

Classification of Transfer Functions for Vehicle Sound Evaluation

A. van Engelant, Dr. K. Genuit, Dr. C. Nettelbeck: HEAD acoustics

This paper deals with the classification of transfer functions to evaluate the acoustic transmission characteristics of vehicles. The Transfer Path Analysis is used to understand and describe the complex acoustic system of a vehicle. With the Binaural Transfer Path Analysis (BTPA) single transfer paths can be examined, analyzed and auralized.

A comparative analysis of different vehicles has been achieved. One important aspect that has been taken into account is the comparableness of the sound transmission of different vehicles. A special database has been created in order to file and statistically evaluate the acoustic transfer functions of vehicles. In a query mask comparable transfer functions can be determined. The characteristics of the vehicle and the transfer functions, which could influence the sound transmission, are used as filter parameters of the query. By means of the developed database the acoustical transfer behavior of a vehicle can be evaluated in general and with respect to competitive vehicles. Moreover, the statistical evaluation of competitive vehicles allows for the assessment of specific vehicle-related transfer functions and the derivation of minimum requirements and targets.

Find more event abstracts in our >> [abstracts archive](#) <<

HEAD acoustics GmbH
Ebertstraße 30a
52134 Herzogenrath, Germany