

INNOVATION

SOFTWARE FOR PACKAGING

THE IMPORTANCE OF **MANAGEMENT SOFTWARE!**

- SAVE TIME ←
- REDUCE COSTS ←
- BE MORE EFFICIENT ←
- PRODUCE BETTER ←
- STAY AHEAD OF COMPETITORS ←

SOFTWARE NEWS

Customers who invest in
their future!

PACKAGING PRINTING
IMPROVEMENTS AND DEVELOPMENTS!



WHO IS SISTRADE?

SISTRADE – SOFTWARE CONSULTING, S.A. IS A GLOBAL COMPANY SPECIALISED IN SOFTWARE DEVELOPMENT AND CONSULTING SERVICES FOR DIFFERENT ACTIVITY AREAS, PARTICULARLY FOR INDUSTRY AND SERVICES.

S

ISTRADE aims to provide information technology solutions based on the latest technologies for organizations, so that they take advantage of innovative management solutions, allowing the organizations not only good internal management, but also a growing connection with partners through e-commerce and online collaboration tools. The company with a team specialised in developing web based software, and knowledge of different business processes is based in the north of Portugal, in Oporto, and is currently a leading provider of management software for industry and services. The skills conceived and developed by SISTRADE allow implementing solutions in organizations with real added value.

Solutions

Among MIS|ERP Sistrade® solutions one can find estimating, commercial management, financial management, human resource management, fixed asset management, research, development and innovation management, stocks & purchases, production management, SCADA & shop floor control, scheduling, mobile picking, Ebusiness, JDF, balanced scorecard, equipment maintenance, quality control, mobile business, project management; that are designed for such markets as offset printing industry, newspaper printing industry, label printing industry, rigid packaging printing industry, flexible packaging printing industry, digital printing industry, form printing industry,

envelopes printing industry, woven labels, publishing industry, plastic extrusion industry, metalworking industry, textile industry, food industry and services.

Research, Development and Innovation

SISTRADE is a company certified by Portuguese Institute for Accreditation (IPAC) in NP 4457 : 2007 Portuguese standard. With the implementation of the standard, it was possible to systematize the innovation, research and business development processes.

Since its founding, SISTRADE has par-

ticipated in research projects with many entities of the national scientific system, such as INESC (The Institute for Systems and Computer Engineering) and FEUP (Faculty of Engineering, University of Porto), looking for synergies arising from the exchange of knowledge between academia and business.

Quality Certification ISO 9001: 2008

The objective to provide the customers products and services of the highest quality, to increase customer satisfac-

SOLUTIONS

MIS|ERP SISTRADE®

- Estimating
- Commercial Management
- Financial Management
- Human Resource Management
- Fixed Asset Management
- Research Development and Innovation Management
- Stock & Purchases
- Production Management
- MES - SCADA & Shop Floor Control
- Energy Management
- Scheduling
- Mobile Warehouse
- Ebusiness
- JDF
- Balanced Scorecard
- Equipment Management
- Quality Control
- Mobile Business
- Eco-Efficiency
- Web2Print
- Business Intelligence

values and aspects such as harmony, environmental concern and excellence in the developed processes are also a future challenge to our company.

Mission

SISTRADE seeks to establish partnership relations with the customers, in order to obtain concrete results, innovate and add value through joint decisions in ever more competitive electronic market. The company emphasizes a business growth by using innovative technologies, totally satisfying our customers and fulfilling and valuing our staff. These aspects will become added value for our customers, for our human resources and for our shareholders.

Technology Partners

Since its founding, SISTRADE sought to establish partnership with various entities whenever the company believes that there is a potential synergy, therefore SISTRADE keeps its doors open to strategic partners that can bring a breath of fresh air to technological development. ↩

MARKETS

WHERE YOU CAN FIND SISTRADE

PRINTING INDUSTRY

- Offset Printing
- Newspaper Printing
- Label Printing
- Rigid Packaging Printing
- Flexible Packaging Printing
- Security Printing
- Digital Printing
- Form Printing
- Envelopes Printing
- Publishing

OTHER INDUSTRIES

- Metalworking Industry
- Textile Industry
- Woven Labels
- Plastic Extrusion Industry
- Food Industry
- Services

tion and to work on a path of continuous improvement has led the company to implement ISO 9001: 2008 standard.

Values that drive SISTRADE

At SISTRADE, as an information technology company, the contact with the most recent and up-to-date technologies is constant, and there is no difference, at a technological level, between managers and the remaining staff. Thanks to the operational proximity between human resources, the transmission of company values is multi-directional. Values, such as innovation, help and team spirit, clearly influence the company's organization and functioning. The company's growth is due to implicitly developed important values, such as: innovation capacity; team spirit; continuous improvement; creativity; quality; transparency; responsibility; flexibility; professional ethics; humbleness and availability. It is also intended to promote in the company the values of social nature, where solidarity plays an important role. Cultural

CASE STUDIES

PACKAGING PRINTING INDUSTRY COMPANIES

THAT USE ERP SISTRADE®

THERE ARE SEVERAL GOOD EXAMPLES OF THE COMPANIES WHICH HAVE CHOSEN TO WORK WITH SISTRADE INTEGRATED BUSINESS MANAGEMENT SYSTEM, MAINLY BECAUSE THE AREA OF ESTIMATING AND PACKAGING PRODUCTION CONTROL MAKES ALL THE DIFFERENCE IN COMPARISON WITH THE COMPETITORS.

C

Cartonajes Del Saz

SPAIN

Cartonajes del Saz, a Spanish company based in Valencia, specializing in the design, development and manufacture of cardboard packaging purchased from SISTRADE a verticalized management system for printing and packaging - Sistrade®. It is 100% WEB MIS|ERP based on the latest information technologies, such as access via Internet Browser and the use of Microsoft SQL Server, used in all the areas of the company, from estimating of a job, invoicing, purchases from suppliers, stocks management, job order management to the manufacturing data collection via production terminals and automatic data acquisition (via PLC), planning of job orders - scheduling, quality control and other. www.delsaz.com

Sentez Ambalaj

TURKEY

Sentez Ambalaj orders Sistrade® MIS|ERP. Sistrade software will allow Sentez Ambalaj to have integrated management of all the departments, from estimating complex products (packaging, flexible packaging), to invoicing, purchases, stocks management, job orders management, production data collection and accounting. Sentez Ambalaj orders to SISTRADE software and consulting services to do

→ According to the management of Poligráfica, "Sistrade® was the only solution that was able to incorporate all types of jobs of the company, starting with the offset up to the continuous forms, without any need for development, that is through the parameterization of processes and types of work."

liate, was founded in 1992 in order to meet the packaging demands of the firms in the Holding body, which operate in the fields of pharmaceuticals and kitchen appliances. With investments in 2002, it expanded its machinery park and began serving other companies in different areas of business. Following the completion of the first phase, SENTEZ launched a second phase of investment in 2004 and began operating in its state-of-the-art facilities, covering 26,000 m2 of indoor space in Samandira. SENTEZ is aiming to become one of the leading packaging companies of Europe in terms of machinery, plant, product and service quality. Now Sentez Ambalaj decides to invest in Sistrade® software for business process automation.

eng.sentezambalaj.com.tr

Groupack

PORTUGAL

Groupack - Indústria de Embalagens Lda. produces printed and non-printed cardbo-

packaging, etc. The company has always been investing in an effective customer management, focusing on a good communication relationship as a form of loyalty. The company defined a national expansion strategy through investment in the new technologies and therefore Ideal Artes Gráficas acquired from SISTRADE management software verticalized for printing and packaging industry - Sistrade®. The solution is used in all the areas of the company, from estimating to production control and supervision, including stocks management, scheduling and shipment. Sistrade® is an ERP, specialized for this industry sector that is based on the most recent information technologies, such as access via the Internet Browser and the use of Microsoft SQL Server, with the features from estimating to the control and industrial supervision including e-commerce and supply management.

www.idealartesgraficas.com.pt

Poligráfica

ECUADOR

Poligráfica, a well known company in Ecuador, acquired integrated business management system Sistrade® MIS|ERP for the management of the company.

This company focuses on printing and a large percentage of its business is dedicated to packaging printing. Poligráfica started its activity in 1979, and since the year of its foundation until today, the growth has been considerable, and today it is the company of reference in Ecuador and one of the most important in South America. After international market research, Poligráfica has chosen Sistrade® realizing that this solution can meet the need of the innovative business project. After a long period of negotiations, conducted by SISTRADE Business Development team, together with its delegation in Madrid, it was possible to meet all the needs that the company wanted to be solved. According to the management of Poligráfica, "Sistrade® was the only solution that was able to incorporate all types of jobs of the company, starting with the offset up to the continuous forms, without any need for development, that is, through the parameterization of processes and types of work." www.poligrafica.com



the business process automation of the companies. Sistrade® software will provide to the companies the possibility to integrate all the information from different departments in only one system, and giving to each user all the information they need in each moment. This investment will also give the opportunity to the companies to improve customer relation and increase the time to market. Sentez Ambalaj decides by Sistrade software for many reasons. One of them is the amount of features available related with estimates and manufacturing. Another reason to decide by Sistrade® software was the innovative technology used, mainly the fact that Sistrade software is 100% web based and is available in many languages, including the Turkish. About Sentez Ambalaj San Ve Tic A.Ş – SENTEZ - a Selcuklu Holding affi-

ard, micro-corrugated cardboard, corrugated cardboard, etc. packaging, producing for a great number of national and international companies, as is the case with Spanish and French companies. With the implementation of Sistrade®, Groupack is able to achieve flexibility in the packaging manufacturing process through the implementation of the modules for commercial management, production management, operation planning and development of a website. www.groupack.com

Ideal Artes Gráficas

PORTUGAL

Ideal Artes Gráficas is located in Guimarães and is a provider of graphic communication services and products, such as booklets, magazines, labels, books,

SISTRADÉ®

MIS|ERP 100% WEB BASED



STOCKS AND PURCHASES MANAGEMENT



PURCHASES

- Management of suppliers
- Price lists by material rules and by supplier
- Internal requests and purchase needs
- Workflow of requests approval
- Preparation of purchase order to supplier and its delivery and distribution plan
- Registration of supplier invoice for accounting
- Outsourcing management

STOCKS MANAGEMENT

- Reception of purchases from the supplier
- Management of the various movements of materials
- Attribution of materials to job order
- Multi-warehouse
- Real-time perpetual inventory
- Complete traceability by material

ADMINISTRATIVE AND FINANCIAL AREA



GENERAL LEDGER

- General and analytical accounting
- International Accounting Standards
- Legal reports
- Automatic launch

HUMAN RESOURCES

- Register of employees
- Payroll
- Performance appraisal

TREASURY

- Management of banks and control of bills of exchange
- Customer/supplier current accounts
- Management of payments and receipts

FIXED ASSETS

- Individual record of assets
- Revaluations, disposals, allocations
- Legal reports

COMMERCIAL MANAGEMENT AND ESTIMATING

ESTIMATING

- Request for quotation
- Details of job
- Detailed calculation of job
- Application of margins
- Simulation of other quantities
- Approval workflow
- Send to customer by e-mail

CUSTOMER ORDERS

- General customer data
- Confirmation of estimate
- Definition of delivery plan in different physical and temporal spaces
- Approval workflow
- Automatic generation of job order
- Order confirmation to the customer

SHIPMENT

- Elaboration of shipment plan
- Automatic issuing of delivery notes based on shipment plan
- Creation of Packing List
- Issuing of identification labels
- Automatic generation of stock movements

INVOICING

- Preparation of invoices, credit notes, debit notes, proforma invoices
- List of delivery notes pending for invoicing
- Certified software
- Electronic invoicing
- Batch invoicing

CRM

- Forward sales plan
- Scheduling activities of sales team
- Communication, requests, sales opportunities log
- After-sales service
- Dashboard with performance information

PRODUCTION

JOB ORDERS MANAGEMENT

- Organizing production methods
- Planning and controlling various manufacturing stages
- Monitoring of orders in production, scheduling deliveries and launching materials in stock
- Settling production costs
- Analysis of efficiencies by line, section, machine and employee
- Reduction of production costs
- Information maintenance

SCHEDULING & MRP

- Gantt scheduling of job orders
- Sequencing of operations by drag & drop or in tabular format
- Assisted employee scheduling
- Matrix-based scheduling of operations by employee
- Real-time indexing of the beginning and end of production
- Load analysis and resource/machine availability
- MRP – Material Requirement Planning
- Multi-user scheduling

SCADA

- Local or remote supervision and multi-factory
- Real-time information about the functional status of the machine
- Identification of employees who are working on the machine
- Produced and rejected quantities
- Events and occurrences per machine and per job order
- Display of speed per machine in real-time
- Register of automatic downtimes and their reasons



DATA COLLECTION AND COSTING

- Data collection via touch screens
- Data collection via PLC
- Process quality control
- Traceability
- OEE – Overall Equipment Effectiveness
- Analysis of income, productivity

EQUIPMENT MAINTENANCE

- Preventive and corrective maintenance
- Management of maintenance costs
- Maintenance plans
- Management of spares

QUALITY CONTROL

- Inspection and testing
- Technical datasheets of control
- Costs and management of non-conformities

MOBILE PICKING

- Wireless and online device (PDA / mobile phone)
- Inventory and materials management
- Creating documents of input and output of materials

MOBILE BUSINESS

- Wireless and online device (PDA / mobile phone)
- CRM in the pocket

E-BUSINESS / WEBPORTAL

- Customer perspective
- Supplier perspective
- Online information

JDF/CIP4

- Integration with pre-press
- Integration via JMF with printing machines
- Two-way communication

BSC – BALANCED SCORECARD

- Integrated management of the company
- Management from the customer, financial, processes, innovation and growth perspectives

ENERGY MANAGEMENT

- Monitoring of energy consumption
- Load shedding
- Real cost control

→ PACKAGING

Software for the printing industry of rigid packaging

→ **Sistrade®** solution was designed from scratch for the cardboard or corrugated cardboard packaging printing area, such as containers for food or pharmaceutical industry. This solution can be applied in the rigid packaging printing industries.

→ Sistrade® is a completely configurable solution and being so flexible it can be adapted to the reality of each company. Including various specific features, this software provides access to the control of the entire production process, and covers all the manufacture stages of all the running jobs. Among these stages, stand out for example modelling/prototyping and prepress, press, cross-gluing, die-cutter application, folding/gluing and assembling of work, including delivery preparation. Taking into account all the peculiarities of each stage, this is very effective software, in addition to all this, it is also possible to estimate and manage the production of various models of boxes according to ECMA (European Carton Makers Association) and FEFCO (European Federation of Corrugated Board Manufacturers) standards.

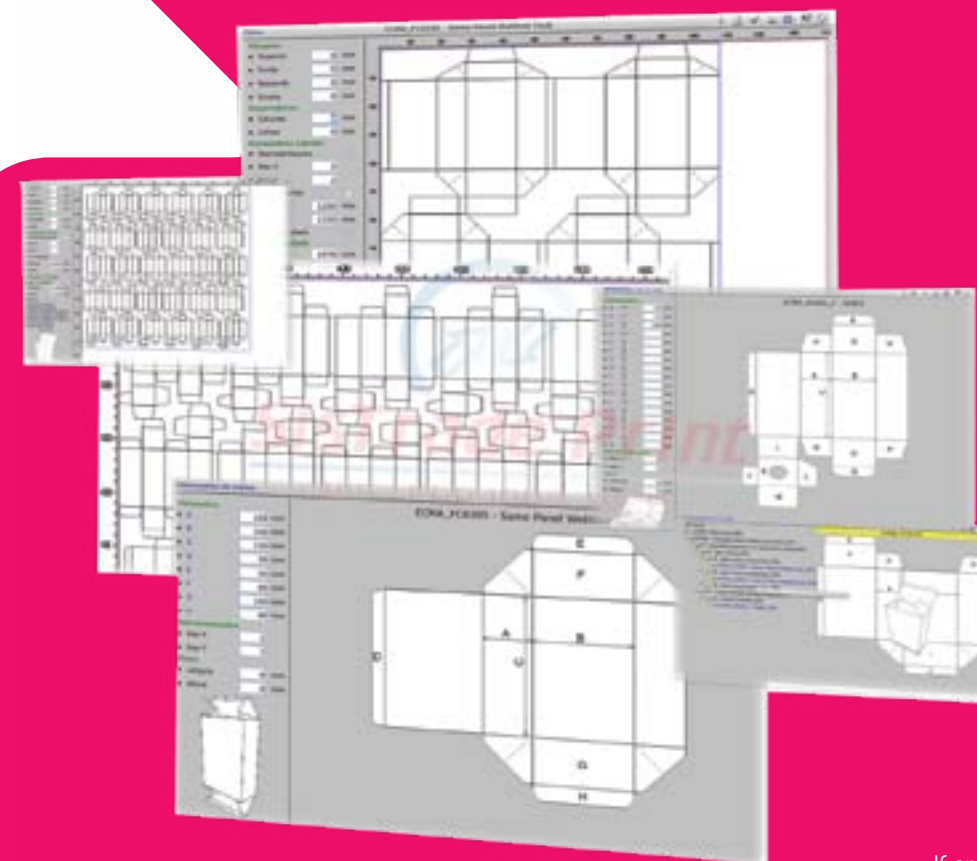


General data of an estimate

→ At this stage, the user can make an estimate having access to a header which contains all the customer data, (name, address, vendor, payment conditions, shipment data, quantity, etc.). In addition, it also includes technical data of the work, such as format, paper, grammage, printing form, carrier material, grammage level, work type, printing type, etc. The user can also make internal comments regarding customer and other specifications.

Definition of printing parameters

→ This stage of estimate can offer various possibilities such as definition of the printing machine with all its technical features, changing the machine parameters that the system suggests, selection of colours and the varnish type that will be used, changing the paper type that the system suggests, choosing the second printing machine, or selection of box type structured by 4 levels: standard, class, level 1 and level 2; and the simulation of each box plan in 2D and 3D.



Boxes and Packaging

→ Using Sistrade® estimate module, the user can make all or almost all the types of boxes and packaging of cardboard, corrugated cardboard or other material. In Europe, manufacturers of packaging follow two standards - ECMA (European Carton Makers Association) - for paperboard or carton and FEFCO (European Federation of Corrugated Board Manufacturers) - for corrugated cardboard. This software follows these standards where the difference between the two is only the packaging material. Yet it is possible to work with any standard or any type of box outside the standards, if the user introduces the specific data. When selecting box, the program allows the user to select the standard, either a free layout for a work that is not configured in the system or provides a second option, which requires a previous study with the data input, with representations and dimensions to be confirmed in the layout. In the following stage it is necessary to enter the data and pass to the standard choosing different categories and levels for each of them. Then the user can see an open and a 3D image representation and here the choice can be validated. In this stage it is also necessary to enter the required dimensions; and the first three options are placed with the data entered in the header. Each dimension indicates

whether it is a measure of height or width. Here may be entered the outer margins, which are then applied in the estimate details. The dimensions of separators between each representation in the layout can also be entered. If necessary, it is possible to leave a space between each representation. When making the layout, the user has several options and may either indicate the number of horizontal and vertical representations or indicate the maximum size where one wants to make the job. It is also possible to make a so-called "layout reversal" and in this case, the system rotates the model 180°. But it is necessary to understand that any of these parameters can be changed, and the system has the feature set as "refresh layout". In this case and assuming that the user indicates the maximum layout of 1200 x 1200, the system immediately calculates that it is possible to make 4x4 representations, which adds up to a layout of 827x530. Among other features, the system also provides an image that indicates fibre direction which can be confirmed later. What is more, the system allows the user to change the fibre direction, for this, the user goes to the toolbar where it is possible to change the fibre direction and select this option. Basically, the image is a kind of guide that shows how

the paper is going to enter the machine. The user is always safe because even if the changes are made, they will be immediately recorded and taken into account, at the moment when the system calculates the paper, although this is done during printing. The system includes an area in which it is allowed to view objects in the normal layout, and at the same time, it will show how the paper is going to enter the machine. When making an estimate for the packaging printing it is very important to take into account die-cutters, so when the user enters this area, it is necessary to indicate the type of die-cutter that the job will require. All the die-cutters, which theoretically can be used for a particular job, will appear. At this stage, the user can search for any type of die-cutter one wants to use. As help, the user can view various images and can choose the required one.

If one wants, it is possible to associate the image to an estimate.

If the user chooses a die-cutter, it is immediately applied to the component. If one does not want to use a die-cutter that already exists but a new one, the system allows this possibility. In case of a new die-cutter and when the job order is given, the system generates a new die-cutter and integrates all the information about it, such as for example the number of sheets per knife life, the number of cut plans, etc.

When a new die-cutter is registered, the system updates the job order and the estimate. In the cases when the same job needs to have two die-cutters, as for example, a box with the lid, the systems ensures that there is a die-cutter for each job.

→ PACKAGING

Printing

→ Referring directly to printing, the system allows the user to preview the chosen layout and shows it with the graphic positions and even its size. In order to know the direction of the fibre, the user can immediately click on the layout, and one will be able to access the new window. If the direction of the fibre has been changed, this new message will be sent to estimates. If the direction is changed, the format does not change. The calculation of the paper changes and will also be "rescheduled". To validate this situation, the user has to select the screen "Respect the fibre direction".

MIS|ERP Sistrade® system features

→ MIS|ERP SISTRADE

Estimating

Commercial Management

Financial Management

Human Resource Management

Fixed Asset Management

RDI Management

Stocks & Purchases

Production Management

MES - SCADA & SFC

Scheduling

Mobile Warehouse

Ebusiness

JDF

Balanced Scorecard

Equipment Management

Quality Control

Energy Management

Eco-Efficiency

Web2Print

Business Intelligence



Paper fibre direction

→ The system feature refers to indication of the paper fibre direction. People working in this area recognize immediately the importance of this approach, especially when it comes to packaging that will end up as a transport of objects of a particular weight. When showing the fibre direction the system indicates that this should be taken into consideration and respected when choosing other materials included in the manufacture stage. This is why it is so important to enter the data relating the size of the paper in the format as they indicate the fibre direction. According to fibre direction that was chosen in the estimates, the system calculates all the job dimensions and other materials, always based on the fibre direction settings.

Final values

→ This is a very important section. Here the system displays the user all the costs, providing the printing machine cost, ink and varnish, plates, paper, operations and used material costs. As a major highlight, the user can "appreciate" separately the costs of each item, has access to the features saving, opening and closing of section of final values.



Data for boxes

→ This section highly facilitates the management of printing process, especially for the later processes related to the package. Here are presented all the boxes defined by the system which makes calculation, using the dimensions, the number of copies that fit into each of them as well as the number of required pallets.



Operations of the manufacturing stages

→ This area is of great help for the management. The manufacturing stages are determined with a sequential order and in this section the user can see all the operations that are organized by stage of manufacture. This way, it is possible to see each operation separately or associated to what was previously configured by the system.



Other materials

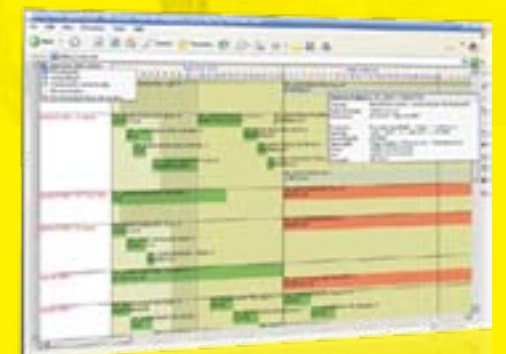
When making an estimate, it is sometimes necessary to add values referring to the consumption of other materials that are spent in the production process of the boxes, as for example, glue or other special elements. Therefore, this phase allows the user to add in the section what the system calls "other materials".

Product record

→ Perhaps the most crucial area and defining nearly everything else. Here the user has to complete a set of questions that are previously defined by the system and aim to determine a particular cost. This stage does not imply difficulties as the system indicates the user all the mandatory fields that should be filled, showing the symbol. This section includes a set of questions that aim to describe, in as much details as possible, what makes up the job. Among these questions the user should enclose the following:

QUANTITY The number of times that the copy is produced. The estimate immediately presents the quantities indicated in the header of the job, there are situations where the same quantity can vary, and in these cases, the user can enter the corresponding value.

FORMAT This field is mandatory and the information comes from the dimension that was entered in the document header (in mm).



JOB THICKNESS AND ITS WEIGHT This field is filled automatically by the system and cannot be edited. The system, through various papers selected in the components, determines the thickness of each copy.

NUMBER OF ELEMENTS/SHEETS This is another field that is filled automatically by the system and cannot be edited. The system through the various components already detailed shows information about the number of elements and the number of sheets.

→ SCHEDULING AND INDUSTRIAL MANAGEMENT

JUST AS ITS NAME INDICATES, THIS MODULE AIMS TO SCHEDULE THE PRODUCTION OF ALL THE MACHINES IN A SIMPLE WAY, TAKING INTO ACCOUNT ASPECTS, SUCH AS THE DURATION OF EACH OPERATION AND SCHEDULING CRITERIA. THIS MODULE WILL WORK ONLY IF THERE ARE ORDERS CONFIRMED AND READY FOR PRODUCTION.

PLAN PRODUCTION

MONITOR ALL THE PRODUCTION OF THE PLANT

A

t any time, the user can view scheduling and monitor in real time, the entire production of the plant. In this option called "Schedule" the user can set new production plans, new criteria, add job orders, etc. Usually it is the production manager, who has permission to access this option but the menu option "Schedule – View" also allows the operators to view the production plan set by the manager.

The user has access to a scheduling screen with the resources which are the machines, time, days and hours. There are two background colours of the diagram, brown represents the time that the machines are not producing, the production line is stopped, and beige indicates the time available for production. This is in fact a very simple way for the user to get a clear view of the situation.

The job orders can be observed in order to see the estimated duration of each. The status of each job order is labelled and can be updated in real-time if there is real-time data acquisition of the machines.

But imagine that the user wants to return to the main menu. It is possible to do this? Of course, on the main screen it provides a toolbar which allows the user not only to return to the main menu but also to remake the manufacturing calendar, see job orders to be planned, plan shipment, remove job orders from planning, from the report, remake of refresh, etc.

In the second stage of scheduling a different aspect is

presented, here appear all the job orders that were previously selected and it is possible in the operation of each job order to (de)select production and change the machine that was set in the estimate.

One very curious thing is that at this stage, the user can divide each operation into various machines, where this assignment is presented in percent and lets the user to choose the machine for each part of the operations.

Equally important is the fourth stage of the scheduling where the user has an access to a sequential list of all the operations to be performed, that can be changed. After completion of this stage, the application displays the final result, although it is possible to withdraw job orders or even some production orders that are separated into stages from scheduling.

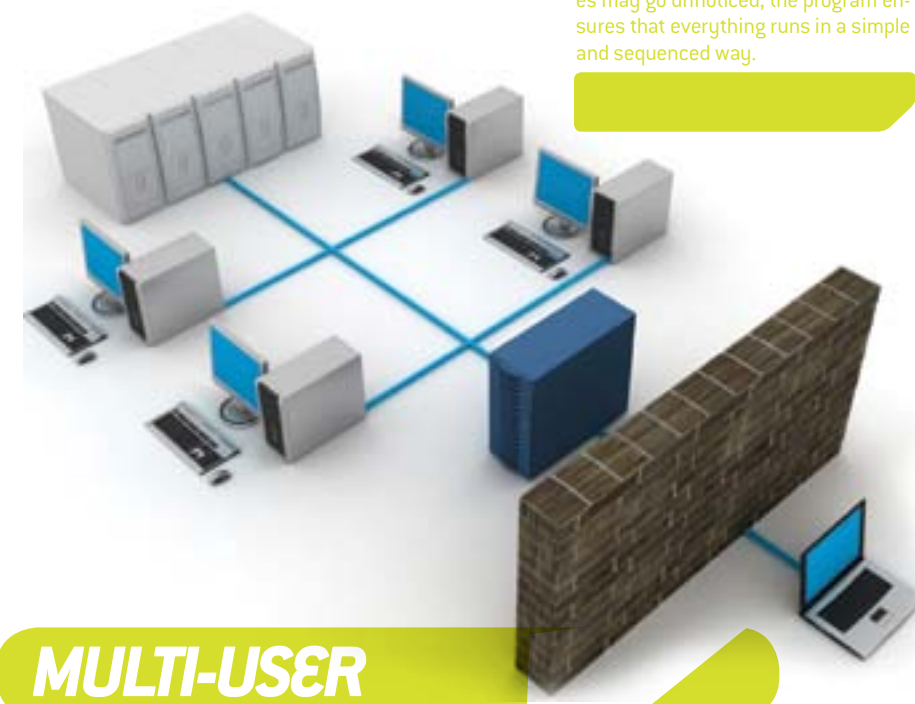
For those who think that some stages may go unnoticed, the program ensures that everything runs in a simple and sequenced way. For example, in the settings of scheduling, the user can define the visual aspects using a window that appe-

ars with some parameters.

An important element of all this is a scheduling report which the user can view and print, taking into account given time range. The user must follow logical steps; fill in the fields, in order to get a report containing data of a particular time range also selecting the mode of viewing. Here the user can select different options from a toolbar that allow accessing the report in PDF, Excel or in Report Server.



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MULTI-USER

IN PRODUCTION SCHEDULING

WHEN CONSIDERING A MULTI-USER PLANNING, it is necessary to note that the production scheduling can be done by more than one person, and that is why the system controls the time when each person is recalculating the planning, preventing other users from making any changes in the scheduling.

It detects when the changes are being made and displays a message to the users. In addition, the control of multi-user was extended to functionalities such as "job orders to be planned" and "remove job orders from planning". Therefore, whenever a user accesses these functionalities, the system validates that

changes are being made by another user, indicating this fact to the current user and redirecting him to Gantt, not allowing the latter to make any changes.

Toolbar of Scheduling Report Screen:

As everything in this programme is thought of, the systems only allows for one operation to be placed in the resources where it will be carried out, thus avoiding possible errors, such as placing postpress work into prepress resources. Of course, if necessary, there is a resource validation where the operation that is, made having on mind alternative resources, can be placed.

It is obvious that all these changes take effect only after the user clicks on the button "refresh planning". Another possibility is "block job order in date and time", on the shortcut menu and where it forms an option "set/release".

There many specific parts in this programme but after using it for a while, it becomes clear that the main rule is logic. For example, to unlock it is enough to make the same process while leaving the date/time field empty.

To define the date of the beginning of the operation, it is possible to set a single operation in time. In order for the user to find a particular job order in the middle of so many others, there is a feature permitting to highlight a particular job, through the option "highlight job order" in the shortcut menu. In addition, the programme allows the user to include comments by operation, and the

→ SCHEDULING AND INDUSTRIAL MANAGEMENT

user can describe what interests him most. An important note here is that the recalculation of the scheduling is not automatic, so the user must select the recalculation of scheduling.

To make changes, there is an option that allows the user to change the percentage of completion of the previous operation, which results in an adjustment of the start of the next operation. People working in printing industry know well the importance of being able to consult a worksheet from scheduling and here, it can be accessed through the shortcut menu. The reports that can be consulted are configured for job order.

It is also possible to define the sequence and percentage of scheduling by component through a menu option.

The scheduling uses of this configuration to make the sequences of operations, and to set the percentage of completion of an operation in order to start the next one. In the production scheduling it is possible to adjust the percentage of the completion of the operation through the option "percentage of previous operation".

The user can change and configure the system for this purpose but in some areas or resources that this is not possible, there appears the symbol forbidden.



It is possible to indicate if in the process of inclusion, the JOs are marked with the identifier in order to be able to identify which job orders were included into the scheduling in the option "scheduling settings". There is also an option "remove marker" which permits to deselect the operation or all the operations of job orders in the resource.

Prevision of Material Reception for the JO

In production scheduling and for printing resources, the system analyses the

prevision of material receptions, with a minimum date, for the job order and highlights in magenta operations that are prior to the expected date of material reception.

Scheduling by Job Orders

This menu option allows the user to view and print scheduling by job order for a particular time range. The logical steps to be followed in order to generate the scheduling of job order involve filling in the fields indicating the date of the beginning of the scheduling of job order.

Another equally logical step should be establishing search criteria, selecting the mode of report preview, either in PDF, Excel or Report Server. After selecting the mode, the report will be shown. ←



PACKAGING AND AUGMENTED REALITY

Augmented reality can be described using

several definitions. One of which, available in the online encyclopaedia is the integration of virtual information to the visualization of the real world.

Basically, it means combining real information available to the unaided eye with other data that together provide the user an augmented reality. In the case of packaging, it implies providing the consumer or companies involved in the value chain of packaging production, more information than is currently available, with all the arising gains of communication.

An example of the use of augmented reality in the relations between printing companies producing packaging and their customers, is sending the technical and commercial estimate to the production of a given package, in which, beyond the usual technical information and typical commercial information, the customer of the printing company receives the content that allows, using an ordinary mobile phone, to see, e.g. the requested packaging in three-dimensional shape, its final version available to the consumer. All this is done when preparing the technical estimate, ERP/MIS estimate management system, besides creating the technical and financial estimates, of a given box, e.g. according to FEFCO (European Federation of Corrugated Board Manufacturers) or ECMA (European Carton Makers Association) standard, will include a set of markers in the estimate. The customer of the printing industry, who receives the estimate, using Sistrade AR application, can view the information of the estimated



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box in 3D, and thus have a better experience and perspective of the final product. There are many applications of augmented reality and there already exist multiple experiences using this technology, either related to the marketing and

promotion of goods and services, or in the industrial production, where operators can benefit from additional information, for example, when handling equipment, or performing maintenance of machines. In sports or online games this news is ever more frequent. Augmented reality is certainly an area with a great potential, which will influence our lives in the near future. ←

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SCADA & SHOP FLOOR CONTROL

SISTRADE RESERVES ONE OF ITS BUSINESS AREAS

to technology solutions implementation of data acquisition, industrial supervision, planning and production control, which is called Sistrade® SCADA & Shop Floor Control, which could also be construed as an MES [Manufacturing Execution System]. SCADA allows monitoring and supervising the data ac-

quisition devices of various participants in the manufacturing process and may act in the field through remote inputs/outputs controllers or PLCs – programmable logic controllers. Information systems that are Shop Floor Control oriented, is software that allows one to plan job orders on time, monitor in real-time production process according to the

preset operation routing, control the movement of materials and hence make a production control more efficient. Here, SCADA turns out to be a complement to the management and production control systems.

WHERE SISTRADe ARE:

→ SISTRADe PORTO

Rua Manuel Pinto de Azevedo, 64B
4100-320 Porto, Portugal
T.: +351 226 153 600 F.: +351 226 153 699
 Call to Sistrade
porto@sistrade.com

→ SISTRADe LISBON

Av António Augusto de Aguiar nº148, 4ºC
1050-021 Lisbon, Portugal
T.: +351 213 805 082
lisboa@sistrade.com

→ SISTRADe MADRID

Ribera del Loira, 46 - Bloque 2, Planta 0
28042 Madrid, Spain
T.: +34 91 503 0083
madrid@sistrade.com

→ SISTRADe FRANKFURT

Platz der Einheit 1
60327 Frankfurt am Main, Germany
T.: +49 (0)69 97503 419
frankfurt@sistrade.com

→ SISTRADe WARSAW

Al. Niepodleglosci 69, 1st floor
02-626, Warsaw, Poland
T.: +48 606 744 996
warsaw@sistrade.com

→ SISTRADe LJUBLJANA

Rozna dolina, Cesta II/29
1000 Ljubljana, Slovenia
T.: +386 40 646 753
ljubljana@sistrade.com

→ SISTRADe ABU DHABI

Al Hilal Bank Building - Falah Street,
PO Box 129 354, Abu Dhabi, UAE
T. + 971 (0) 249 30297
abudhabi@sistrade.com

→ SISTRADe MEXICO CITY

Av. Insurgentes Sur #1898, piso 12
Colonia Florida C.P. 01020
Distrito Federal, Mexico
T. + 52 (55) 9171 1156
mexicocity@sistrade.com

→ SISTRADe ISTANBUL

Buyukdere Caddesi, Levent No:193 Binasi
K:2, 34394, Istanbul, Turkey
T.: +90 212 371 47 29
istanbul@sistrade.com

→ SISTRADe PARIS

57, rue d'Amsterdam,
Paris, 75008, France
T. + 33 (0) 1 81 50 45 06
paris@sistrade.com

→ SISTRADe MILAN

Viale Abruzzi, 13/A
20131 Milan (Italy)
T.: +39 02954205376
milan@sistrade.com