

More Development Power than Ever for SIMPACK

The DLR (German Aerospace Center), which is responsible for the development of SIMPACK, has recently extended its range of activities to include the field of ground transportation. This has led to a significant improvement in quality and extent of the development resources for SIMPACK, which will in turn result in further technological advances and major enhancements of the Automotive⁺ and Wheel/Rail modules.

The main focus of the new area is aimed at technologies in which DLR experience and expertise derived from aerospace research can be cross-matched with ground transportation applications, especially in areas where the DLR has a leading scientific and technological position - for example mechatronic simulation. The research area will commence with a three-year period of intensive support after which this research will be integrated into the normal routine of DLR activities, as in the case of the aerospace program - demonstrating a determination and long-term commitment. Existing relationships and cooperations with other industrial sectors and research centers, including universities, will be consolidated and intensified (creating "networks" of cooperation). The establishment of the new focus on transportation technology will be combined with the further development of CAE technology for virtual prototyping and the development of mechatronic systems. The SIMPACK development team is to be significantly strengthened to

enable this exciting new challenge to be met and initiated. The on-going development of efficient and effective mathematical solvers for non-linear kinematics, 3D-graphics, contact models, combined mechanical and control system tools and interfaces from multi-body simulation tools to any CAE techniques will be an area of intensive efforts. New resources for the further refinement of the Automotive⁺ and Wheel/Rail modules will be created - strengthening the existing manpower.

The development of SIMPACK's automotive and railway modules will be continued with the cooperation of industrial partners, thereby guaranteeing the quality and efficiency of current software and the future investment in the software of tomorrow. The DLR would like to ask partners and SIMPACK users from the automotive and railway industries as well as from research centers to make contact and to share their ideas on which direction and approach the new development should take.

Software

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Realtime Simulations



Literature

Dr. Lutz Mauer
INTEC GmbH

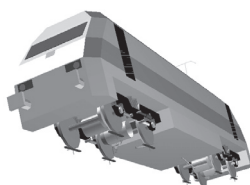
Mehrkörpersysteme mit flexiblen Körpern



Models

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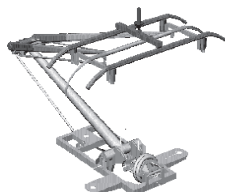
Modular Train-Models Using Substructures



Research

Armin Veitl
Deutsches Zentrum für Luft- und Raumfahrt

CAE Design of Controlled Pantographs



Models

Johannes Gerl
INTEC GmbH

Engine Simulations

