



ABSTRACT:

Analyzing the effect of driver characteristics on ISA system and developing individualized methods of presenting information

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Various kinds of development examples and the effects by utilizing Intelligent Speed Adaptation (ISA) which control vehicle velocity within the speed limit to minimize traffic accidents and reduce environmental loads in terms of vehicle emissions have been already reported.

However, only a few reports are available on a quantitative evaluation regarding the effect of decreasing the number of traffic accidents and optimizing a method of presenting information with regards to the personal characteristics of driver. These two are very important factors to make the ISA system common use in a market and design more effective system. Therefore, authors have been investigating the effect on decreasing the number of traffic accidents quantitatively and constructing the individualized method of presenting information in terms of a human-machine interface (HMI).

Authors have already clarified that driver characteristics have an influence on decreasing the risk level of traffic accidents and the acceptability of ISA system through a real vehicle experiment on public roads and the acceptability of method of presenting information is affected by individual differences through a driving simulator (DS) experiment. Based on the result of real vehicle experiment, authors carried out a DS experiment to optimize the methods of presenting information to increase the acceptability of the system.