



Protex Scheduler

Production Planning and Control



SISTEMI FORMATIVI INTEGRATI PER AZIENDE TESSILI

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Protex Scheduler

Module For the synchronized Management of The textile production chain:

- * Spinning
- * Dyeing
- * Warping
- * Weaving
- * Finishing
- * Sizing & Packaging

**Master
Production
Scheduler**

**Managerial
Easy to integrate
with ERP
company systems
and ERP
data collection systems**

**Department
schedulers – DPS
Department Production
Scheduler**

Data collection system

Production Planning and Control

Scheduler is a software package that allows you to manage your company's production planning in the best possible way, taking into account all the key factors determining production capacity: shifts, machine productivity, production cycles, JIT components and materials and any other raw materials needed to create a production plan.

The processing of information is governed by an advanced heuristic algorithm that manages the data entered into the system in an analytical way. The end result is an optimized production plan based on the most appropriate logic for each production department whose specifications and parameters can be individually set.

It immediately displays a Gantt diagram showing the status of orders in progress, their impact on the production plan, providing the operator with a wealth of information, enabling the proposed solution to be analyzed. It is easy to see the machine load, orders overrunning their delivery dates, the way the machines have been set up, hours of inactivity and production stoppages in relation to the work schedule.

After having calibrated the setup, Scheduler can be launched: the reporting interface, the machinery load and the analysis tools will supply all the information needed in order for the operator to confirm the proposed solution.

Scheduler offers the following benefits: improvement and control of the production processes, management of work schedules in the most reliable and effective way, rapid and prompt reaction even in the presence of problems, decrease in the time it takes to set up the plant, meet date of delivery, optimizes the loading of machines, coordinates decision-making between the programming, commercial and logistics departments.

Managing a bottle-necks department is no longer a problem. The software manages the bottle-neck programming of production which guarantees the optimization for this most critical department.

Precise and sophisticated tools allow for the integration between the MPS and DPS while at the same time meeting production obligations and complete independence in logistics of the respective scheduling.

The software allows you to define operating strategies with the configuration module, acting directly on individual production levers, and thus, by simulating different scenarios, it can verify the impact on planning.

Scheduler is an indispensable support tool for any company wishing to make its production planning accurate and precise.

Some of our products

Implemented based on the mathematical model of JOB SHOP SCHEDULING

- Minimized parametric cost function
- Finite number of Task and Resources
- Limits in procedure and set-up timing

Minimized multilevel objective functions

- Costs of the Productive Departments: plant set up, color tone, labor, saturation of resources, etc.
- Costs due to failure to meet demand: delay in delivery, client priority, processing appointments.
- Costs for procurement: inventory, orders from suppliers, bath management, etc.

Resolute Heuristic Algorithm based on the Simulated Annealing technique

- Very effective in finding the optimal solutions
- Practicable architecture simple and easy to parameterize
- Analysis of the quality of the exchanges and number of iterations

Technical Specifications

Development Environment: Microsoft Visual Studio
Database: ORACLE, DB2, SQLServer, Access, DBMS generic with ODBC
Operating System: Windows XP, 2000, 2003 Server

Minimum Hardware

MPS: PC Pentium IV 1.4 GHz 512 MB
Department: PC Pentium III 800 MHz 256 MB



Designed for the textile sector

Scheduling with a finite and infinite capacity of components

Guided Simulation for the acquisition of commercial orders

Planning elaboration in a surprisingly short amount of time

Automatic creation of the work dispositions

Scheduling for plants saturation and delivery dates

Lead time and bottleneck scheduling techniques

Management of typical difficulties of every textile productive department

Analysis tools for the study of the Gantt diagram

Management of commercial priorities and urgent orders

