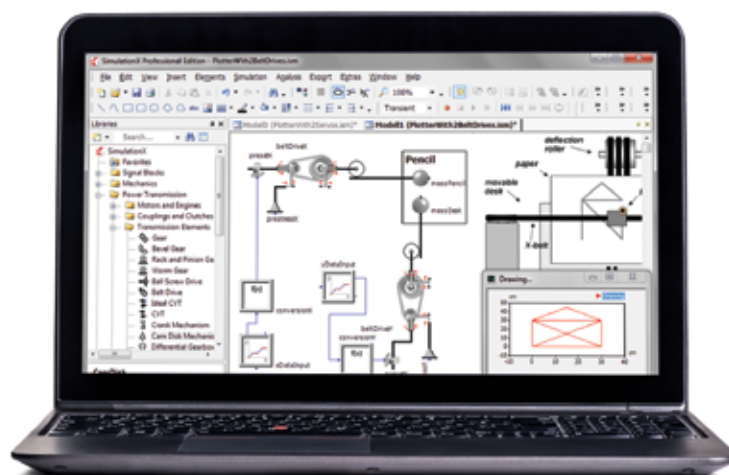


Accelerating concept design of complex precision instruments and equipments

The development of precise instruments requires the use of modern simulation techniques. The integration of intelligent sensors in complex designs using modern materials and processes is a great challenge for the designer.

Mechatronic instrument components and equipments are found in consumer products,

microscopes, semi conductor equipments, stepper drives or navigation systems. The implementation of innovative approaches for the composition of assemblies and instruments with respect to predefined objectives, such as extreme noise or mass reduction, high dynamics, precise and low-loss operation, can be analyzed holistically within SimulationX.



Holistic analysis of precise instruments

One of the main tasks is the composition of assemblies and instruments regarding predefined objective functions e.g. extreme noise- or mass-reduced, highly dynamic, precise and lowloss process. Engineers and scientists face this challenge by relying on ESI ITI simulation solutions for the instrument engineering.

An open architecture and a range of transparent, customizable models and libraries provide SimulationX users with the ultimate level of flexibility and user-friendliness. Applications such as printers, refrigerators, actuators for spotlights or satellites can be functionally designed based on physical system simulation. SimulationX has long proven its excellent performance and is an essential tool in precision instruments industry.

Modeling | modeling of DC-, synchronous and induction motors, converters, stepping motors and control systems used in the writing and print technology, pharmaceutical and laboratory equipment.

Magnetics | magnetic circuit modeling with resistance of ferromagnetic materials, electromagnetic transformers, magnetic stray resistance and magnetic force generation.

Electrics | modeling of electric/electronic elements used in electronic circuits and mechatronic systems.

Mechanics | 1D, 2D, 3D mechanics for the modeling of static, kinematic.

“SimulationX speeds-up our innovation processes and provides reliable information for comprehensive discrimination analyses.”

Dr. Michael Anheuser,
PRINCIPAL
ENGINEER/HEAD OF
PREDEVELOPMENT
SIEMENS AG



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