Transparency of Routing Service Platforms and Potential for Segregation and Manipulation

Presentation

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Accessibility of everyday locations and the possibility of mobility are important factors for the quality of life Introduction





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Use of route planners on a large scale leads to the question whether mobility behavior could be influenced by API's

Thesis





Results show a realistic distribution with longer trips in fringe areas and an average duration of 34 min¹⁾

Average travel time Google (public transport): Hamburg



1) Mean over all cells averages. The travel survey MiD 2016 states an average travel time of 32 min for Hamburg.



The difference between the routing provider is negligible for individual motorised vehicles but substantial for PT

Time difference Google vs. Here: Hamburg (Germany)



Public Transportation

Source: civity 2019, average travel time based on specific travel demand for each cell (INSPIRE 1km² grid)





Differences in travel durations using PT in fringe areas can be up to 40 minutes per trip

Time difference Google vs. Here: Berlin (Germany)



Public Transportation

Source: civity 2019, average travel time based on specific travel demand for each cell (INSPIRE 1km² grid)





It seems that the results suggest that users are provided with different information about route options

Thesis 3



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Differences in routing information for citizens can have serious consequences for municipalities

Consequences for municipals





Up to now, municipalities and government have had little or no insight

Need for action



Generate Knowledge

- Benchmarks
- Data analysis
- Customer survey

Create awareness among authorities and users

Creating experimental spaces

- Research projects
- Cooperations
- Open source data







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