



Control of traffic in large regional road networks

Problem statement

The next step in dynamic traffic management is integrated control of traffic in large regional road networks such as the Randstad. The main advantage of such a strategy compared with currently used local control strategies is that it becomes possible to incorporate the effect of traffic control in one area onto other areas. However, this introduces additional complexity to the traffic control problem. This complexity results in, among other things, high computation times and/or very complex algorithms.

Assignment

The objective of this research is the development of a control strategy for large regional road networks. In order to reach this goal, several steps should be carried out:

- 1) Literature review: identify challenges and opportunities for controlling large road traffic networks
- 2) Controller development: select a solution direction and develop a controller
- 3) Case study: evaluate the performance of the developed controller

Profile

Preferably, the student has some prior knowledge of traffic flow theory and control theory / control systems design when starting with this assignment

Research group

Thesis supervisor: prof. dr. ir. S.P. Hoogendoorn

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