

Color Management in a “Jiffy”

Brand recognition and integrity depend on packaging. The need for faster makeready, on-time delivery, and reductions in cost and waste place a premium on predictable results and comparable quality independent of location, substrate, or printing process. The primary goal of color management, therefore, is to reproduce predictable, repeatable, consistent color across a range of devices and media from the time a file enters the workflow until it is reproduced on press. Because proof, plate, and print must deliver identical results, color management touches every part of the print or packaging workflow. As such, it relies on a range of tools including calibrations devices, prepress software, on-press color monitoring, and other methods for controlling color.

C&S Carton in Marshall, Mich., the printing division of Chelsea Milling Company, a vertically integrated, fourth-generation food manufacturer, recently invested in one such tool—a digital color control system by EPG (Essex Products Group) that enables user-friendly

The iconic Jiffy brand line of baking mixes was refreshed with updated, color-rich packaging.



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Don Whitney, second pressman, C&S Carton, uses X-Rite inspection equipment to check ink color densities produced by the KeyColor ink control system:

ink key adjustments from a central ink desk to control color, speed makeready, and reduce waste.

Chelsea Milling Company, Chelsea, Mich., has been selling Jiffy prepared baking mixes since 1930. It has never advertised to consumers, relying instead on its core principles of providing quality and value to its customers, as well as brand awareness of the “little blue boxes” that hold the Jiffy mixes. When the time came to revamp the graphics on the blue box, the company replaced an aging 5-color press with a 6-color 77” Harris, equipped with the EPG KeyColor system.

“We were running a 5-color 77” Harris from 1970 until about two years ago,” says Don Stephan plant manager, C&S Carton. “It had cloth dampeners and was badly in need of major repair. When we went to proof the new graphics on our shells, the owner realized we couldn’t reach the color quality (the brightness of the red on the flag) that he wanted to achieve. So we replaced the older press with another 77” Harris—a 6-color this time—and upgraded it with the EPG system and Dahlgren Dampeners.”

Chelsea Milling Company stores wheat, mills it into flour, and uses it exclusively for its own prepared mixes. The company created C&S Carton in 1970 to help control the quality and cost of the cardboard shells that encase the growing Jiffy

brand product line, which now included 24 different prepared mixes, C&S prints the shells for every one of them.

C&S’s purchase of the 6-color Harris with EPG system was a direct result of management’s decision to revamp the graphics on the Jiffy box. The team was looking for a fresher, more modern and livelier look, without abandoning the lineage of the Jiffy brand franchise.

“Since we don’t advertise, that package is the franchise,” explains Jack Kennedy, vice president of operations. “Why bother going to the effort of refreshing the graphical look of our packages if we couldn’t reproduce colors from package to package on a consistent basis? We needed to have that repeatability and quality to make our other efforts pay off.”

C&S runs six colors to produce the Jiffy blue box. Three are process colors and three are spot colors—the dark blue, background blue, and a red—specially formulated for Jiffy. Six EPG Smart Fountains, one for each of the six units on the press, control the ink keys. Each Smart Fountain controls 59 ink keys. C&S also uses a densitometer, running color by the numbers instead of the press operator’s best guesstimate.

Prior to the EPG install, “in order to accommodate normal variation during a press run, the operator had to manually adjust hundreds of ink

keys by hand," Kennedy explains. Not all 59 ink keys had to be adjusted on each unit every time, but a majority of them had to be changed. "If we still had control color by hand, it would defeat the purpose of all these other improvements."

Although it is a captive printing operation, C&C Carton faces challenges that are similar to those faced by most converters, such as the demands for higher quality and faster turnarounds, all while keeping costs down. The absence of product advertising makes the visual appeal of the "little blue box" even more critical and raises the stakes on the company's ability to control quality efficiently and cost effectively. On an average day, C&S Carton's 14 employees produce 1.5 million packages, 42-up on a sheet, in one 10-hour shift. The division prints 300 million shells annually. Prepress work is handled outside; C&S prints onto recycled clay-coated boxboard, then strips and cuts the

board, sending the shells to Chelsea Milling in a flat configuration.

EPG's digital KeyColor ink control system incorporates Smart Fountain technology for computerized control of the fountain ink keys. Smart Fountain is designed to allow press operators to adjust ink key settings easily and quickly on all ink fountains from a central console, helping assure color repeatability throughout an entire press run, while speeding makeready and reducing waste. The Dahlgren continuous dampening system helps maintain consistent press performance and reduce scrap, Stephan says.

Now, except for some normal variation during a press run, the color holds. Comments Stephan, "On our old press, we were lucky to run 28,000 sheets a shift. Because of the newer press and the EPG system, we are now able to run anywhere from 38,000 to 40,000 sheets. Start-up time has been reduced from 45 minutes to 15 minutes, and instead

of taking 2,000 sheets to get up to color, it now takes 200."

Gary Hoag, C&S Carton production supervisor, adds, "It has also reduced overtime, because we are running much more efficiently.

C&S develops a history for each product shell it prints, which gets stored in the KeyColor console. Some shells, like those for the best-selling corn muffin mix, are produced constantly, while others—holiday or seasonal varieties, for instance—are produced intermittently. The stored data ensures that the color is consistent regardless of the timeframe between the shell runs for a particular product.

"When we proof a job, Howdy will come over for a press check," says Stephan. "When he OKs it, we save the data, so the next time we put that job on press, we can go back into the computer, bring it back up, and automatically start adjusting the keys for color."

As part of its own improvement process, C&S's prepress house, Panoplate Lithographic in Kalamazoo, Mich. provided C&S with a profile, or fingerprint, of the new 6-color press soon after installation.

Performing fingerprinting prior to production ensures full color management. Color profiles and gamma curves are adjusted accordingly so that the digital proof matches the final production print.

"Profiling, or fingerprinting, gave us the characteristics of our press—dot gain and all the other attributes of how one press differs from another," Kennedy explains. "Panoplate applies that profile and makes adjustments at the plate level rather than us having to make adjustments on press."

Training press operators to use the system went very well, says Stephan. "The EPG system is so much easier to work with," he says. "The press operators fell in love with it. It made their job so much easier and saves them so much time. It saves us a lot of legwork. It is like night and day from the way we used to do it."

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