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MPD/IRI – Transverse Position

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MIRIAM – Project Info and Scope

MIRIAM – Models for rolling resistance In Road Infrastructure Asset Management systems

The objective of MIRIAM – Reducing rolling resistance hence lowering CO_2 emissions.

Results from the different projects within MIRIAM should relate to road pavement conditions and be able to implement in road asset management systems

Objectives, MPD / IRI – Lateral Levels

MPD and IRI values influence rolling resistance.

In many countries MPD and IRI are measured according to the track width and lateral position of light vehicles. (~ 1,5 m).

In order to refine emission calculations for an entire network or an object, we need the appropriate levels of IRI and MPD for the lateral position of different vehicle types.

The Scope of this study is to investigate MPD and IRI levels for the lateral positions of heavy vehicles.
Is it possible to forecast this at object level or as an average at network level?

Lateral Positions of Different Vehicles Types

A study (McGarvey T., VTI, in progress) provides data on where different vehicle types are positioned laterally.

Findings of this study shows (right-hand traffic),

1. **On wide roads (motorway and other roads with wide lanes), the left wheel track is almost common for all vehicle types.**

2. **The narrower the lane gets – the more traffic tends to be centered in the lane.**

LV – Light Vehicle, HGV1 – Light Truck, HGV2 – Heavy Truck

Transverse Profile

McGarvey T. 2015

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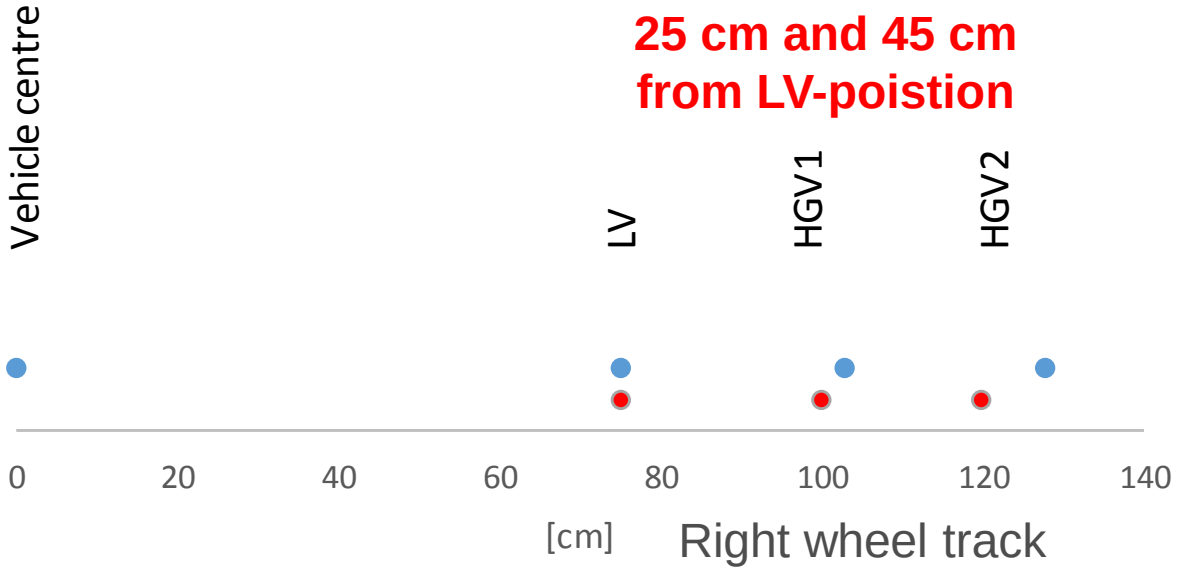
Preparation of Measurement Vehicle and Measurements

We equipped our measurement vehicle to measure MPD and IRI in three lateral positions around the right wheel track.



Blue bullets – optimal position – according the study

Red bullets – achieved position – measurement car

Approx. 1000 km was measured

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