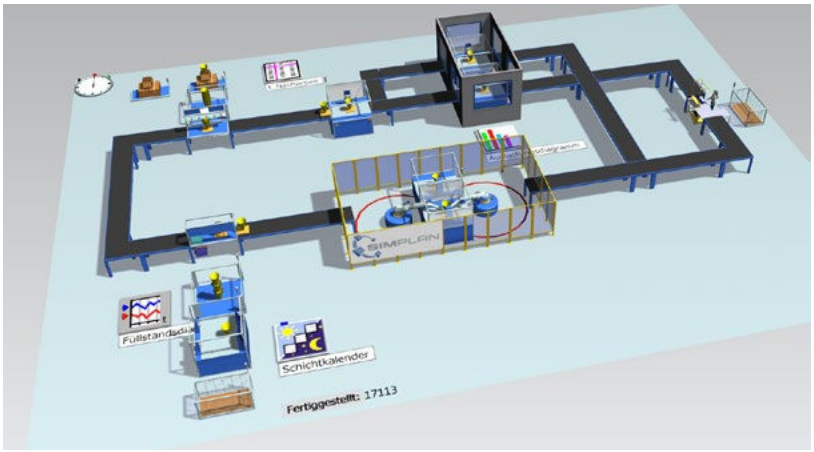
Building Blocks for Plant Simulation

Simulation of assembly plants

Scope of application

Simulation has established itself in many manufacturing companies as an important tool for safeguarding planning and supporting plant optimization. However, sometimes the complexity of simulation tools does not allow for general use by all department employees or there is not enough time for detailed simulation.

With the building block kit for the simulation of assembly systems and workpiece carriers based on the simulation tool Plant Simulation, you have a tool at your disposal, which makes it possible to create assembly systems within a few hours or days and to test and optimize them simulatively at a simplified level.



Example model of an assembly plant (SimPlan)

The target is, with the help of the so created simulation models to examine the dynamic effects (machine malfunctions, NOK rates, etc.) from reality in order to obtain a supplement to the static planning and to go on a targeted bottleneck search by means of the simulation. This should enable a more precise calculation of new plants in the project planning, as well as the identification of rationalization potential in existing plants.

With the help of simulation, sound knowledge should be gained about the influence of the

- Design of machines (manual or automatic),
- Number of employees depending on the qualification
- Number of WTs, etc.

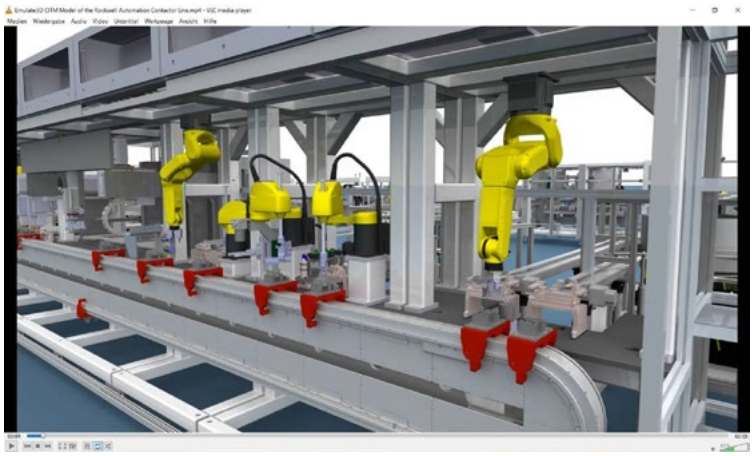
in relation to dynamic effects are gained.

Easy to use without programming knowledge

The building block box is ideally suited for use with the Plant Simulation Application License from Siemens PLM Software. This eliminates the need for programming knowledge and high investment costs in an expensive full license of a simulation software are required. The simplified input interface enables the creation of simulation models via drag & drop even by non-simulation experts. However, it should be noted that simplification of processes is envisaged in this sense. Due to the abstraction and constraints of the building blocks, in some cases further detailing may be necessary.

Benefits of the Simulation

- Fast and risk-free identification and verification of possible optimization measures
- Effects of the measures can be presented transparently so that an implementation decision can be made on the basis of concrete key figures (e.g. throughput, capacity utilization)
- Safeguarding of planned changes and increase in process quality, since effects of changes can be detected without risk and remedied by appropriate measures.



Emulate3D Model of assembly line (SimPlan)

SimPlan building block kits

For your individual fields of application, we develop modular libraries based on standard simulation software. These libraries combine the required standard functionalities of the model components to be modelled, for example machines, warehouses, conveyor technology or entire plant areas.
You can find an overview of all SimPlan building blocks here:

www.simplan.de/en/software/building-block-libraries/

SimPlan AG was founded in 1992 as a service provider for the simulation of operational processes and today, with more than 120 employees, it is one of the leading German providers of simulation services.

Why SimPlan?

We are a cross-industry full-service provider for simulation, supporting companies of all industries with extensive expertise in the analysis and optimization of their business processes

- Objective and independent analysis
- Detailed knowledge in logistics and production from over 30 years of project work
  → Development and use of standards
  → Permanent advancement of simulation topics through research and development
- Excellent resources to respond quickly to your issues
- Close collaboration and project integration with a high level of on-site involvement
- Development of innovative solutions for the efficient handling of problems
- Neutral distributor for simulation software
  → Support in software selection and implementation as well as training

Feel free to contact us

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