

Is real-time production control right for you?

By Lionel Vary Introducing technology onto the shop floor can generate increased profits and provide a competitive advantage in the global market

As technology advances deeper into the apparel sector, manufacturers are slowly investing in real-time production control systems. The pioneers have been using this mode of production control for decades and intensifying competition and available technology have resulted in a growing number of real-time system installations in Canada.

What is real-time?

A real-time system collects and responds to shop floor information during production. The information is collected using factory terminals that are located near each operator on the factory floor. The transformation of this data into meaningful reports enables the manufacturer to gain significant benefits.

What kind of information is collected?

There are two kinds of information collected: employee attendance, and bundle tracking. Employees hold an 'employee' card that is used to sign in or out of their workstations. This makes possible the calculation of the precise attendance of each worker. The use of so-called 'bundle cards' enables bundle tracking. Every bundle has a single card traveling with it. Before each operation, the employee swipes the card through his factory terminal. The system not only automatically finds out what operation is being done but also who is performing it.

How can it help me?

- **By improving profitability:** The system gives managers more control over production, which in turn leads to increased productivity and reduced costs.
- **By increasing productivity:** Real-time data collection systems increase the motivation and productivity of employees by constantly measuring their output, calculating individual standards, and allowing management to see a minute-by-minute complete picture of their productivity and

remuneration. These systems eliminate lost employee time at time clocks by recording each operator's time and attendance in real-time at their workstation, therefore giving the operator more time to perform his/her work.

- **By reducing costs:** Real-time data collection systems reduce labor costs by providing on-line accurate snapshot of Work-In-Progress. Management can anticipate and remedy backlogs as well as make real-time staffing decisions. Traditional piecework coupons are replaced, thus reducing bundle-handling cost by eliminating the cutting, sticking, gluing, initializing, and tallying associated with batch system coupons. They also track repairs and record seconds. In addition, a real-time system provides details of off-standard time spent for machine repairs. Finally, office employees save time since these solutions automatically compute motivational bonuses paid to employees for exceeding pre-assigned efficiency ratings.
- **By automating gross payroll calculation and finished goods inventory updates:** The collected attendance information enables the automation of the gross payroll computations. These results are electronically handed to payroll systems for net payroll calculations. Naturally, since these solutions control the flow of production, they automatically update third party systems with finished goods inventory at the end of the bundle production cycle.
- **By utilizing the Internet:** With the latest technology, production information like factory or department efficiency or cut progress can be accessed in real-time on the Internet through secure web sites. This allows managers to keep a close eye on production even when they are away.

Return On Investment (ROI)

The American Apparel and Footwear Association conducted an elaborate study of the benefits of a real-time shop floor data

collection system and determined the following area for potential savings, as a percent of direct labor costs:

Gross Payroll Calculation	1.25%
Piecework Ticket Printing	0.40%
Net Payroll	0.20%
Reduced Excess Labor Cost	1.00%
Productivity Improvement	5.00%
Payroll Computational Errors	1.50%
Reduced Bundling Handling Time	1.80%
Bundle Coupons & Gum Sheets	0.10%
Reduced Lost Time at Time Clocks	0.10%
Reduced Work in Process	0.50%
Total Estimated Savings	11.85%

Benefits of a Real Time Data Collection System

- Collect, track and report on shop floor activities in real time.
- Increase employees' productivity and motivation by measuring their output against standards.
- Reduces bundle-handling costs.
- Automates computations of gross payroll in real-time with up-to-the second information.
- Completely eliminates punch clocks, punch cards, coupons, gum sheets and their costs.
- Accurately records off-standard work types. (Training, sample making, repairs, etc.)
- Empowers managers to adjust inadequate production levels in a shop, a department, a line or a sub-line.
- Automates the preparation of bundle tickets.
- Provides audit trails, thereby eliminating errors and improving off-standard reporting.
- Tracks repairs and records seconds.
- Provides details of mechanics' time spent on machine repairs.
- Allows management and employees to understand their productivity and remuneration.

- Reduces labor costs with an accurate on-line snapshot of work in progress.
- Provides management with real-time information on which to base staffing decisions.
- Automatically computes motivational bonuses for employees who exceed efficiency quotas.
- Reduces payroll errors by eliminating human inconsistencies, cheating and overpayments.
- Are completely self-contained.
- Are easy to learn and use.

Intangible benefits

- Improved customer relations.
- Retention of customers
- Increase in order book.
- Access to constantly changing direct costs in terms of labor will allow more accurate job costing and allow companies to ensure the correct product mix is flowing through their factories.
- Increased productivity for managers and supervisors.
- Improved labor force morale.

Apparel manufacturers introduced computers to front offices in the late '70s. They later computerized grading, marking and cutting with CAD systems. Today, North American manufacturers must inject modern computer technology into their shop floors in order to secure a competitive advantage within the global apparel sewing market. In this context, real-time data collection systems are definitely worth implementing. ■

Lionel Vary, Informaplus Solutions & Consulting Inc., 514-956-5566 or lvary@informaplus.com

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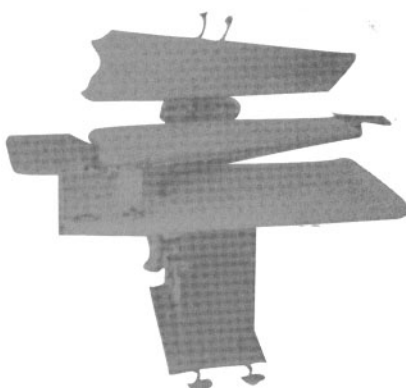
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