

Interne Mitteilung     Notiz Nr.

## **Abstract Fisita 2008**

### **Challenges and new Methodologies for NVH Simulation**

The prediction of car-body vibroacoustics characteristics is an important aspect for the development process in the automotive industry now. Historically, the ability to predict the location and nature of highly sensitive components within a structural network containing a wide range of modal densities has suffered from a lack of effective full-spectrum prediction methods. In last years new CAE methodologies has been investigated specially for cover the called vibroacoustics mid-frequency range. With the background that Finite Element Analysis (FEA) becomes computationally impractical as the acoustic wavelength in the structure becomes small and Statistical Energy Analysis (SEA) becomes inaccurate as wavelengths increase and modal density decreases. A method calls Hybrid FE-SEA has been recently developed attempts to solve this problem by combining the large wavelength deterministic capabilities of FEA with the small wavelength capabilities of SEA. In this paper a overview about the methodology and its application in NVH areas will be presented.