## **Product Brief:**

# WorldCLASS::Scheduler



## "At Last - World-Class Decision Support"

In today's manufacturing environment, the production planner is at the forefront of efforts to deliver products on time, at least cost, using existing resources.

To achieve maximum throughput, the planner must correctly sequence the order flow through the system. The main problem is in creating a schedule flexible enough to cope with the dynamic nature of modern business.

Paper and pencil scheduling is too slow and cumbersome to cope with modern production pressures. Spreadsheets or project planners tend simply to 'computerise' paper methods. And most purposedesigned scheduling software - although suitable for relatively stable product mixes - requires fundamental re-programming or adapt to new work loads or re-organised work flow.

Recognising these problems the WorldCLASS SCHEDULER has been designed to cater for rapidly changing circumstances on the shopfloor, the WorldCLASS SCHEDULER is one of the first software systems to reconcile work orders with actual resource availability and shopfloor status.

Bringing world class decision-support capability to customer-driven manufacturers, the WorldCLASS SCHEDULER is one of the most accurate and effective finite capacity scheduling systems currently available.

## The Schedule Viewer "Clear, Accurate Schedule Displays"

The Schedule Viewer provides a Gantt chart display of the current or proposed schedule. The Viewer differentiates between set-up tasks, clean downs, production tasks and planned maintenance and displays them in different colours. The user can select the timescale and time horizon.

This overview level can be extended to display more detailed information simply by clicking the mouse on a task.

## Editing

The Scheduler Viewer editing facility allows the user to make manual adjustments to the schedule to take account of 'black-art' rules. Using the mouse, a task can be 'dragged and dropped' on the screen and the work-to lists will be updated automatically. However, the user is warned if any scheduling rules are infringed, such as operations in reverse sequence.

#### Chaining

Chaining highlights the route of a component, batch or order as it passes from one work group to another right through the factory.

#### **Closed Loop Scheduling**

By manual input of production data, or by integrating with WorldCLASS SFDC, actual progress on the shop floor can be displayed as a comparison line beneath the schedule line for each work group.



## The Schedule Assessor - "Transforming Manufacturing Data Into Powerful Information"

It is vital for manufacturing managers to be able to measure the performance - and potential performance - of schedules produced by the WorldCLASS::Scheduler. This function is provided by the Schedule Assessor, a powerful decision support tool ideal for off-line experimental scheduling and post production analysis.

The Schedule Assessor interrogates the database to draw upon planned, scheduled and actual manufacturing data. These figures are displayed as a series of high quality graphic images and tables arranged as individual graph books.

#### **Planned Performance**

Used to illustrate the likely demand on machine time, specialist skills, critical tools and raw materials prior to re-planning the workload. The true planned cost of manufacture can now be consolidated for business analysis.

#### **Scheduled Performance**

Showing where time and resources are to be allocated taking into account all relevant production constraints. The Assessor will predict to the minute the completion date of each planned operation, giving total due date analysis.

#### **Actual Performance**

Using actual data to describe the effectiveness of the schedule and the effect of unplanned events on throughput, resources and costings.

Used from any compatible networked computer attached to the system, the Schedule Assessor provides crucial decision support.

With the WorldCLASS::Scheduler, management's decision support is improved, customer service is enhanced and 'guesstimating' is all but eliminated.



## THE WorldCLASS::SCHEDULER - How It Works

#### What and When To Make

The WorldCLASS SCHEDULER's inputs are production orders, their priority and despatch/delivery dates. New orders are added to those already known to the Scheduler.

#### How To Make

The WorldCLASS SCHEDULER holds a database with information on each product, its method of manufacture and the resources needed to make it. Method information is related to product families, thereby rationalising set-up/strip/clean down activities.

#### **Production Constraints**

The limitations of the production facility are described by a series of constraints held by the WorldCLASS SCHEDULER. Parameters such as throughput speed, manning levels, shift patterns and yield/scrap rates can be set or modified for each batch/method/operation, providing exceptional flexibility. Manual adjustments to the standard plan can be incorporated using an on-screen edit facility.

## **Scheduling Algorithms**

Built-in algorithms enable the WorldCLASS SCHEDULER to create a sequence which takes the facility's production constraints into account. These include:

Shortest operation Customer priority Closest to due date Due date dependent (backwards) Finite viability (forwards) Product sequence scheduling (white to black) when product contamination is a constraint.

## What-If?

The Scheduler can be used in 'what-if' mode to predict the consequences of critical factors such as rush orders, seasonal peak workload, extras shifts, additional machines or planned maintenance.

#### Results

A finite capacity schedule is produced that provides a production plan as a series of achievable tasks. The plan is displayed as a Gantt chart on the Schedule Viewer for easy assimilation. A conventional printout of job instructions can be generated.

The Schedule Assessor is used to analyse live and historical production data.

#### Integration

The WorldCLASS SCHEDULER can be used on its own or integrated with existing ERP (or MRP), stock control and financial systems. Input of actuals from the WorldCLASS SFDC system can be displayed on the Schedule Viewer Gantt chart for direct comparison of predicted and actual production.

By integrating the WorldCLASS SCHEDULER with other modules from the WorldCLASS suite, its value as a management tool is further multiplied.

Please contact the WorldCLASS sales office for further information, on: +44 941 111392.