

## Special Effects that Stand Out



By Cassandra Balentine

In the midst of a digital era, printed communications hold value. To capitalize on this, print providers are stepping up their enhancing printed graphics with specialty effects like expanded colors—including white, clear, neon, and metallic; dimensionality; and texture; and security functions.

“Print is just ink on paper, but by adding print embellishment it becomes an experience that engages the senses and one customers can see and touch,” shares Anthony Gandara, product manager, Duplo USA Corporation.

These embellishments are added inline on select digital production presses, and offline or near line with dedicated print enhancement solutions.

*Above: MGI offers the JETvarnish 3D Series, enabling enhanced print with dimensionality and metallic foil.*

### Adding Value

Print embellishments represent a growing trend. Print providers and marketers look to these effects to differentiate their products from other brands, move away from the commodity print model, and add value to the printed piece.

“In a world with growing purchasing power, competition over consumers’ pocket share is fiercer than ever,” suggests Haç Isman, product manager, HP Indigo GEM, HP Inc. “They need products to stand out and the best way to ensure shelf appeal is through print embellishments. In addition, commoditization processes affect many products and embellishments help the product not only stand out and differentiate, but also to fight price erosion.”

Jeroen Van Bauwel, director, product management, Xeikon, says the technology addresses a critical, emerging need in labels and packaging. “Our initial focus is on self-adhesive labels, particularly for short run, high-end labels, especially for health and beauty as well as luxury goods like cosmetics, wine and spirits, and confectionary. It is also aimed at products like pharmaceuticals where they support counterfeit prevention,” he says.

In the past, embellishments were found mainly in premium products. Today the effects are found in personal and hair care products, health and beauty, and confectionary, and even in higher end home cleaning products. “We believe that with the increasing competition on retail supermarket shelves this trend will increase and we will see embellishments used in more end-use markets,” predicts Isman.

Virtually all print products have to work to stand out on the shelf, adds Lynn Kolevsohn, director of marketing, Scodix. “What’s more, not only has the total number of print jobs reduced, but the remaining number of printed pages/sheets per job has diminished. Print service providers (PSPs), converters, and brands are all under more pressure to differentiate themselves that trend looks set to continue for the foreseeable future.”

According to Gandara, it’s Duplo’s goal to make print embellishment more affordable for all, not just for the high-end jobs. Kevin Abergel, VP of marketing and sales, MGI USA, believes we are only beginning to see the emergence of the ultimate digital enhancement market. This is the last mile of digital technology adoption for all print segments. “Once digital workflow can be implemented from prepress design through printing and into the postpress finishing stage of job completion, then true benefits and transformation of the graphic arts world will be achieved.”

## **Challenges**

While the advantages of enhanced print are clear, there are challenges. The biggest is getting customers in front of the product to see the value.

Kolevsohn comments that it is such a visual, tactile experience that customers need to encounter the enhancements first in order to gain a full appreciation. “Once print providers get samples in front of their customers, it’s a very easy sell.”

Leonard Christopher, worldwide product manager, Kodak, points out that most printing sales representatives need to reach the designer as well as the print specifier to successfully implement the service.

Educating the design community, agencies, creatives, marketing managers, and brand owners about the possibilities of enhancements and how easily and economically these effects are added is a challenge, especially for short, personalized jobs. “Once that exposure and awareness occur, the print provider can lock in any customer for life,” suggest Mary Rodd, worldwide product marketing manager, and Amy Stear, worldwide product marketing manager, iGen product family, Graphic Communications Business Group, Xerox Corporation.

Gandara agrees, commenting that the initial marketing and promotion of an embellishment service is a challenge. “But once a customer physically experiences and touches the raised spot UV coating on a sample, they will immediately be sold on it states.

Yuji Buchan, senior product manager, production cutsheet color and B&W systems, Commercial and Industrial Printing Business Group, Ricoh USA, Inc., says the idea of branching out into five colors can be daunting to those that have produced four-color digital printing for a long time. “It’s like suddenly being able to see an entire new dimension for your work. As a result, some print providers may be weary of straying too far from their comfort zones with regard to digital print.”

## **Pricing Factors**

There are many ways to approach pricing and promotion of printed products featuring enhancements.

Gandara says the purpose of embellishment is to add value to the printed piece. “This is an added value that printers can bring by simply producing one sample with embellishment for customers.”

Print embellishments are a high-value service, so commodity and lowest cost pricing strategies typically don’t apply. “Print providers are looking at metallic embellishments as a business growth opportunity and finding that print buyers and customers have an appetite to invest in these types of enhancements,” say Roddy and Stear.

“Our customers typically correlate their pricing models to the production costs of traditional non-digital methods of print embellishment and find their profit margins easily fit into a 50 to 80 percent improvement range,” says Abergel.

Pricing for print enhancements vary widely by customer. Print providers may include these features at no extra charge for differentiation, while others target specific applications where the final product is priced, not the individual ink or substrate, comments Christopher.

Abergel adds that some customers are completely new to producing digital enhancements and may need to develop marketing and sales strategies to complement their new technology.

### **Print Enhancement Platforms**

Select printing presses and standalone enhancement solutions offer a range of digitally printed effects.

Duplo offers print embellishments with the new DDC-810 Raised Spot UV Coater. It is a compact solution that utilizes 60 dpi inkjet technology, UV lamp curing, and camera image registration to deliver production output with texture and depth by applying a gloss varnish to defined areas of a substrate.

HP Inc. recently introduced HP Indigo GEM, which will be released later this year. Integrated inline with the HP Indigo W-series, it uses one workflow, one operator, and one design file without the need for tooling. The HP Indigo GEM utilizes GEM Clear, GEM C, and GEM Clear, sold by HP Indigo and developed with JetFX.

HP Indigo GEM offers foil, spot, tactile, digital holograms, cast and cure, and other special effects. All are 100 percent digital and variable. "Users will be able to place a few of these on each label, creating a range of image embellishments," says

Kodak offers several digital print solutions with embellishment capabilities, all based on the NexPress platform. Currently available are ten fifth station inks, along with corresponding front-end capabilities to use each individual ink in different ways/treatments. Additionally, the ability to add the choice of fusing method provides flexible options on the types of finishes available with CMYK printing.

MGI has two full-fledged digital print enhancement platforms, the Meteor Unlimited Colors Series and the JETvarnish 3D Enhancement Press Series.

Meteor Unlimited Colors presses are capable of producing output with a virtually unlimited number of colors by blending toner and the reflective qualities of foil film.

The JETvarnish 3D Enhancement Press Series offers dynamic enrichment of digital, offset, and flexographic printed output with unique inkjet applications of dimensional varnish and foil textures.

The RICOH Pro C7100X Series offers a fifth color station capable of adding white, clear, neon pink, neon yellow, and so-called invisible red. Additionally, the company developed the 5th Color Kit, which showcases example applications and instructs how to reproduce them.

Scodix offers a range of digital enhancement platforms and applications, starting at entry level with the Scodix S75 through the Scodix Ultra Pro Series. In addition, the Scodix E106 focuses specifically on the folding carton market.

Xeikon is developing Fusion Technology, which combines high-quality, full-color production printing with digital embellishment of labels and packaging in a one-pass, one platform, fully digital production process. According to Van Bauwel, digital enhancement modules will include high opaque white, foiling, matte, and gloss varnish in flood and spot modes.

"The technology will provide converters with true flexibility of virtually any label or package on demand. It will make instant reruns of previous jobs easy, as all of the necessary parameters are held in a single digital file. But, more excitingly, converters will no longer need to invest in offline embellishment solutions, nor will they incur the time delays and potential error inherent in both offline and manual processes," offers Van Bauwel.

The first Xeikon Fusion module generates a digitally printed, high opaque white layer. This is a development mainly driven by the requirements of health and beauty applications where high-quality, short-run jobs printed on transparent substrates require white with even higher opacity than standard available with dry toner, combined with high-quality images. The company is also working on a digital spot varnish and foiling module.

The Xerox i1000i Press features metallic silver and gold dry ink plus mixed metallic effects using silver as the underlay a CMYK over.

The Xerox iGen 5 Press' fifth print station enables orange, green, and blue gamut extension colors, which increase the ability to match a wider variety of PANTONE colors and keep print buyers on brand. It also allows customers to hit more than 90 percent of PANTONE PLUS colors without moving short runs to offset.

The iGen 5's White Dry Ink offers benchmark brightness and opacity that can be printed over, under, or next to CMYK to provide eye-catching spot effects, explain Roddy and Stear.

The Clear Dry Inks create decorative spot effects or watermarks.

### **Into the Workflow**

The application of digitally printed effects is designed to be simple. Technology providers work to make it fit effortlessly in existing digital print workflow.

With the Duplo DDC-810 Raised Spot UV Coater, most preparation is completed on the design end. "The designer must prepare three items—a print file with the registration marks, a PDF of the spot UV layer, and an XML file for the registration mark parameters. Once the files are completed, the print file will go to the press for printing. The operator of the DDC-810 uploads the printed media into the feed tray, uploads the Spot UV PDF and the XML files, and presses send," says Gandara.

"While today the production of embellishments require a high level of expertise and complicates the prepress and make-ready processes, the HP Indigo WS6800 Digital Press with integrated HP Indigo GEM makes the entire workflow digital, using only one machine through all production steps," explains Isman. "Users will be able to automate their prepress phase; narrow bottleneck production—for tooling lead time, for example; reduce waste; and increase net print time thanks to elimination of analog stages."

Many of the effects for the Kodak NexPress platforms are added directly at the digital front end (DFE), or specified in the local job ticket. Most customers produce/supply sample kits to designers for custom design work, adds Christopher.

The MGI JETvarnish 3D systems include a software suite of image and project management tools and utilities, including image editor and job cost calculator.

Buchan says fifth imaging effects are often built in during the design stage with Adobe software like InDesign, Illustrator, Photoshop. "Our industry has been going beyond CMYK for years and Ricoh has taken what was a standard practice in offset world and standardized it for digital output."

As a digital technology, Kolevsohn says Scodix enhancements fit easily into both digital and offset press line workflows. "The Scodix Ultra Pro with Foil digital enhancement press conveniently brings the enhancement process in house, offering PS capabilities that they could not do before, adding high value to print for a low cost. Brands also take advantage of this new capability for shorter print runs and less cost. Before the launch of the Scodix Ultra Pro with Foil digital enhancement prepress houses and brands mostly outsourced foil applications or deployed costly, make-ready processes that included molds and dies."

The Xeikon X-800 DFE takes care of prepress, data processing, color management, and press operation as well as full control and operation of all embellishment modules without manual intervention.

With Xeikon Fusion Technology, a print job containing multiple layers, defining each production step, is dropped into a job ticket and RIPed, after which the different layers are sent to the relevant modules including the press—all without manual intervention.

Depending on the requirements, digital embellishment modules can be positioned before and/or after the Xeikon digital front end color press. The resulting configuration produces a digitally printed and embellished label or package in one single pass.

“The cornerstone of this concept is Xeikon’s dry toner electrophotographic five-color printing press. Xeikon’s application-specific dry toners have been specially developed to meet the requirements of this market in terms of print quality, color gamut and accuracy, light fastness, food safety, and brand protection,” says Van Bauwel.

Using the fifth station in a Xerox Color 1000i Press is straightforward, according to Roddy and Stear. “The fifth station provides easy swapping between the options for silver or gold metallic dry inks or clear dry ink. It is a self-contained, clean process that can be switched on demand, requiring no maintenance or cleaning between the different specialty dry inks,” they explain.

Two DFEs are available for the press, the Xerox FreeFlow Print server and the Xerox EX-P Printer Server, Powered by FontLab. They are specialty color and effects capable. Effects execution and management are possible at the DFE, even if a designer has built that effects layer into the file.

The iGen 5 comes with a design and file preparation guide for designers, providing guidance, hints, tips, examples, and instructions on designing for the gamut extension colors, White Dry Ink and Clear Dry Ink.

Its fifth print station also provides easy swapping between orange, green, blue, white, and Clear Dry Inks. It is a self-contained clean process that takes the operator approximately 30 minutes or less, say Roddy and Stear.

### **Presenting Enhanced Print**

Digital PSPs add value to output with special effects like expanded color gamut, metallic and white inks, and security features. These effects stand out on the shelf or in the mailbox, enabling marketers and brand owners to step away from commodity print. While once reserved for high-end, luxury applications, new solutions and continued adoption bring enhanced print mainstream.

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