

## **Abstract:**

Tests of physical prototypes take a very important role during the vehicle development process. Therefore the number of physical tests is reduced by testing several functions in form of 'manoeuvre' tests - on the basis of individual total tests. A further tendency regarding minimization of real tests consists of securing functions on the basis of virtual prototypes in an early phase of the product development process. By comparing the test results of the virtual and real world however usually large differences of qualitative and quantitative kind exist - resulting from different levels of development of the inserted parts, different product configurations and structures as well as different load assumptions. These circumstances make a comparison of both kinds of testing more or less difficult. Hence virtual tests in the automobile industry will be regarded so far only for individual special cases concerning the relevance of their significance.

A methodology for the solution of the described problem is pointed out as a possible attempt, where the significance of virtual tests results in comparison to real prototypes can be increased - with consideration of different influence factors (levels of development, configurations and product structures, load assumptions, etc.)

Thus following questions are to be examined in detail:

- Which advantages does the use of virtual prototypes in combination with real prototypes yield - concerning time, costs and quality?
- Which physical tests can be saved in consequence of sufficient security of the functions in the virtual test for future projects?