Information Technology

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Information Technology AG

InFrameSynapse Scheduler

Smooth planning and allocation of manufacturing resources

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With InFrame Synapse Advanced Planner & Scheduler (APS) acp-IT accompanies you to face the challenge of hitting accurately your customer due dates while keeping your production costs under control. Our innovative scheduling component together with our comprehensive know-how leads to a planning solution that exactly fits your needs.

InFrame Synapse APS enables a smooth planning and allocation of manufacturing resources considering all essential restrictions (hard and soft constrains) from the shop floor. Therefore a minimization of cost and an improvement of manufacturing efficiency are realized. The following application areas are covered by InFrame Synapse APS:

- Release / Demand Planning to optimize the product mix and lot start planning, due date planning and inventory forecasting and to forecast resource utilization
- Human Resource Planning for optimal allocation of operators to processing tasks, maintenance activities in consideration of skill groups, shifts, holidays and work calendars
- Maintenance Scheduling for allocation and scheduling of maintenance tasks in consideration of resource utilization, especially temporary bottleneck situations. Therefore, identification and management of bottlenecks in the factory are possible using the APS
- Online Scheduling and Dispatching for ad-hoc dispatching and re-scheduling based on unforeseen events (e.g. down events)

InFrame Synapse APS generates optimum resource schedules with consideration of earliest release date & due date, multi-resource planning, sequence dependent setups & interoperation times, resource availabilities & work calendars as well as split & merge steps. It offers a resource library with specific timing models: single unit, parallel batch, sequential batch, lot based, tact, assembly operation. What-if analysis and management of planning scenarios as well as comparison of different scenarios are part of the standard functionalities of the APS module. Finally, it provides customer specific user interfaces and reports.

Features

Fast
- Less than 2 minutes calculation time for over 300.000 activities
- Fast Gantt chart capable of handling huge amounts of activities

Flexible
- Extendable resource models
- Fully customizable GUI and reports

Scalable
- Handling of process flows with several hundred steps and several hundred resources

Cost efficient

Flexible through extendable resource models

The innovative concept of resource models inside InFrame Synapse APS allows you to model the timing of your equipments. We provide out-of-the-box models for single lot throughput equipments (serial batch) and parallel batch equipments. All these models can be extended or custom models can be added. We adjust the model to your factory not vice versa.

Multi-resource planning

Employees are often deployed to the current bottleneck of the factory without considering the overall impact. Our scheduling component considers all required resources (operators, machines and required tools) and thus provides scheduling results that incorporate overall line status. Employees are assigned to process steps by their skills. Shift and holiday calendars can be assigned to each resource.

Rich GUI for visualization and reporting

InFrame Synapse APS provides a customizable and very fast Gantt chart view for resources and lots, resource utilization charts and monitoring and reporting capabilities for KPI's (Key Performance Indicators) such as on time delivery or throughput. This enables a quite good overview and rating of scheduling scenarios and results.

Compare different scenarios

The scenario manager allows you to manage and compare different scheduling scenarios. E.g. to evaluate if an additional shift in a certain area helps to overcome production bottlenecks.

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