Augmenting and reasoning in semantically enriched maps using open data

Abstract:
—Complex robotic tasks require the use of knowledge that cannot be acquired with the sensor repertoire of a mobile, autonomous robot alone. For robots navigating in urban environments, geospatial open data repositories such as OpenStreetMap provide a source for such knowledge. We propose the integration of a 3D metric environment representation with the semantic knowledge from such a data base, and describe an application where road network information from OpenStreetMap is used to improve road geometry information determined from laser data. This approach is evaluated on a challenging data set of the Munich inner city.

Stichworte: spatial reasoning; hybrid maps; scene understanding
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Occurences:
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