

# SimPlan Newsletter



December 2012

## News from the world of simulation

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## Simulation in practice

### Johnson Controls safeguards planning with the help of simulation



Johnson Controls is an internationally successful technology and industrial company offering a wide spectrum of products and services for the building and automotive sector. Its power solutions division is the leading supplier of lead batteries for automobiles and of innovative batteries for vehicles with start-stop function, for hybrid and electric vehicles. World-famous brands like VARTA® are part of the product portfolio of Johnson Controls.

Worldwide demand increases steeply for batteries that are suitable for fuel-efficient start-stop vehicle technology. For this reason, Johnson Controls currently expands its battery assembly capacities. Especially the connecting logistics within the pre-production processes have been examined in detail. The focus was on two central topics:

- is the planned number of furnaces and forklifts in pre-production sufficient?
- how many vehicles are necessary in the driverless transport system in order to safely supply the assembly lines?

The simulation model developed by SimPlan to investigate these questions was able to safeguard the planning by allowing detailed forecasts about throughput and processing times, inventory and the utilization of the furnaces and vehicles. Different scenarios were tested regarding for example the occupancy rate of the furnaces and the number of vehicles needed.

Johnson Controls was able to adjust the relevant parameters in the model and carry out simulation runs independently, in order to gain a detailed understanding of the effects of adjustments. To be able to do this and to safeguard future planning decisions, Johnson Controls had SimPlan train one of their employees to use the simulation software.

The employee accompanied every phase of the project, which enabled him to directly and efficiently learn how to carry out simulation projects, in order to independently undertake future projects for Johnson Controls.

## Software Trainings

We offer different training courses in several of our offices in Germany. If you are interested in a training at your company please ask for an individual offer.

### Software training courses

- Plant Simulation
- Enterprise Dynamics
- SimView
- AutoMod
- Simul8
- Demo3D

➔ [More information and registration on www.SimPlan.de](http://www.SimPlan.de) >> [Wissen](#) >> [Schulungen](#)

Solution  
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## Simplan supports Hugo Boss in the planning of a new distribution center

Hugo Boss, international lifestyle company and world leader in the premium and luxury goods segment, engaged SimPlan to simulate its newest distribution center. During the concept phase, the basic process variants for the planned warehouse were modeled. The focus was on the order start strategy, the investigation of the necessary storage and transportation capacity as well as the buffer size needed. The results and insights from the concept simulation became important input data for the planning of the specific technical concept and basis for the tendering.

SimPlan has simulated various supplier concepts for Hugo Boss to be able to evaluate their effectiveness.

## b+m Surface Systems relies on the digital factory

 b+m surface systems GmbH is a manufacturer of painting plants and paint application systems for surfaces, and offers customized solutions for almost all requirements. Most customers of this medium-sized, internationally active company are from the automotive and automotive supply industry, but also manufacturers of commercial vehicles, agricultural machines and rail vehicles are using painting plant solutions by b+m.

Due to rising complexity in customer processes and shortening project cycle times, b+m decided to rely on the digital factory to gain substantial increases in planning quality and to reduce follow-up costs. In collaboration with SimPlan, the simulation tool Plant Simulation was evaluated and introduced. B+m's aim was to implement discrete, event-oriented simulation step-by-step along the company's entire supply chain.



At the preliminary phase of the project, material flow simulation was used to support the early planning phases of painting plants for vehicle fixtures. For this, the current planning stage was modeled in order to be able to recognize any weaknesses early on and to modify the layout accordingly. Since the software Plant Simu-

The major advantage of this strategy was that it made the concepts comparable, since they were all modeled using the same framework conditions and identical result variables.

The advantages and disadvantages of the tendered concepts became obvious and served as a decision-making tool for Hugo Boss.

lation is also well suited for animating material flows, the model now offered b+m an effective tool in the communication with their customers.

## Use of the simulation model during project phase

At the later stages of the project, the rough planning model was refined gradually by b+m and SimPlan. Various „stress tests“ were done regularly on the basis of the most recent planning state. Here the simulation model was set up in such detail that control variants could be tested taking into account the acceleration and deceleration behavior of the conveyor technology elements. The goal was to visualize the future facility accurately, including fluctuations and interferences. The insights gained hereby formed the basis for the implementation of the real control logic in the simulation model and also was used to support the commissioning of the facility.

## Vision digital factory

„With Plant Simulation, we can safeguard customer projects already during the project planning phase and thereby achieve a higher planning quality,“ said Sebastian Merz, managing partner of b+m surface systems GmbH. He added: „SimPlan has supported us from the beginning on. During the implementation of Plant Simulation, our employees were trained using real, existing projects and so were able to learn how to use the new software in a quick and practice-focused way.“

## Simulation tools

### Klug integrierte Systeme uses Demo3D-videos for sales support

The company Klug integrierte Systeme is a leading specialist for complex logistics solutions. The core competency is in project planning of highly automated logistics systems, focusing especially on software and control systems.



Klug also uses project-specific Demo3d videos for customer communication. This way, the planned automation technology and logistics processes can be presented tangibly already during the sales and project planning phase. In contrast to static CAD-drawings and excel spreadsheets, this facilitates comprehension of the proposed concept.

### SimPlan China expands its software portfolio

On 1st October 2012, SimPlan China expanded its portfolio to include the software tool AnyLogic. The agreement with XJ-technologies, the developer of AnyLogic based in St. Petersburg, has been signed recently.

„The combination of discrete event-oriented simulation with agent technology and systems dynamics makes this software attractive for a wide range of uses. It covers classic simulation applications, supply chain simulation, logistics and production as well as pedestrian flow simulation and market trend simulation. This is a unique concept that no other simulation software

The big plus: potential customers understand complex warehouse processes more easily through this realistic depiction. This type of video is also an ideal eye catcher at fairs and exhibitions and is a good conversation starter there.

Demo3D is a solution for the intralogistics industry, its modular kit principle allows very quick creation of virtual 3D models of facilities and their processes. Besides the excellent graphics quality, the software is also characterized by its flexibility and the possibilities for individualization.

Here you can find more information about Klug integrierte Systeme:

➔ [www.klug-is.de](http://www.klug-is.de)

More information about Demo3D:

➔ [www.demo3d.de](http://www.demo3d.de)

offers“ characterizes Dirk Wortmann, executive director of SimPlan China, the software that the SimPlan head office in Germany already successfully markets since February 2010.

The AnyLogic reference list includes companies like Volvo, Panasonic, Pfizer, Gazprom and Fraport.

More information about AnyLogic at:

➔ [www.simplan.de/AnyLogic](http://www.simplan.de/AnyLogic)

## Workshops

We have expanded our range of workshops and are now offering free workshops for a first impression of the following simulation tools:

- AnyLogic
- AutoMod
- Demo3D
- Enterprise Dynamics
- Plant Simulation
- Simul8

➔ More Information and registration: [www.SimPlan.de](http://www.SimPlan.de) >> Wissen >> Schulungen

## SimPlan news

### SimPlan celebrates its 20th company anniversary



**20 Jahre**  
Simulation mit  
**SIMPLAN**

When SimPlan's founders Sven Spieckermann and Dirk Wortmann simulated the first virtual cars on their computer

screens in 1992, this technology was still in its infancy. The state of software and hardware technology imposed very tight limits on simulation. Since these beginnings the technology and SimPlan have experienced a remarkable development. Today the company can look back on an impressive project history and is one of the leading service providers for process simulation in Europe. With 75 employees in the entire group, SimPlan has six offices in Germany, one representation in Slovakia and one in Austria as well as a subsidiary in Shanghai. Opening a representation in Dubai has been the latest step in the expansion process and will very likely not be the last one.

After initially focusing strongly on the automotive industry, SimPlan today serves customers across almost all industries. Wherever there is demand for optimization of existing or planned complex production and logistics processes, the simulation service provider supports its customers in finding the most economical solution for them. Simulation helps to show potential bottlenecks and provides process alternatives before the start of construction and production itself. This not only shortens start-up times of manufacturing and production systems, it also provides objective bases for decision

making for planned investments.

Early on, SimPlan's founders recognized that they also needed to get involved in research and teaching in the field of simulation. Strong cooperations with universities and colleges as well as the active participation in associations like ASIM (Arbeitsgemeinschaft für Simulation – German Simulation Society) or GOR (Gesellschaft für Operations Research – Society for Operations Research) as well as participating in national and international research projects are leading to innovations that help SimPlan to access new market potentials.

„Today there is no process that we cannot simulate. The only limits are the availability of reliable data,“ says board member Dr. Sven Spieckermann. That the technology in combination with the experience of SimPlan's consultants brings many benefits for its customers proves to be true again and again.

Numerous success stories and the steady increase in customers are proof of this. „This is why we look to the future with great confidence and have set ourselves ambitious goals,“ says Dirk Wortmann about the prospects of the company.

#### Follow us on:



#### Imprint

**SimPlan AG**  
Edmund-Seng-Str. 3-5  
63477 Maintal  
Tel. +49 6181 40296-0  
Fax +49 6181 40296-19

[info@SimPlan.de](mailto:info@SimPlan.de)  
[www.SimPlan.de](http://www.SimPlan.de)

#### Board of Directors:

Dr. Sven Spieckermann, Dirk Wortmann

#### Supervisory Board:

Prof. Dr. Ulrich Noack (Chairman),  
Prof. Dr. Stefan Nickel,  
Andreas Schindler

AG Hanau HRB 6845  
USt-ID-Nr. DE 154 989 277