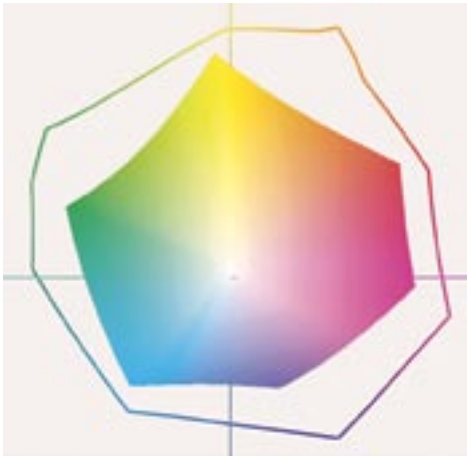
By Dan Reid

6 colors hit the spot

Pantone Hexachrome lets printers do more with less

In a market of increasingly smaller margins and escalating costs, every business seeks to be efficient and offer a superior product at a competitive price. The challenge is daunting but not insurmountable. One option to achieve this lofty goal is to do more with what you have.

Most lithographic and flexographic printers have multiple printing presses—typically with more than four-color ability. These printing presses sometimes have perfectors and coaters inline, but also have one or two towers available for special colors, bump plates or spot colors. Printing spot colors is a premium many print buyers resort to only if important colors cannot be achieved with four-color printing. In the case of flexographic printing, most jobs are comprised entirely of spot colors. To minimize costs, jobs requiring careful color communication typically are specified using the Pantone Process color library, a simulation of the original spot color printed using common four-color-process inks.



This color graph depicts the color range of the typical US Web Coated v2 ICC color profile and Pantone Hexachrome CTP Coated included with Pantone HexWare software suite for Adobe Illustrator and Photoshop. The interior color graph shows US Web Coated v2, while the exterior colored line shows the Hexachrome CTP Coated ICC profile.

The power of Pantone

Pantone, a leader in color communication for 40 years, is a ubiquitous system for communicating color rendering between content creators, designers, print buyers and print providers. Prior to the 1990s, the Pantone Matching System (PMS) libraries were a method for choosing and communicating important colors by mixing ink and running a fifth or sixth printing plate. Designers were restricted in how many spot colors could be specified by the number of printing press color towers available at the print provider. The additional cost of mixing a fifth or sixth color, extra plates, and press down time contributed to a premium print buyers had to incur. Unfortunately, when Pantone introduced its process simulation library, only about a third of the original PMS library could be correctly simulated because of the limited color range of process

6 colors, no waiting

Hexachrome's six-color process combines CMYK with Pantone Hexachrome orange and Pantone Hexachrome green inks. Hexachrome inks and Hexachrome separation software let users simulate more Pantone Matching System (PMS) colors than using CMYK inks with a four-color process. By using six colors instead of four, Hexachrome reportedly can effectively reproduce many spot colors. In addition to Hexachrome's expanded gamut, Hexachrome offers potential production efficiencies. Since Hexachrome can simulate spot colors, a press can stay configured for Hexachrome whenever spot colors are required, eliminating wash-up time between jobs. For jobs with numerous spot colors, plate burning and hanging time also is reduced.

CYMK vs. CMYKOG

Unlike CMYK printing, Hexachrome employs an RGB workflow so that color gamut is not compressed. PantoneHexWare plug-ins are used in conjunction with Adobe Photoshop and Illustrator to color-correct files, separate into six channels and soft-proof images while QuarkXPress is Hexachrome enabled. Printing Hexachrome requires a six-color press and proofing system as well as specially formulated Hexachrome inks.
Source: Pantone.com

Pantone's online "A decade of Hexachrome" gallery features examples of six-color books and magazine covers, packaging, labels, fine art and more. See www.pantone.com.

inks. Nevertheless, the Pantone process library, now called Pantone Bridge, was and is a success.

As Pantone sought to improve the simulation library further, Pantone Hexachrome was born. Pantone Hexachrome offers a larger color palette to simulate the original spot color library but offers a reduced cost in reproducing multiple spot colors, especially if more than two spot colors are designated in a job. Not requiring special colors for each job simplifies flexographic printing immensely by standardizing on one inkset that can reproduce the majority of PMS and special colors.

Hexachrome's helping hand

Few print providers and designers, however, viewed the Hexachrome process as the evolution of the Pantone simulation library. Most print providers saw the process as unproven and costly to print because of the additional printing plates (six instead of four). The benefits of Hexachrome are numerous. For the designer, more than two-thirds of the original spot color library can be specified in jobs without compromises of color saturation or hue—the most noticeable improvements are in reds, blues, greens and yellow-greens. A job can have more than two spot colors specified—indeed, a potentially unlimited number of colors can be used—because the print provider translates each spot color to the Hexachrome press setup. The lithographic and flexographic print providers are not limited by the press color towers available for spot colors. Press downtime is minimized if a press is configured for Hexachrome; a press configured for Hexachrome can be used to print jobs specified with spot colors and traditional four-color separations without wash-up between jobs.

The print provider converts the four-color bitmap, vector and spot colorants to Hexachrome, allowing more jobs to be printed. Four-color files are translated to Hexachrome so the original color balance is retained while spot colors are reproduced correctly. The cost of running jobs that have spot colors specified increases with special ink mixing and clean-up between jobs, while a Hexachrome job maximizes press uptime by running more jobs per day. Hexachrome can be a cost-effective approach to printing more spot color jobs by minimizing down time and thus increasing revenue.

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