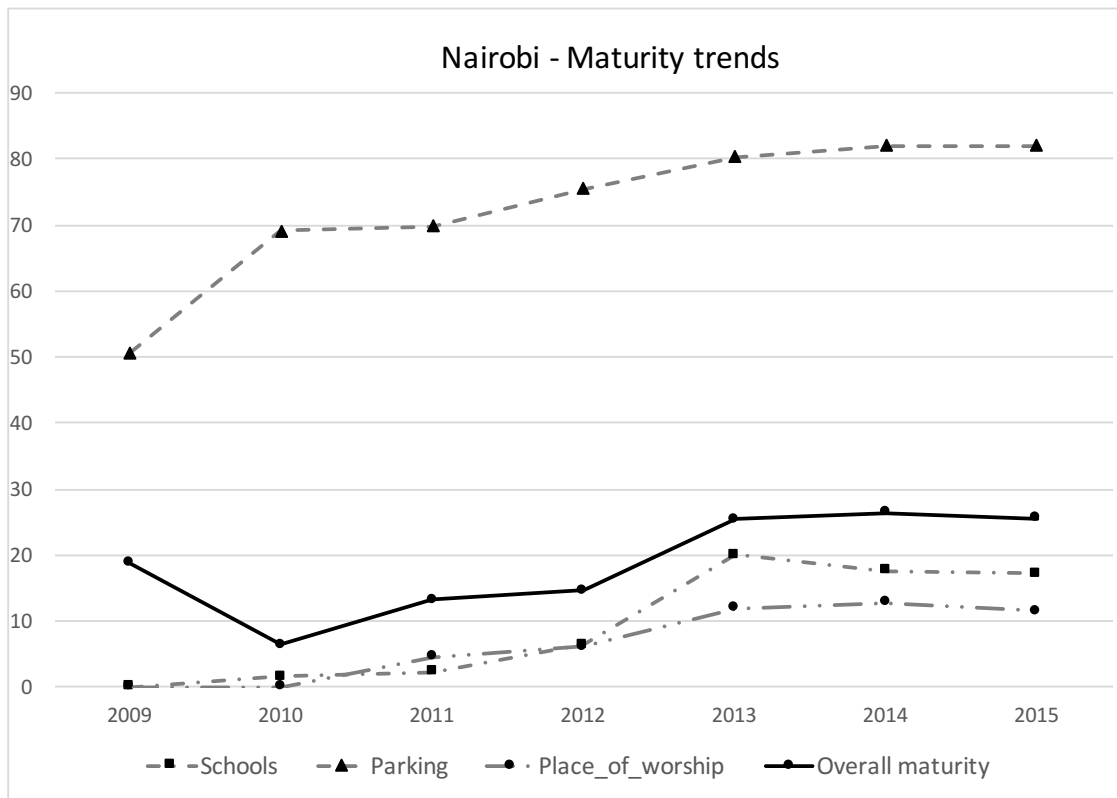


Figure 2. Per-feature and overall maturity trend for Nairobi, Kenya.

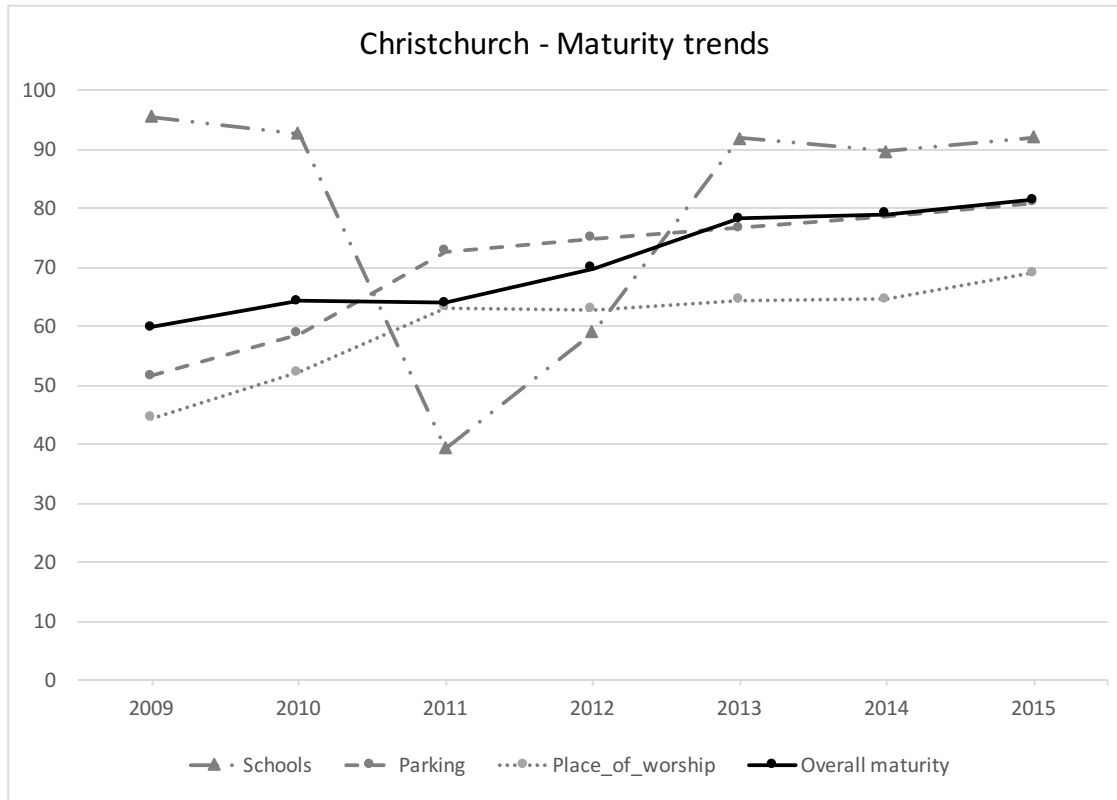


Figure 3. Per-feature and overall maturity trend for Christchurch, NZ.