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Abstract for the first Annual Scientific Seminar of the Nordic Traffic Safety Academy

Identification of Hazardous Road Locations on the basis of Floating Car Data

The objective of the project is to build a predictive model for identification of hazardous road locations (HRL) on the basis of Floating Car Data (FCD). By means of this model it is likely that road safety can be enhanced. Although enhancing road safety, most countries are still far behind the set road safety target. A central part of the road safety work is based on identification of HRL. However, the said identification is based on police reported accidents, which show massive underreporting. In Denmark, only 14% of the serious injury accidents were reported. Hence, HRL identification and enhancement is more or less carried out at random. Also, it is retrospective, i.e. the accidents have to occur before road safety enhancements can be made. Instead, a predictive model based on serious jerks (the derivative of the deceleration) found in FCD will be assessed. Strong decelerations are often involved in road accidents. From conflict studies it is known that there is a connection between the number of conflicts and the number of accidents. Our hypothesis is that, on the basis of driving behaviour established through FCD collected from a large number of trips, HRL can be identified on the basis of a considerable number of strong jerks in the same area. As part of the development of the model a meticulous scientific verification of the model's reliability will be carried out. The research question is: Can a scientific FCD-based model contribute to a more accurate identification of HRL? This paper will focus on the necessity of an additional HRL identification method, the theories, the methodology, and the planned and available data sources for the project.