

Probe data, AVI detectors, CO2 emission.

Background

Sustainable mobility and assessment of traffic related CO2 emissions require a reliable estimate of traffic state. Such task is performed using a different approach.

Probe vehicle data have a determinant role to play as they provide vehicle speed and even vehicles trajectories, essential input for instantaneous model emissions.

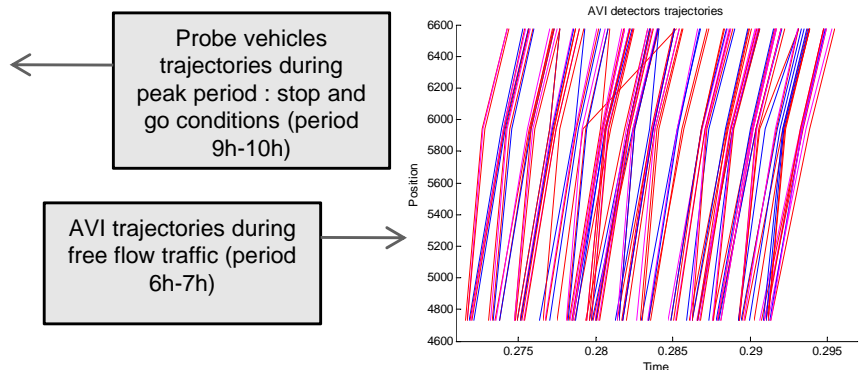
Purpose

The research can be divided in two steps :

1. Analysis of traffic state using probe data and AVI detectors in order to estimate each vehicle trajectory.
2. Assessment of driving patterns impact and traffic states (level of congestion, route, number of traffic lights) on CO2 emissions.

Method

By combining floating car data (FCD) with AVI data, we work towards a better estimation of each vehicle trajectory.



The research aims to combine those two kinds of data. The second objective is to use instantaneous emission models in order to link driving patterns and traffic states with CO2 emission.

Application

The determination of the whole vehicles trajectories in urban networks has several applications (e.g. travel time estimation and prediction ...). The monitoring in real time of CO2 emissions is one among these.

Conclusion

This research aims to list cluster trajectories corresponding to traffic states and driving patterns. These trajectories can serve as inputs of the instantaneous emission models (CMEM, JCAP II), in order to monitor dynamically traffic-related CO2 emission.

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