



## **TERMS OF REFERENCE**

**M.Sc Thesis Abdul Basit**  
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**PTV AG Karlsruhe**

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## **Topic:**

**“Interoperability of volunteered geographic data (OSM) to PTV AG local data model”**

## **Motivation:**

OpenStreetMap (OSM) is a best example of collection of geographic information by individual volunteers enabled by web technology. Users of OpenStreetMap increase rapidly and now size of the data are comparable to the proprietary data like NavTeq and TomTom in actively contributing areas of the world. Now OpenStreetMap has more than half a million registered members some of them are active members which contributes more than 50% of the total data. Approximately 150 new active members have joined the project each day since the beginning of 2011. In some countries like USA and France large datasets was imported from other providers of free data like Government agencies and Census Bureau. In Germany the development of OSM data is totally dependent on its large number of participants. The rate of increase of OSM data is higher than other commercial data. These all factors are motivating the GIS organization to conduct research in the possibility to use OSM data in their applications.

The analysis of OSM routing attributes in context of PTV AG local data model and to import these for any region is set by PTV AG as master thesis topic.

## **Tasks:**

Under the field of volunteered geographical information (VGI), OpenStreetMap is the most promising crowd sourced mapping. The quality and amount of OSM data is considerably increased in the recent years. For routing OSM must be analyzed and imported in AGF (PTV AG local data model) for future decision to use this data in commercial or open source products.

- Detail on OSM Data Model and tagging possibilities
- PTV AG local Data Models description.
- Analysis on OSM routing attributes in context of AGF.
- OSM to AGF importer development for routing and rendering.
- Routing comparison with proprietary or other open source OSM data applications.
- Preparation and presentation of the thesis.

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**2<sup>nd</sup> Supervisor:** Axel Gußmann

**Duration:** 5 month

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