



Lane flow distribution: effect of speed limit and average speed check

Problem description

Currently, on motorways the flows per lane at capacity differ significantly. Under regular conditions, the flow in the left lane is very high, and the flow in the right lane is low. That is most likely due to drivers that want to “speed up” if speed decreases, and hence keep left to overtake. The consequence is that the right lane is under utilized. The inverse is seen if average speed limit of 80 km/h is present.

Assignment

The goal of this study is to describe to which extent the underutilization of the right lane is due to driver's preference to overtake, and to which extent it is caused by regulations. New road layouts (100 and 130 km/h average speed check, dynamic speed limits) give possibilities to analyse the traffic data.

Required skills and interests:

- Interests: traffic flow theory
- Good programming skills (MATLAB)
- Good analytic skills
- Organisation skills (for the experiments)

External support

This research project can be carried out in collaboration with Rijkswaterstaat, the Dutch Road Authority. The ITS Edulab is a lab for master students from TU Delft graduating at Rijkswaterstaat. Supervision by Rijkswaterstaat as well as financial compensation are available.

Supervision

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