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Integrated Scheduling and Optimisation using the APS Add-on SCHEDULE++

OR Soft Jänicke GmbH has specialized itself on the Enhancement of ERP systems by implementation of APS (Advanced Planning and Scheduling) Add-ons. The application system SCHEDULE++ is the major APS tool used for this purpose. SCHEDULE++ is a powerful modern planning software for detailed scheduling, optimisation, forecasting and collaborative planning. In contrast to other APS systems SCHEDULE++ can be utilised as a real APS Add-on to ERP systems and does not require its own server, special administration and speparate data storage.

Detailed Scheduling with SCHEDULE++

SCHEDULE++ allows to model, visualise, modify and optimise complicated production logistics scenarios. Even complex production with large numbers of recipes and resources, co-products, shift regimes and individual downtimes can be modeled easily. In particular complex multistage productions with intermediates and interaction over different sites can be planned very well with SCHEDULE++.

The following fundamental scheduling functions are provided:

◆ Feasibility Checks
Due to simultaneous planning of capacity, resource allocation and material availabilty the resulting schedule is always technologically feasible without capacity overload. However, SCHEDULE++ can also be used for infinite scheduling and will give information about resulting conflicts if it is used in this way.

◆ Simulation
In SCHEDULE++ it is possible to apply modifications of the production model in a simulative way. Those modifications are applied only inside the Add-on and are not applied to the leading ERP system. The results like e.g. storage overloads or violations of technological restrictions are recognised immediately. If the simulative modifications were succesful then they can automatically be applied to the ERP system. This simplifies the handling of the leading system and enhances its function and modelling possibilities.

◆ Optimisation
Modules for the automatic scheduling of orders find the least-cost schedule using criteria like lead time, stocks, raw material consumption or setup expenditure. During optimisation all technological limiting conditions are considered. Because of the high complexity of many planning tasks, a considerable saving potential exists here.

◆ Supply Chain Coordination
SCHEDULE++ can operate on data from different sources like e.g. multiple plants, companies or systems and aggregate these data by defineable criteria, enabling a planner to get overview and insight and to manage the supply chain even in complex production scenarios.

SCHEDULE++ as a modern APS Software

◆ Ease of use

SCHEDULE++ is easy to use due to its utilisation of well-known Windows management principles and look-and-feel standards. Multiple users can work on the same production model at the same time. The modular design of SCHEDULE++ provides an easy way to configure individual user interfaces with regard to content and layouts.

◆ Clear visualization

The SCHEDULE++ system visualizes the planning situation in a graphical way. All data needed for decision making is prepared for the user by intelligent filters and presented on the user interface. Both graphic and tabular confict visualisation supports the fast finding of decisions by the planner.

◆ Enhanced Usability

The usability of the ERP systems, which have not been designed for scheduling in particular, is enhanced significantly with regard to modelling, simulation and information gathering. Many hours of routine work can be saved in this way.

◆ Scheduling Strategies

To make SCHEDULE++ usable for various industry sectors and various planning tasks it provides not only a large set of preconfigured scheduling strategies but also the possibility to additionally implement customer specific strategies and business procedures. In addition to strategies like Pull Production (with or without multistage BOM explosion). Push Production with selection of alternatives, MRCP over all production stages (with or without creation of purchase requisitions) etc., all scheduling and rescheduling functions can be customized to user requrements by option settings.

◆ Power User and Collaborative Work over the Internet

Due to the specifics and the size of scheduling models and tasks occuring in an APS system like SCHEDULE++, the system is usually implemented as a „fat client" on a user PC. In addition it is also possible to use schedule as a web-based application. This makes sense in particular for Evaluations of e.g. stocks, capacities, allocation situations and monitoring of key performance indicators derived from those evaluations, which are based on operational scheduling data of SCHEDULE++ and are of interest for managers or planners. In the same way collaborative workflow can be implemented e.g. for cross-site forecasting or demand planning.