



Car-bicycle mixed traffic: Effect on network operations

Problem description

Bike traffic is increasing in Dutch cities. This causes problems for the cyclists (bikers are queuing) as well as for the car drivers, since the cyclists limit the road capacity for car drivers.

Assignment

A recent development in the field of traffic flow theory is the Network Fundamental Diagram. This diagram shows the (car-)speed in an *area* (e.g., a city center) as function of the number of vehicles. In this study the effects of bicycles are incorporated in the Network Fundamental Diagram. The goal is to create a bi-model Network Fundamental Diagram, showing the effect of speeds of both cyclists and motorists on both the number of bikes and the number of vehicles. This can be created using (microscopic) traffic simulation.

Required skills and interests:

- Interests: traffic flow theory
- Interests: traffic simulation
- Good programming skills
- Good analytical skills

Supervision

Supervisor: Prof.dr.ir. Serge Hoogendoorn (Transport & Planning)

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