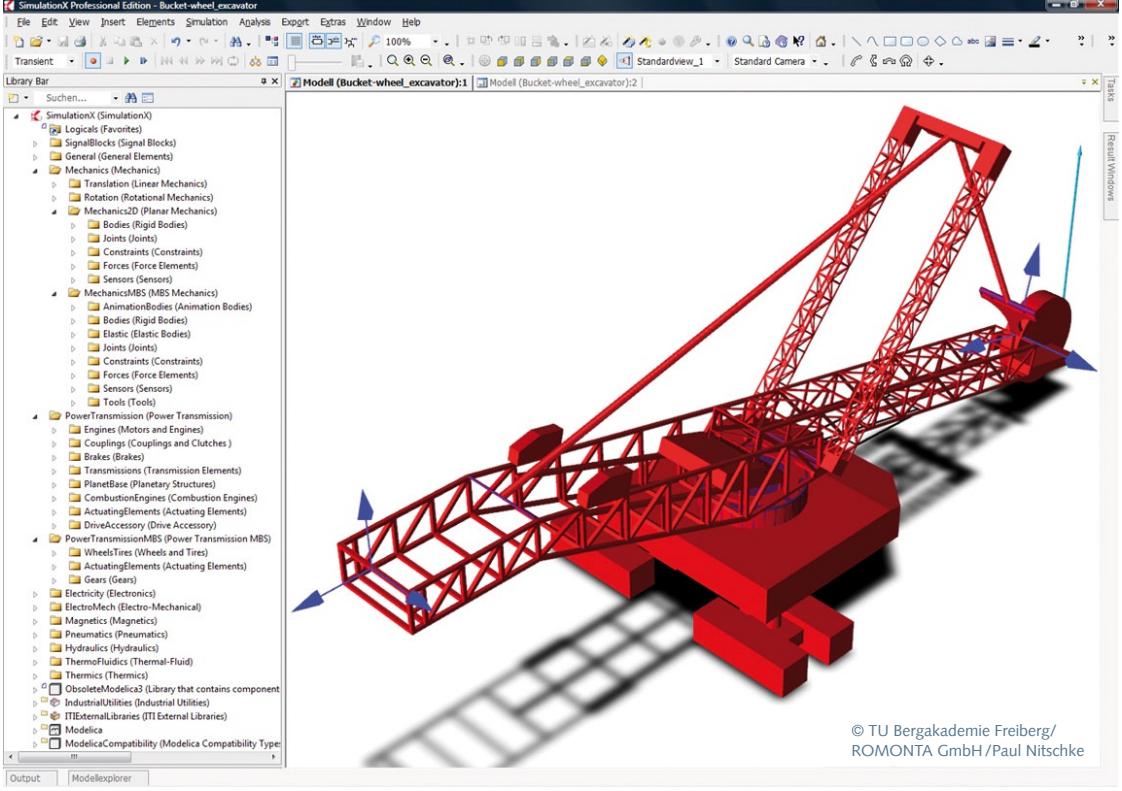
Supporting your vision

Developing reliable and efficient mining equipment and machinery for bulk material handling

Mining & Bulk Material Handling

Throughout the entire process chain – from extraction and handling to storage and loading – SimulationX is the first choice for designing and optimizing mining equipment and machinery through a comprehensive, multi-physics simulation approach.

Whether for surface or underground mining, with continuous techniques or "Truck and Shovel", moving large amounts of bulk materials in mining poses extreme challenges to man and machinery. Consequently, maximum safety, performance and reliability of extraction and conveyor equipment are crucial while keeping operations at an efficient level. The integration of such machinery into entire process chains emphasizes those requirements even more so.



Simulating complex systems on multiple levels

SimulationX with its comprehensive model libraries, interfaces and analysis options allows for developing, retrofitting and optimizing machinery for mines, cement plants, storage facilities and ports.

During the development of complex systems, such as bucket-wheel, dragline and hydraulic excavators, belt conveyors and systems for bulk material handling, engineers draw upon the vast possibilities in SimulationX for simulating typical operating modes and designing optimized layouts. This allows for simulations of critical scenarios, such as emergency shutdowns under maximum loads, without putting personnel or equipment at risk. But also developing and testing fully real-time capable controller layouts is possible without the need for an actual prototype.

- **Multi-domain simulation** | increasing knowledge of technical systems through modeling complex structures with respect to all physical domains, non-linearities and the interactions between them
- **Dynamics** | analyzing machine behavior under highly dynamic conditions of mining and bulk material handling activities
- **Efficiency** | developing and optimizing drive systems and machinery for optimal performance and consumption
- **Load scenarios** | analyzing dynamic loads during the design phase for normal operations and extreme conditions
- **Safety and compliance** | supporting compliance with legislation for operational safety and environmental protection
- **Integration** | facilitating the integration into existing CAE environments through proven interfaces

Manufacturers and operators of mining equipment and machinery for bulk material handling use SimulationX for developing efficient and reliable systems.

e.g. ABB, Aker Wirth, Ardelt, Romonta, Tenova TAKRAF

"During the development of new drive systems and controller layouts, SimulationX has proven to be most versatile through its true-to-life parameterization."
Uwe Heuer, Project Management, ABB Automation GmbH, Germany

ITI Headquarters
Schweriner Straße 1
01067 Dresden · Germany
info@itisim.com
T + 49 (0) 351.260 50 - 0
F + 49 (0) 351.260 50 - 155
www.itisim.com

For your local representative please visit:
www.simulationx.com/global