

HANS-JÜRGEN FERCHOFF:

„Kommunaler Handlungsleitfaden zur Bevorrechtigung von Einsatzfahrzeugen“

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Abstract

According to § 38 of the Straßenverkehrs-Ordnung (German Road Traffic Regulations /StVO) the use of blue flashing light together with the use of sirens orders: "All other road users have to provide free track immediately". In case of operations of fire and rescue vehicles, the highest rush is always necessary in order to save lives or prevent serious injury, to avert a threat to public safety or order. In the course of this, there exist special dangers of the traffic flow, in particular at junctions. As part of this thesis a guideline for municipalities is established, to facilitate the construction of an economic preemption system for emergency vehicles taking into account the local conditions and requirements.

To show the state of the art, an overview of existing systems for preemption of fire and rescue vehicles, both on the open road as well as at signalized intersections is given as part of a literature review.

In a further step the individual systems are examined for advantages and disadvantages, and possible capabilities are shown. The objective data of this research are supplemented with subjective experiences of drivers of emergency vehicles that have been interviewed in personal conversations.

In a further step, a set of criteria based on the listed advantages and disadvantages is established to demonstrate, under what external conditions (location in the network, traffic density, time of day, etc.) what kind of preemption system can be implemented usefully.

As the last step the results of this criteria catalogue are used to establish the municipal guide for the construction of preemption systems to prioritize emergency vehicles. This guide is a working tool for the municipalities for planning economic preemption systems, which are compatible with the existing infrastructure.