

# 高速公路大客車縱向防撞警示系統轉換為側向防撞警示系統之間距門檻研究

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## 摘要

Keeping a safe distance between vehicles is the main factor of safety. In actual traffic condition, a great number of accidents take place due to lack of effective brake distance. Study of Advanced Safety Vehicle (ASV) and Advanced Vehicle Control and Safety Systems (AVCSS) in Intelligent Transportation Systems (ITS) in advanced countries focuses on collision avoidance warning system. The trend is to combine rear-end and side collision avoidance warning system into one. Few studies aim at transference threshold. This paper focuses on time threshold of rear-end collision avoidance warning system switching to side collision avoidance warning system in consideration of lane changing. The number of large passenger vehicles is less than that of other vehicles, and large passenger vehicles also have fewer traffic accidents. Due to the large capacity of passengers of large passenger vehicles, however, in case of accidents, the number of deaths/injured is much higher than that of other vehicles. With better transportation efficiency than small passenger vehicles, and under global environmental protection and enhancement of energy use, large passenger vehicles will gain more passengers provided that they are able to provide better transportation safety. The researcher screens the average data of lane changing of drivers in driving experiment with driving simulator of the previous studies by other researchers, and analyzes the relation in reference of regression appropriate to establish initial threshold model. Images are then taken on large passenger vehicles changing lanes on straight highways by using video cameras. The researcher analyzes and compares the data to verify the initial threshold model for modification. The final spacing threshold of rear-end collision avoidance warning system of large passenger vehicles transferred to side collision avoidance warning system on highways will serve as reference on relevant studies.

關鍵字：Rear-End Collision Avoidance Warning System, Side Collision Avoidance Warning System, Spacing Threshold, Driving Simulator.