PRODUCT PROFILE

FactoryTalk® Scheduler

OVERVIEW

Global manufacturing facilities maintain a competitive advantage by increasing productivity and reducing cost — with the goal to produce a high-quality product, at a low cost, when the customer wants it. As a result, many manufacturers have optimized their supply chains to keep their inventories low, increased the efficiencies of the operations, and converted to a make-to-order system. This can result in major cost reductions, but it places the burden on the shop floor.

Develop an accurate long-term finite-capacity operation schedule with FactoryTalk Scheduler, a key application within the FactoryTalk Integrated Production and Performance suite. Use FactoryTalk Scheduler to generate detailed, finite-capacity schedules that provide a view into the future. Now, production schedulers can identify and act on late orders; manage capacities and labor or material constraints and expedite orders for total resource management.

FEATURES

FactoryTalk Scheduler can receive production orders from higher-level ERP systems. These ERP systems generally schedule to theoretical infinite capacity, which can lead to problems with excessive work-in-process and missed due dates. FactoryTalk Scheduler helps eliminate these problems so you can create more realistic schedules and have fewer issues on the plant floor.

You can also use FactoryTalk Scheduler with other Rockwell Software packages, such as RSView®32™, FactoryTalk Transaction Manager, and FactoryTalk ProductionCentre to make your production schedules readily available to plant-floor resources like labor, tooling, materials and machine availability. And your production information can be fed back into FactoryTalk Scheduler to keep you informed of your quantities and actual processing times.

FactoryTalk Scheduler can generate schedules in a very short period of time, often minutes, which means that new schedules can be produced quickly if shop-floor disruptions or machine breakdowns occur. The FactoryTalk Scheduler user interface is an intuitive Gantt-style planning board, with easy-to-learn menus and icons.
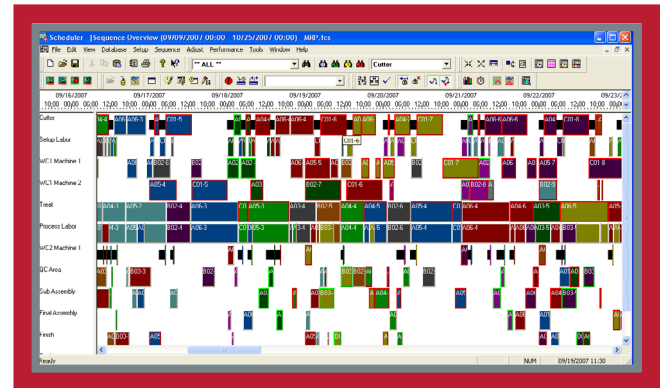
FactoryTalk Scheduler's electronic planning board.

SCHEDULING METHODS

FactoryTalk Scheduler offers you four methods for generating a schedule: algorithmic, custom, simulation, and manual.

Algorithmic
This method is also known as a "job-at-a-time." FactoryTalk Scheduler selects one of your "jobs" and puts all of its operations on the planning board. Each operation is loaded on its specified resource in the first available time slot that satisfies the constraints of your operation.

The key to the quality of an algorithmic schedule is determined by the rule you use to select which job is placed on your planning board. You can create rules based on due date; first-come, first-served; order property/ascending; order property/descending; priority; process time; release date; reverse priority; slack time; and user rule. Algorithmic scheduling can be used for backward or bi-directional scheduling.

Custom
FactoryTalk Scheduler lets you create custom algorithms using embedded Microsoft® Visual Basic® for Applications (VBA). Considered an algorithmic means of scheduling, this method determines your next job scheduled using logic in the custom algorithm.

Simulation

The simulation method is similar to the algorithmic method, with one important difference. It selects and loads one operation at a time onto your planning board. By loading individual operations rather than entire jobs, the simulation method offers you finer control over the way operations are loaded.

Manual

FactoryTalk Scheduler also lets you drag and drop jobs and operations onto the planning board manually. The manual method gives your production planner ultimate control over how your orders are placed. You can place crucial orders manually, then the remaining orders can be scheduled using any of the other scheduling methods.

REPORTING AND SCHEDULER DATABASE

Using FactoryTalk Scheduler, database information can be loaded into memory to create a production schedule. This makes schedule generation quick and efficient, as access to the database and disk are unnecessary. When you save an acceptable schedule, information about it is written to the database. You can then query the database to obtain the desired reports (e.g., resource dispatch lists, unscheduled orders, resource utilization, etc.).

You can also use FactoryTalk Scheduler to generate a number of reports, such as Dispatch List, Resource Utilization, and Unscheduled Orders. These reports are designed with Crystal Reports® 8.0; FactoryTalk Scheduler can view them with Crystal Reports Runtime. Additional reports can also be designed and added to the folder.

Scheduler generates a variety of reports.

SCHEDULER VIEWER

FactoryTalk Scheduler Viewer is a view-only look at schedules and reports. It offers you a reduced set of FactoryTalk Scheduler functionality when you only need to analyze the data, not program new schedules.

BENEFITS

FactoryTalk Scheduler can be integrated with your ERP and shop-floor systems. Now you can be proactive rather than reactive as you work to resolve key resource utilization and setup issues. FactoryTalk Scheduler can also help you reduce production cycle and completion time, reduce inventory requirements, generate accurate consumption requirements for raw materials, and reduce queue time for Work-In-Process while maintaining shorter replenishment time for finished goods. As a result, customer satisfaction can be increased and workforce requirements can be predicted accurately because less time is spent on scheduling and expediting.

INTEGRATION WITH OTHER SYSTEMS

FactoryTalk Scheduler can integrate with your higher-level ERP and MRP (Manufacturing Resource Planning) systems, such as SAP®, Oracle®, J. D. Edwards, QAD®, and others. You can also integrate FactoryTalk Scheduler with plant-floor control systems, which lets plant-floor information flow into the FactoryTalk Scheduler database, keeping FactoryTalk Scheduler knowledgeable about plant-floor status and events. FactoryTalk Scheduler has embedded Microsoft VBA and a published object model to enhance integration with other applications.

FACTORYTALK SERVICES PLATFORM

The FactoryTalk® Services Platform is the foundation of the FactoryTalk Integrated Production and Performance Suite. It is a flexible solution consisting of activation procedures, a common address book, centralized authentication and access control, and uniform diagnostics that can help reduce costs and extend the life cycle of your existing investments.

GET ANSWERS FAST

When you purchase FactoryTalk Scheduler, you receive both industry-leading software and award-winning global support. Use the MySupport feature to personalize our Support Services Web site for your needs. MySupport can send you regular email messages with links to the latest technical notes and software updates for FactoryTalk Scheduler and other products. To register, visit http://support.rockwellautomation.com.

GET MORE INFORMATION

For ordering information, contact your local Rockwell Automation sales office or Allen-Bradley distributor. Or learn more by visiting http://www.rockwellsoftware.com.

FACTORYTALK SCHEDULER APPLICATIONS

FRESH FOODS EXAMPLE

The company manufactures fresh food products with a shelf life of seven days. A typical plant has up to 10 production lines. The production schedule must be synchronized with the delivery truck departures. Prior to implementation, a typical planner spent several hours each day using a spreadsheet to manually generate a schedule. The expertise of the individual planners at different plants resulted in a large variation in the quality of the schedules.

The resulting implementation allowed for a 50% reduction in on-hand inventory, while cutting order turnaround by over 75%. The time required to generate a schedule was reduced from hours to seconds.

PHARMACEUTICALS EXAMPLE

The company manufactures over-the-counter drugs, including high-volume and specialty items. The manufacturing operation contains over 150 resources and produces approximately 170 different items. Each item requires six or seven operations. This company performs between 5,000 and 10,000 operations per week.

The resulting implementation increased the on-time delivery rate from 20% to 90% while minimizing the clean-ups and changeovers. It also provided an accurate prediction of late orders, allowing the manufacturer to respond in a more effective manner.

COMPLEX ASSEMBLY EXAMPLE

The company manufactures large products that require a complex assembly prior to shipping. The manufacturing operation includes seven manual assembly lines and seven support shops that supply parts to the assembly lines. Prior to implementation, spreadsheets were used for production scheduling.

The resulting implementation resulted in 100% on-time deliveries while significantly reducing the work-in-progress (WIP). The overtime and material variance was also cut by more than 50%.

FactoryTalk Services Platform

The FactoryTalk® Services Platform delivers value. It is a shared set of common features that enables superior interoperability and commonality between applications for reduced engineering, operations and training costs, while extending the life of existing investments. The FactoryTalk Services Platform provides a solid foundation for today and a path for the future.

	Activation	Directory	Security	Diagnostics	Audit	Live Data	Alarms & Events
FactoryTalk Scheduler	✓	✓	✓				

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846