TAPAS + SUMO

Synthetic, Multimodal Demand for SUMO

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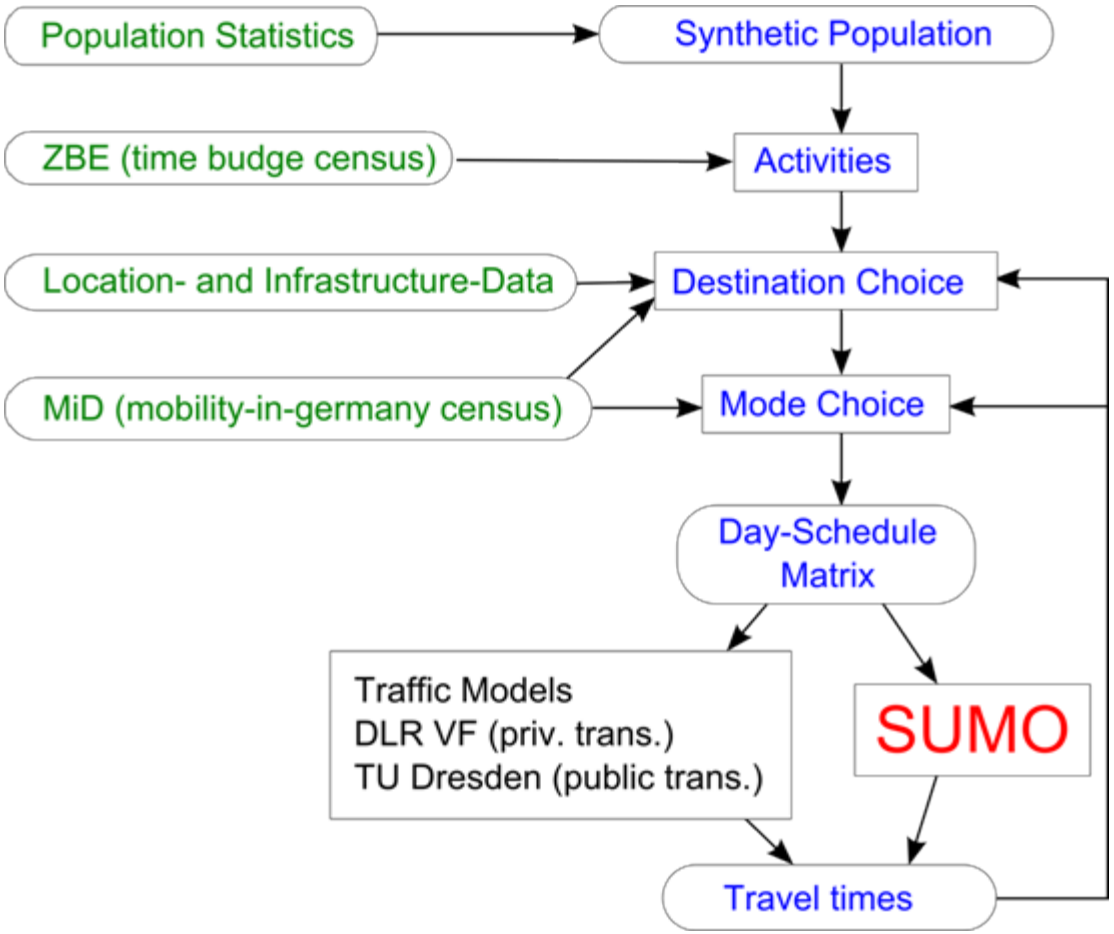
TAPAS

- **T**ravel-**A**ctivity **PA**ttern **S**imulation
- project of DLR Institute of Transport Research (Dipl.-Geogr. Rita Cyganski)
- agent-based, microscopic, demand model

TAPAS (Structure)



Intermodality in SUMO

- New `routes` element `person`
  - `rides` (specifies a vehicle or line)
  - `walks`
  - `Stops`
- Road vehicles may be grouped into lines
- Road vehicle `route` may contain `stop` for picking up person
- Vehicle model accommodates busses and trains

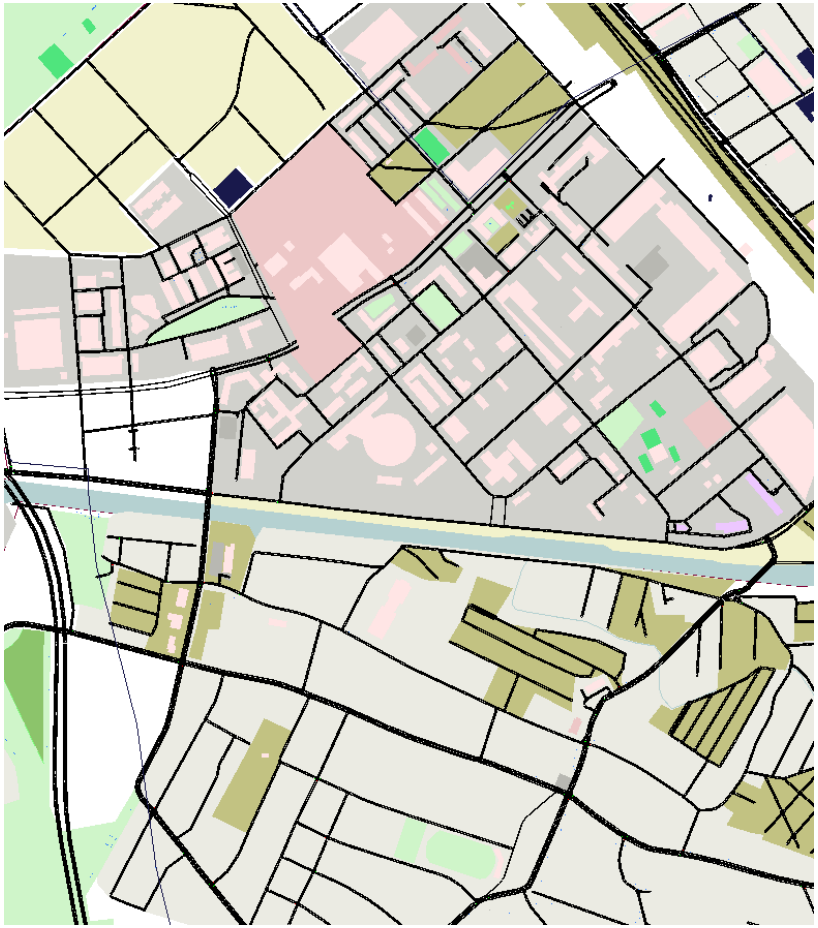
SUMO Inputs

- TAPAS Day-Schedule-Matrix
- Road Network
- Public Transport Data

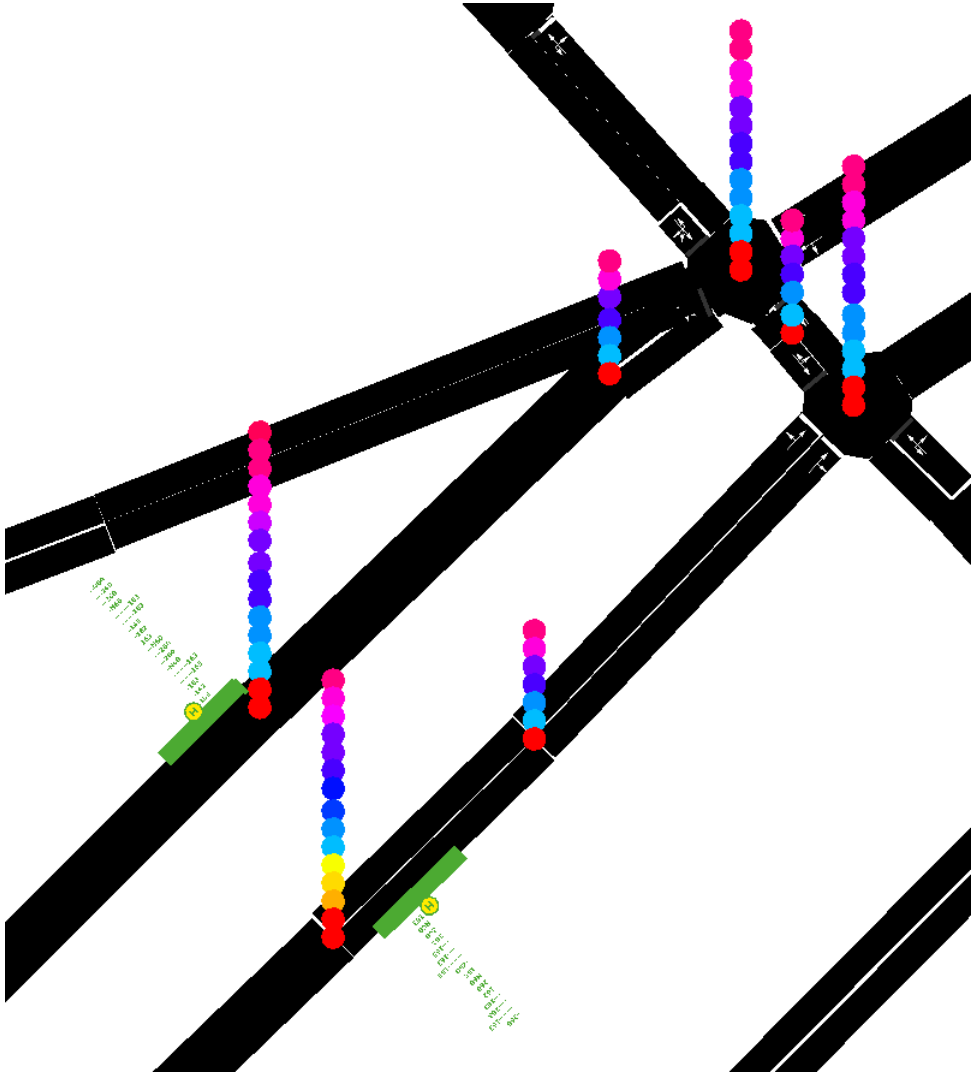
```
JaneDoe
 trip1
  depart = 42          (seconds)
  source = 13.51,52.45(lon,lat)
  destination = 13.55, 52.40
  mode = bus
 trip2
  ...
 ...
...
```

OpenStreetMap (OSM)

- Free map data build from user contributions (CC-BY-SA)
- Good road network for Germany, Europe
- Quality of road network varies for other Regions
- Public Transport Data limited (focus on rendering), can be expected to improve



OSM import



Tasks

- Build *sensible* public transport data from OSM / aquire other data sources
- Routing for public transport trips (i.e. bus-walk-tram)
- Refinements for pedestrian and bicycle traffic