

Estimating passenger exits in the bus traffic

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Why?

How?

Results

Why?

- Information needs
 - The load of lines
 - Ridership patterns
 - Travel habits
- Utilise already existing data
- Travel card system

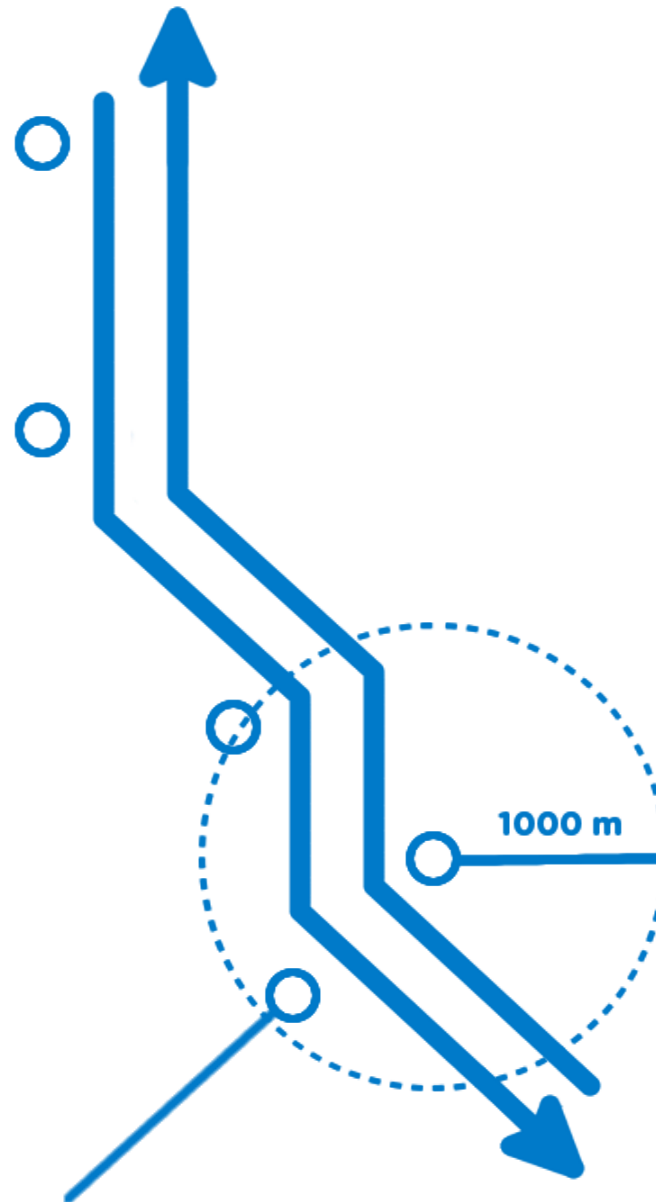
How?

- Source information
 - Smartcard taps and single ticket transactions
 - Planned transportation data
 - Vehicle positioning (GPS)
- Synchronizing all source information

How?

- Combining information of consecutive taps
- Assumptions for travelling:
 - The journey includes only public transportation
 - Passengers won't walk long distances
 - The last journey of the day will end to the same place from which the first one started
- An algorithm makes calculations for exits

Example



The nearest stop inside 1000 m radius

Results

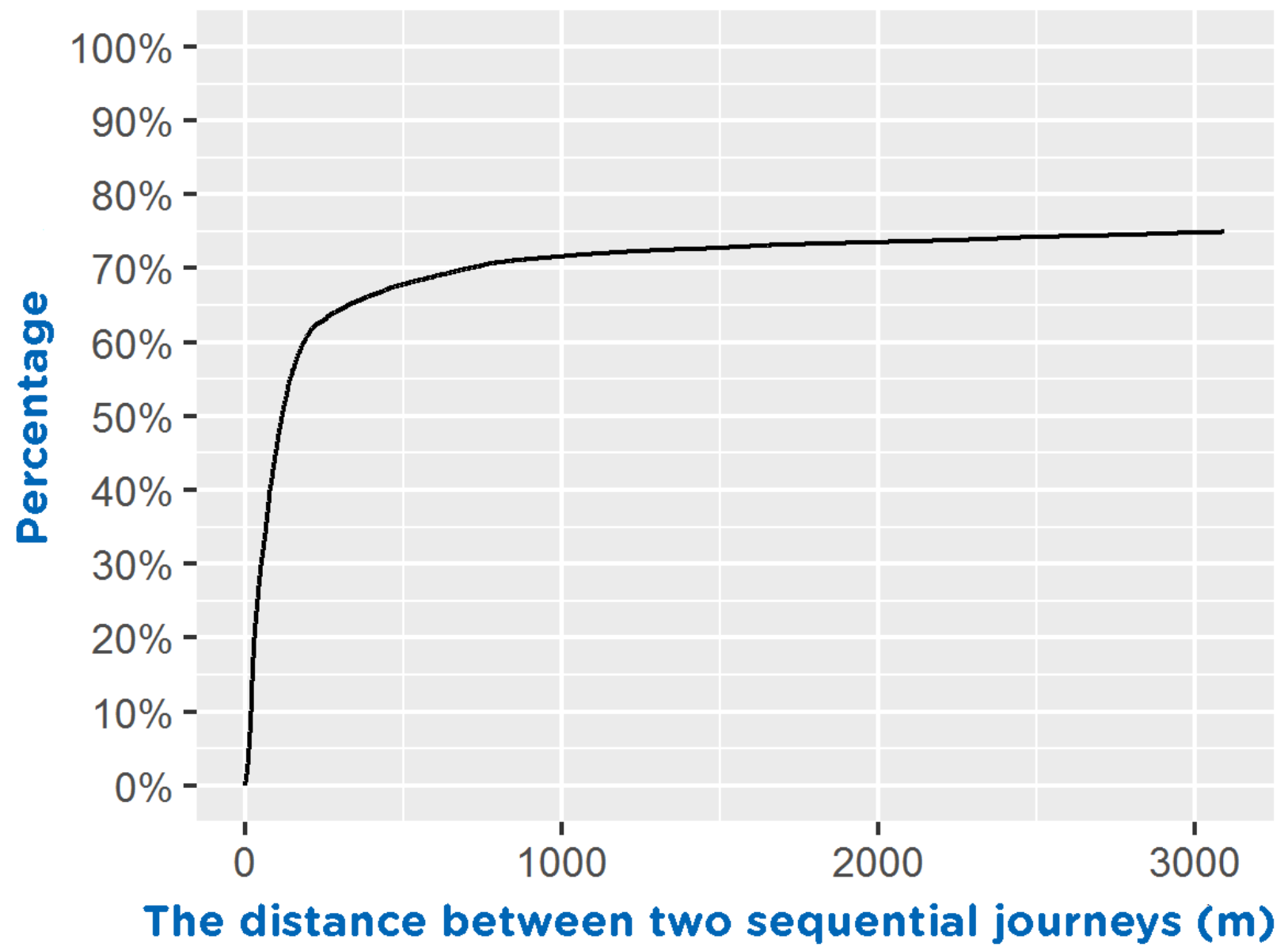
- The exits can be found approximately for 70 % of the trips

| Searching the exit stops | Number | Share |
|---|-----------|--------|
| Succeeded | 7 652 883 | 71,8 % |
| Not succeeded | | |
| Only one tap during the day | 1 153 611 | 10,8 % |
| The next stop was too far away | 882 079 | 8,3 % |
| Shorter walk to the next stop | 806 204 | 7,6 % |
| No information for coordinates | 107 501 | 1,0 % |
| No stop at the beginning of the journey | 56 544 | 0,5 % |

Results

- Possible to calculate lengths for journeys
- Cost efficiency
 - Compared to the traditional methods the algorithm is faster
 - Increased amount of data, exit information for several routes
- Not suitable method in the rail traffic, crosstown trunk lines etc.





Any questions? Comments?



Thank you!