

TRANSFER PATH SUMMATION TOOL

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KEYWORDS –

NVH, TPA, Metapost, User Toolbar

ABSTRACT –

The NVH department at Volvo Car Corporation (VCC) uses in-house python scripts for METAPOST to post-process sound and vibration responses. Basically, the scripts take interface forces and transfer functions as input and sum up transfer path contributions. The in-house scripts have both, advantages, e.g. the possibility to plot many curves simultaneously and to reuse previously defined input, and disadvantages, e.g. being an obstacle for first time users and limited speed performance.

In collaboration with BETA CAE Nordic a graphic user interface (GUI) has been developed, proceeding from the existing Volvo transfer path summation scripts. The aim has been to make the tool user friendly and combine the advantages of a text editor usage with the advantages from a GUI.

The GUI is based on the User Toolbar environment of METAPOST, but includes some advanced scripting which enables the possibility to copy and remove already defined input and plot requirements – stored in an external excel file – together with the response curves.