3D graphical multi-domain simulation as universal means for integrating virtual technologies into research projects

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Institute for Research and Transfer

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Factsheet

Business facts

- Non-profit association founded in 1990
- Currently about 100 employees in different departments e.g.:
  - Quality management
  - Robot technology
  - Production automation
  - Industrial science
- Technology transfer organization to bridge the gap between university and industry

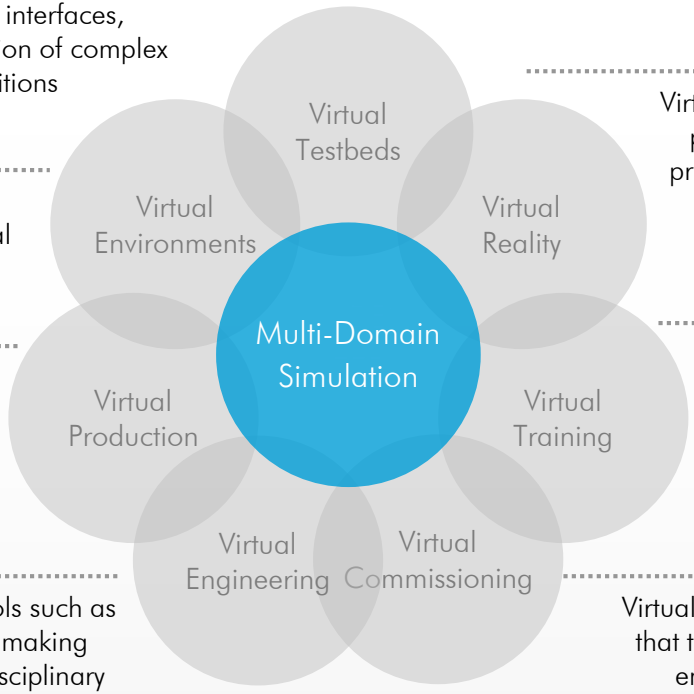
Topics to explore / Core competence

Covering all inner and outer dependencies and interfaces, VTs enable the modeling, variation and simulation of complex digital prototypes under varying boundary conditions

Interactive virtual worlds with comprehensive close-to-reality simulation of all relevant physical aspects

Execution of manufacturing processes where virtual models allow for prediction of potential problems, e.g. product manufacturability

Integration of geometric models and related tools such as analysis, simulation, optimization, and decision making within virtual environments that facilitate multidisciplinary collaborative product development



Virtual Reality solutions for interactive and immersive presentations which help key decision makers and prospective customers to experience products better

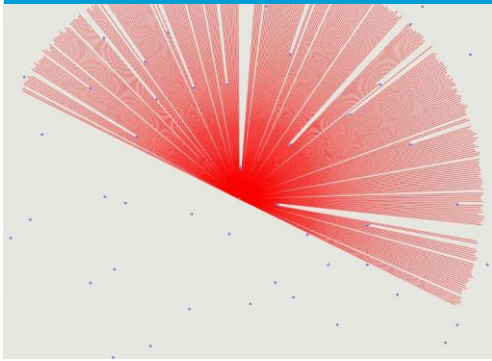
Immersive and interactive training solutions providing the benefits of real-time training and blending the difference between Virtual and Real

Virtual models are connected to real control systems, so that the simulation can be used simultaneously in early engineering phases to verify the design and test the control programs

Type and role of partners

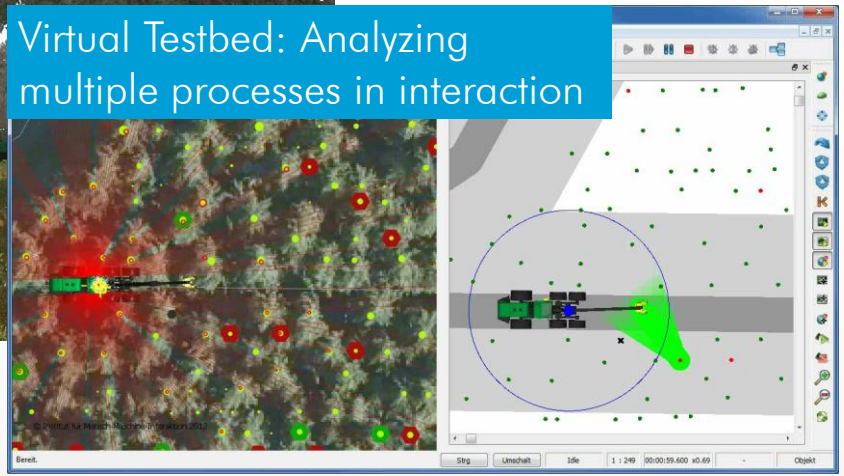
Partners/Consortiums looking for virtual testbeds/digital twins

Simulation: Analyzing single aspects

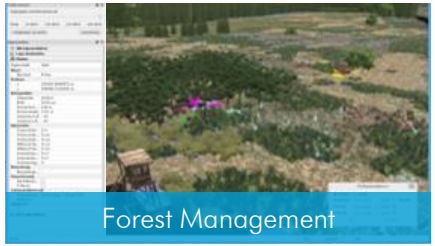


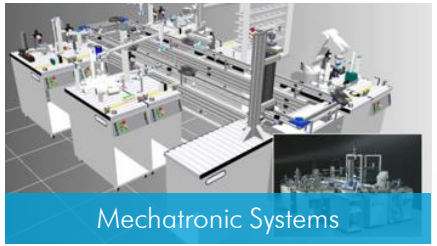
eRobotics: Support of entire development cycle

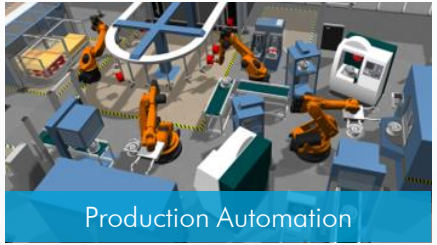
Virtual Testbed: Analyzing multiple processes in interaction

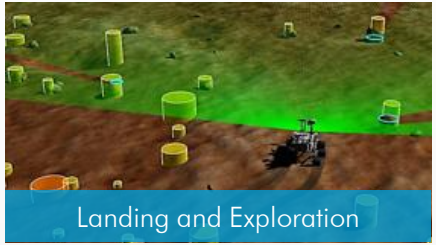


Application areas









Environment

Industry

Space

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