

SIMIT Simulation Platform

Real-time simulation – a foundation for your digitalization strategy

Almost every industry faces the following three challenges: increasing pressure in terms of project deadlines, greater plant profitability, and lack of highly qualified personnel. The use of real-time simulations of automation projects has proven very efficient for this and other requirements.

With SIMIT, you can perform simulations on a single platform which permits comprehensive tests of automation projects as well as the virtual commissioning of systems, machines, and processes. In addition, the simulation platform can also be used for realistic training environments to train operating personnel.

Use SIMIT to create a simulation model of your machines or plant and lay the foundation for the digital twin, the virtual representation of your technological reality. SIMIT provides improved operability, simplified simulation modeling, and more performance, openness, and flexibility.

Virtual commissioning for more engineering efficiency and greater planning security

With SIMIT all relevant automation functions can be tested safely and efficiently before the actual startup, using the original automation programs. Easy coupling between the simulation and automation environment. The coupling can be done with the real hardware of the automation systems (hardware-in-the-loop) and with the integrated virtual controller or the SIMATIC S7-PLCSIM Advanced and therefore without real hardware (software-in-the-loop).

SIMIT: Your benefits at a glance

- Simulation and testing improve engineering and automation quality
- Seamless integration of existing engineering data
- Faster startup with fewer risks
- Increased plant availability and security throughout the entire life cycle
- Train plant operators before actual startup
- Risk-free testing of diverse optimization or expansion measures
- Transfer of experience and know-how in modular and repeatable training units

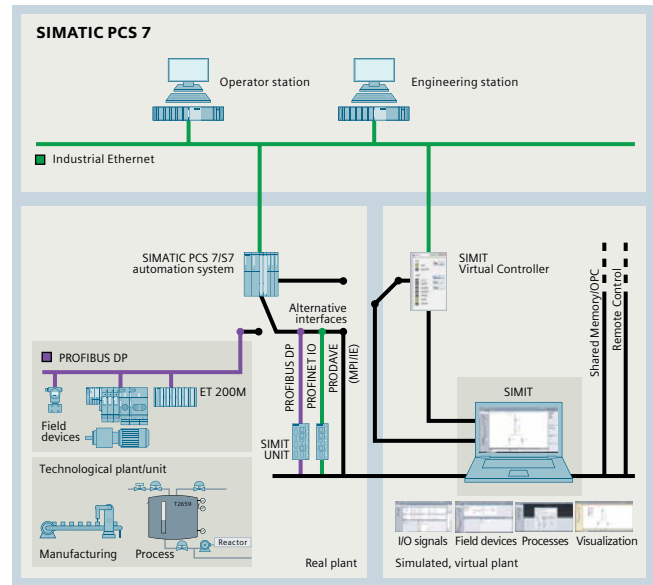
By simply adopting existing planning and engineering data as well as further simulation models, already existing knowledge can be used efficiently for the development of the simulation environment. The integrated project analysis visualizes interfaces, diagrams, model sizes, etc. In addition, SIMIT provides several libraries with industry specific and simulation components.

SIMIT – A unique simulation platform for your automation projects

- **User-friendly**
 - Integration of SIMIT UNIT Administration into SIMIT user interface
 - Easy configuration of PLCSIM Advanced interface
 - Information from engineering system easy to reuse
 - Various operations can be simulated dynamically and can also be stored for subsequent analysis
- **Flexible**
 - Further use of existing snapshots even after reloading from scratch
 - Licensing can be easily adapted to individual needs
 - COMOS-SIMIT interface for library exchange and automated modeling
 - Bulk engineering via spreadsheet
 - Integration of application specific library's (CHEM BASIC, etc.)
 - Support of SIMATIC PCS 7, SIMATIC PCS neo and among other things SIMATIC ET 200SP HA, SIMATIC Compact Field Unit and SIMATIC CPU 410SiS
- **Open system**
 - Support for Windows 10 and Windows Server 2016
 - Export of template information
 - Interface for external interfaces developed by SIMIT partners
 - Remote license server for virtual controllers
 - OPC Unified Architecture (OPC UA)

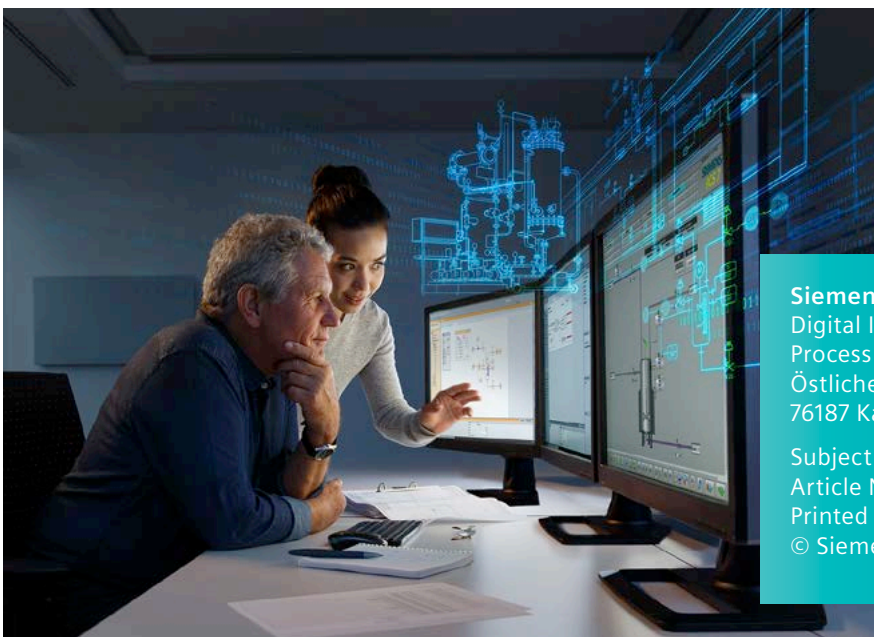
Optimized Processes for an efficient plant operation

The specific optimization of the technical process, including during system operation, is supported by the integration of the gPROMS platform from Process Systems Enterprise (PSE) with SIMATIC PCS 7. Models from other simulation tools can also be integrated in the form of Functional Mock-up Units (FMUs), via the Functional Mock-up Interface (FMI). The range of operational uses for the models includes monitoring, soft-sensing, predictive controller and optimization applications.



Safe and efficient training of plant operators in virtual environment

Use SIMIT as virtual training environment ensuring a variety of applications when training plant operators. It is possible to train operator teams before the actual startup of the plant as well as training rarely used startup and shutdown scenarios. The training environment is based on original control views and automation programs but can be realized without major space and hardware requirements, e.g. by using the SIMIT Virtual Controller. All training measures take place without interfering with the plant operations or endangering people, the environment, or machines.



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