Methods to developing a workable road characteristics based approach for managing hazardous road locations on rural two-lane highways

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Abstract

Danish road Authorities has since the 1970's been handling hazardous road locations - i.e. black spots – with great success. However, recent developments have undermined this approach as the accidents today are far more scattered over the road network than in the 1970s, 1980s and 1990s. This is due to general significant improvements in traffic safety that has reduced the number of accidents since the 1970s and due to the fact that the reporting rate of accidents has fallen. 10 years ago more than 20% of the persons injured in road traffic were recorded by the police and included in the official accident recording system in Denmark today less than 13% of the injuries are recorded by the police.

Consequently many municipalities are therefore faced by the paradox, that they are unable to identify any black spots based upon the accident counts in the rural areas even though more than 2/3 of the persons killed in road accidents are killed on rural roads. In order for the road authorities to continue to use traffic safety budgets most effectively there is a need for workable non-accident based approaches.

In a PhD project at Aalborg University the problem is addressed, and the objectives for the PhD project is to develop an approach to localize hazardous road locations on rural two-lane highways based upon road characteristics. The approach must be workable for the road administrations.

In this paper advantages and disadvantages using different methods in order to develop an approach for managing hazardous locations based upon road characteristics will be discussed.