



Research School for Operations
Management and Logistics

Dynamic traffic control through in-car navigation systems

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In this PhD-project, we focus on steering users through an urban network of roads by (primarily) making use of the communication between in-car navigation systems. We assume that in-car navigation devices try to use floating-car data efficiently in order to make the best decisions regarding the speed and/or route that is being advised to the driver. In contrast to existing implementations, not only the individual benefits are taken into account when determining the individualized advice, but the overall performance of the global network should be considered.

The research will probably consist of the following parts:

- The first relates to traffic light prediction based on floating car data, so as to determine the state of traffic lights.
- The second task is a natural extension: combine the traffic signal predictions with route planning, such as to determine the optimal route for drivers.
- A third task is to incorporate queueing phenomena in the models that will be developed.