

Perceived styling and usability in integrated centre panel layouts as a function of interaction style and age

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Abstract

In the past ten years information and entertainment functionality has become an increasingly important part of the car interior. Infotainment functions have been growing in number and diversity, concurrently with a trend towards utilization of fewer controls and graphical displays in integrated centre panel layouts. This evolution has solved many functional and styling issues. However, as a consequence, several usability and safety concerns have been raised. A number of these concerns are related to age, a factor that is especially important in the premium car segment where a majority of drivers are older than 50 years. This study investigated perceived styling and usability of premium car centre panel layouts among different age groups. The investigation was based on APEAL customer survey data from the North American market, associated with the sound system. Questions on the appearance (styling), understanding (usability) and ease of use while driving (usability/safety) of the stereo faceplate and controls were analysed. The results showed that all age groups perceived the appearance of integrated centre panel layouts similarly. However, with rising age, there is a decrease in perceived understanding and ease of use while driving in the case of a number of premium car models.

Introduction

The use of secondary task functions, such as information and entertainment devices, while driving is under debate owing to possibly increased driver distraction and traffic safety risks. From the 100-car Naturalistic Driving Study, conducted in the United States of America, Klauer et al. (2006) concluded that 78 percent of all crashes and 93 percent of rear end crashes were caused by the driver's visual inattention to the forward roadway. The study also indicated that inattention caused by secondary tasks accounted for 23 percent of all crashes and near crashes in the study. Today, in premium cars, hundreds of functions are incorporated in the context of the centre panel, known earlier as "the radio". In addition to the traditional AM/FM channels, modern radios also offer a variety of media such as CD, mp3, DVD and over 100 channels of satellite audio programs (Lind et al., 2004). The

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