

BSc. thesis project

Contact : Jaap Vreeswijk
jaap.vreeswijk@peektraffic.nl
06-53207206

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Investigating advantages and disadvantages of online traffic models

Real-time network-wide traffic management is largely dependent on high performance online traffic models. Important requirements of such a model are that it provides detailed, accurate and reliable information, while the calculation time is short. Especially with larger networks these two requirements collide and trade-offs need to be made. Macroscopic models are able to process large network in a short time at the cost of detail, while more advanced computers enable the use of microscopic models. Relatively unexplored is the use of mesoscopic models like Dynasmart.

The research will involve the following activities:

- Investigate the requirements of an on-line traffic model for real-time network-wide traffic management (e.g. by means of a workshop).
- Investigate the advantages and disadvantages of micro-, meso- and macroscopic models, and make a proposal for the most suitable model available on the market.
- Select an easily available model (e.g. Dynasmart) and evaluate the features of the model doing a simple case study (e.g. modeling of network, demand, traffic management measures and control strategies).
- Analyze results and report.