SIMPACK MAGNETIC LEVITATED TRANSPORT

Simpack offers a library of modelling elements for simulating magnetic levitated transportation systems. The software enables users to model and analyze the dynamic performance of a completely assembled maglev train including various subsystems for vehicle levitation, lateral guidance, drive control mechanisms, suspension components etc.
APPLICATIONS

- Magnetic levitation control
- Vertical vehicle dynamics
- Lateral guidance control
- Track irregularity influence
- Flexible track dynamics
- Operational safety
- Passenger comfort
- Stability analysis

HIGHLIGHTS

- Easy assembly of multi-car-trains from submodels
- Application of distributed magnetic forces on levitation surfaces
- Linear and non-linear flexible track modelling
- Realtime capable multibody system solver for Software-in-the-Loop (SIL) and Hardware-in-the-Loop (HIL)
- Library of vehicle suspension modelling elements

FEATURES

- Full 3D force distribution simulation
- Extensive library to define application specific force laws
- Element library for standard controllers
- Powerful post processing and visualization tools

INTERFACES TO

- Robust interface to 3rd party tools through functional mock-up interface (FMI)
- MATLAB® and Simulink® interface for model exchange, co-simulation and simulation results export
- CAD geometry import
- Interface to structural and fluid simulation softwares for co-simulation

OPERATING SYSTEMS

- Windows and Linux

Our 3DEXPERIENCE® platform powers our brand applications, serving 11 industries, and provides a rich portfolio of industry solution experiences.

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