Hong Kong ASA Spring 2012

SS "Future of Acoustics: East and West

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Title: (R)Evolution in Vehicle Acoustics - Sound design, warning signals and quiet cities

Abstract:

The increasing electrification of the powertrain offers the unique opportunity for complete new sounds with respect to vehicle interior sound and exterior noises after an era of 125 years of combustion engine. With this expected development noise affected persons in urban areas hope for quiet cities and a better quality of life in general. In particular, the creation and preservation of quiet zones in cities is a special focus in European noise policy exploiting the potential of electric vehicles. However, with the expected engine concepts changes - besides the hopes - several conflicts and problems are seen. These concerns are related to apparent technological problems (infrastructure, costs, range limitations) as well as to noise issues probably leading to an decrease of pedestrian safety. This has caused a general demand for acoustical warning signals for quiet (electric) vehicles to alert blind and visually-impaired persons. Are the concepts recently argued really well-thought-out and sustainable?

Recent and potential future sound developments are highlighted from different perspectives. Here, from the constituting frame of reference regarding public opinion, automotive manufacturers' considerations, legislative initiatives and political actions the potential design of electric vehicle sound is discussed.

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