

Upgrade Makes Impression in Print Industry

San Jose Mercury News Improves Printing Quality and Saves \$275k per year in Waste Reduction With Rockwell Automation

Background

The *San Jose Mercury News* (SJMN) is the major newspaper covering San Jose and the Silicon Valley in northern California. The paper boasts an average daily circulation of 240,000 and 275,000 Sunday. In addition to printing the daily newspaper, the SJMN facility also prints the Hayward Daily Review, Fremont Argus and San Mateo County Times daily editions, as well as an additional 21 weekly publications.

In total, the facility prints approximately six million copies every week, which equates to a newsprint consumption rate of well over 55,000 metric tons per year. To meet its high-volume printing requirements while maintaining a high level of quality and efficiency, it is critical that the newspaper keep its production equipment updated with the latest technology.

Challenge

Like many newspapers around the country, the SJMN has adopted a strategy of upgrading equipment rather than purchasing completely new machinery, where applicable. This has proven to be a cost-effective approach for many newspapers, especially when the equipment is mechanically sound and can be supported or easily expanded to meet changing needs.

When the SJMN needed to upgrade to digital inking and replace the obsolete control technology on four different vintage Goss presses, it sought a control architecture that was flexible and easy to use, yet provided the performance capabilities it needed along with a clear migration path for future upgrades. The control system upgrade presented the newspaper with a number of challenges. The first was how to convert their four Web offset printing press lines without shutting the presses down or compromising quality during the transition. The task was even more challenging because the existing controls were extremely out dated and consisted of a mix of proprietary technology. This would make it more difficult to meet the paper's goal of implementing a unified control platform across each of the presses.



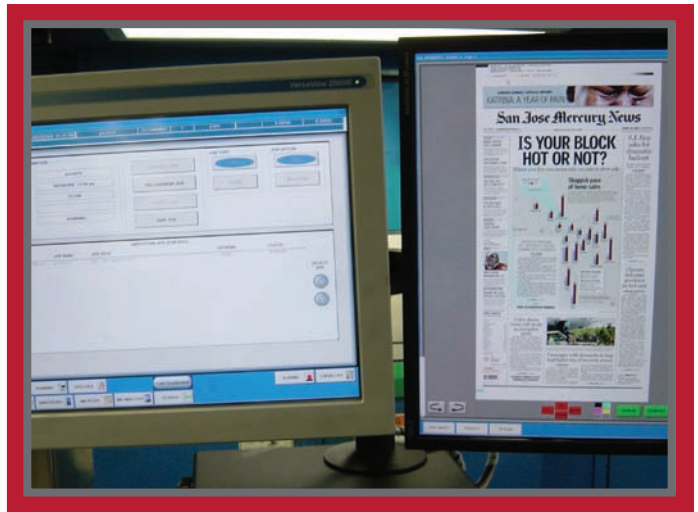
Operators recognize improved efficiency through common centralized control platform, no matter what vintage of press.

In fact, this lack of integration flexibility and use of proprietary technology was one of the primary problems with the old system. Because each press was so different, each required an extensive amount of training to operate and maintain. Reliability also was a growing concern, as it was becoming increasingly difficult to find replacement parts.

In addition to making all of the presses uniform and easier to operate, the SJMN also wanted an automated system capable of supporting the new digital inking systems and improving the accuracy of its ink preset capabilities, as well as collecting and analyzing press information, including waste totals, print quality, maintenance and other performance data.

Solutions

After considering a number of options, engineers at the SJMN decided to totally replace the old systems in what it calls a "brain transplant" approach. They set out to work with Rockwell Automation to replace virtually all of the old control architecture, implementing a PC-based press control system on each of its four Goss presses. The new Allen-Bradley® PrintLogix™ press control system includes Windows™-based supervisory workstations and centralized control desks designed specifically for the newspaper industry. The control system upgrade also included Allen-Bradley ControlLogix® Programmable Automation Controllers and Allen-Bradley PressView™ operator interface software.



*"We met our goal to extend the life of the presses with an upgraded control system."
Joe Boessenecker, San Jose Mercury News*

The integration of softproofing assists the operator with improving quality on a consistent basis through real time interaction with press control system.

The new system also uses Allen-Bradley PlantView™ software to provide ongoing press monitoring and supervisory control on a system-wide basis. The system reports the status and updates of critical parameters such as ink levels, press speed and web break detection.

Rockwell Automation also integrated an ink presets software module, designed to eliminate negative scanning by obtaining ink presets directly from the newspapers pagination system through processing of a TIFF file. Previously, only two of the four presses were even capable of accepting ink presets. The new software provides consistency within the operations, reduces startup waste on all four presses and improves overall product quality from start to finish of each press run.

The upgrade also includes a new soft-proofing application that displays an onscreen full color digital image of the selected page to assist the operators with improving quality and reducing waste.

Results

The new control system simplifies plant-wide control of each press while the operator interface consoles provide greater access to quality control data, helping operators make faster and more efficient adjustments. The operators now have centralized control where

they can monitor the product throughout the entire run to maintain quality and consistency. The control consoles are easy to understand and operate, accurate and uniform.

The PrintLogix control system provides SJMN with many features available on newer presses, and reduced its operator learning curve with more consistent functionality and operation across all presses, regardless of vintage.

The system allows operators to execute multiple setup commands at one time, greatly speeding press startups. For example, a compensator preset program facilitates quicker cold starts and lessens make-ready waste. The digital ink presets increase the accuracy of startup ink levels so that operators obtain reliable ink value data, helping to further reduce make-ready waste. This allows operators to set color registration, page alignment and ink densities quicker, and generate acceptable copies sooner. Since installing the system, the paper has reported being on track for a projected savings of \$275,000 per year in waste reduction.

"With our previous system, our press operators spent nearly 40 percent of their time setting ink," said Joe Boessenecker, director of operations. "Now only 1 percent to 2 percent of their time is spent on this task, giving them more time to focus on producing quality newspapers, on time."

Quality also has improved as a result of the new system, with a 10 percent to 12 percent increase in the number of pages passing its internal daily quality test. This is due in large part to the PressView software, which allows more efficient correction of color-to-color registration errors and misadjustments in ink densities.

Time spent on maintenance and troubleshooting also has been reduced. Operators can now use the PressView consoles as a diagnostic tool to analyze stopped events and identify the root cause of press problems rather than have to rely on outside expertise.

By implementing advanced control technology, the SJMN has met all of its upgrade goals, including improved print quality, reduced startup times, less waste and greater flexibility for future upgrades and expansions.

"We knew that a control system upgrade was the way to go, and the return on investment that we've already seen confirms our decision," said Boessenecker. "The system has delivered exceptional performance and provided us precisely what we were looking for in an upgrade solution."

The results mentioned above are specific to Customer's use of Rockwell Automation products in conjunction with other products. Specific results may vary for other customers.

Allen-Bradley, ControlLogix, PlantView, PowerFlex, PressView and PrintLogix are trademarks of Rockwell Automation Inc.

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 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