高速公路大型廣告物設置位置對大客車駕駛者視覺與駕駛行為影響之模擬分析

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摘要

In recent years, bus accident has become an important traffic problem in Taiwan. According to road traffic accident statistics, driver distraction is one major cause of bus A1 accidents. The roadside advertising object (T-Bar with commercial advertisements) is one recurrent event usually happening on the freeway systems in Taiwan. The object usually attracts drivers to watch the commercial advertisements posted on it and may cause drivers' visual distraction. Therefore, it is essential to study the impact of road advertising on bus drivers and provide the related traffic management measures or safety protection systems. This study integrates a bus driving simulator and the faceLAB system to analyze the impact of roadside advertising on bus drivers' visual and driving behavior on freeways. Results show that the nearer the location of a roadside advertising object to the freeway the higher the impact of the object on bus drivers' glance percentage, glance frequency, glance duration, perception-reaction time, and the standard deviation of the gap between the lead vehicle and the following bus. It also indicates that the location of the roadside advertising object can influence bus drivers' visual reaction and driving behavior because the object is a recurrent event which has short glance duration but high glance frequency characteristics. To sum up, the results of this study will provide a helpful basis on the management of roadside advertising objects on freeways.

關鍵字：Bus, Roadside Advertising, Visual Distraction, Driving Simulator, faceLAB System