

Research in emissions analysis techniques

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Abstract

EMISSION MODEL: ENVIVER

Nowadays, the environmental aspects from air pollution caused by traffic are becoming more and more relevant. TNO has developed some detailed emission models for vehicles (VERSIT+) in order to be able to predict emissions from road traffic. A specific piece of software, EnViVer, has been developed to link traffic simulation software (VISSIM) to emission models, such that the effect of traffic measures on the emissions exhausted can be predicted.

VIDEO BASED MONITORING

Another tool that has been developed inside TNO is Video Based Monitoring (VBM). By recording traffic streams, VBM is now able to track speed of vehicles over 100 meters and classify the type of vehicle. Furthermore, the first results with multi camera tracking are obtained as well, which means that longer trajectories can be recorded. This is not only interesting because from this data driver behaviour models can be improved, but we are also able to use the speed profiles to link with EnViVer, through which we can estimate the emissions of traffic streams with high reliability.

ITS

Both EnViVer and VBM are components we can use in different types of ITS systems, to investigate the effects of ITS measures, both in terms of mobility (e.g. what is the impact on traffic flow) and environment (e.g. is there less exhaust?).