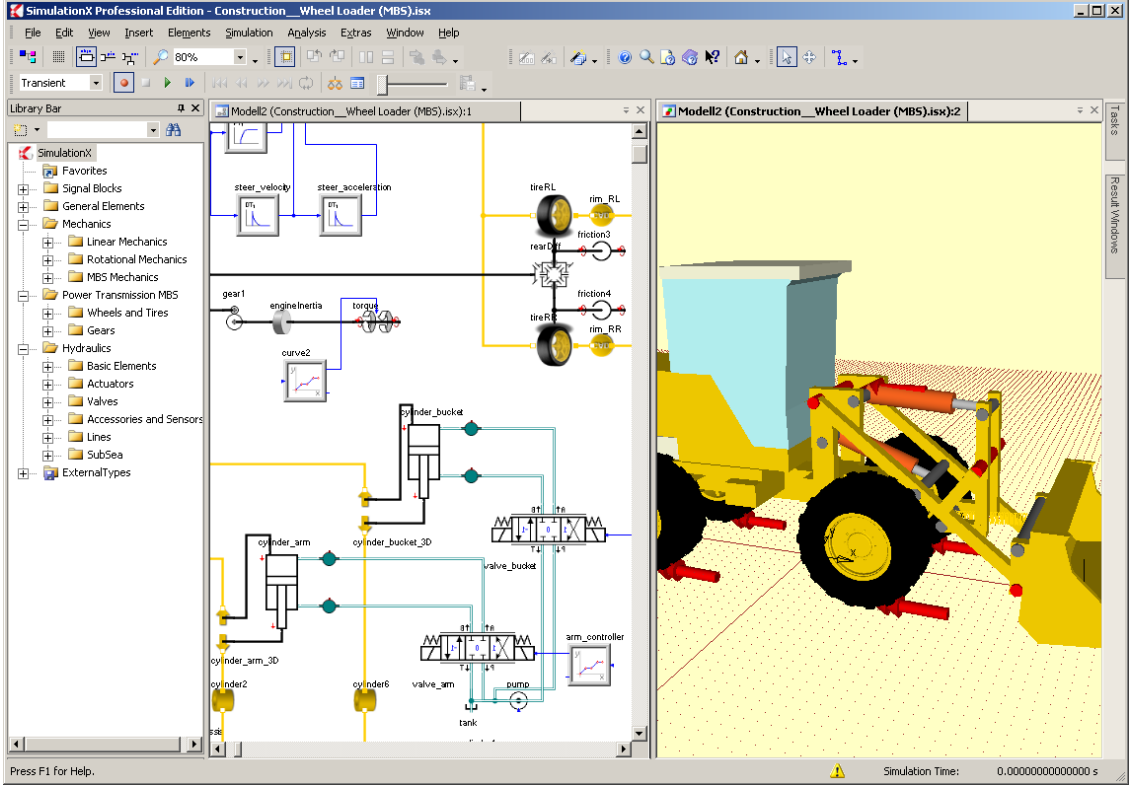
Supporting your vision

Designing precise, reliable and robust mobile working machines that accelerate work cycles

Heavy Machinery

The multi-domain simulation tool SimulationX provides the necessary capability to design mobile construction equipment simulating true to life working conditions thus enabling all aspects from precision operation through to safety cases to be fully explored early in the design process.

Complex analysis usually requires more than stress analysis, flow calculations or simulation of kinematics. Many phenomena originate from the interaction of sub systems with different physical backgrounds and non-linear physical-technical relations. Due to this complexity, OEMs and suppliers in the construction machines industry know, that they can no longer describe the system behavior in calculation tables or quasi-stationary computations.



Complex modeling of multi-domain systems

Engineers and scientists overcome this challenge by relying on ITI simulation solutions for the construction machine industry. SimulationX is an intuitive 1D to 3D software platform for physical modeling, simulation and analysis of mobile mechatronics systems.

Early in the design cycle, OEMs and suppliers model and simulate hydraulic controls, drives and kinematics in a single software environment, solve tribulogical tasks, validate diverse variants and analyze energy-efficiency of machines and control concepts. SimulationX has long proven its excellent performance in system simulation and is an essential tool in modern machine development.

- **Multi-domain simulation** | comprehensive approach for non-linear multi-domain simulation of hydraulic-mechanical machines
- **Dynamics** | analysis of the dynamic behavior and the behavior of drive and control units
- **System behavior** | prediction of machine behavior and tuning of machine functionality in its operating environment
- **Load determination** | determination of the expected load in normal operation mode and during break-downs in early development stages
- **Comfort** | model-based development of functions and system integration including results about dynamics and comfort
- **Analysis** | quick analysis of structural variants

All over the world, suppliers in the construction machine industry, use SimulationX for designing and optimizing mobile machines.

e.g. ABB, Bosch Rexroth, CNH, ETO Magnetic, Hawe Hydraulik, Hitachi, Komatsu, Liebherr, and Putzmeister

„SimulationX allows an early analysis in the design process, replaces cost-intense prototypes and acts as a knowledge base in the development of our machines .“
Thomas Esche, Construction/Development, Liebherr-Werk Bischofshofen GmbH

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