Describing driving behaviour of trucks

Problem description
Often traffic is macroscopically described as a total flow of all vehicles or microscopically as the average values of driver behaviour, mainly focussing on the movement of passenger cars. However, the presence of trucks and other HGV’s in traffic plays an important part in the overall characteristics of traffic flow. Also with new developments such as truck-platooning, for which incredible claims are being made, we need to have a solid reference case of normal truck driving behaviour for comparison.

Therefore, data and simulation lab DiTTlab and TNO are interested in investigating and describing driving behaviour and traffic flow dynamics of trucks.

Objectives & Assignment
The objective of this project is to describe the dynamics of how trucks drive on motorways and main roads, to gain a better understanding and qualitative overview to apply in general traffic flow analyses. Many assumptions are currently made for trucks, however these may not be valid or insufficiently accurate. Literature review is required to give an overview of the current state of practice. This will be followed by an experimental setup and/or data acquisition. Using the acquired data, statements can be made in regard to truck speeds, following distances, over-taking strategies, etc. In the analysis a comparison should be made with current state of practice and views should be formed on the future relevance of the results, for example when considering the possible benefits of truck-platooning.

This Master thesis includes an internship at TNO, the Hague

Research group
DiTTlab, Transport & Planning Department
Thesis supervisor: prof.dr.ir. Hans van Lint
Daily supervisor: dr.ir. Simeon Calvert

External support
TNO

Information
Simeon Calvert - s.c.calvert@tudelft.nl
Hans van Lint - j.w.c.vanlint@tudelft.nl