

Adding a spot of interest

Our cover this month has a digital spot UV varnish finish produced on the MGI JETvarnish inkjet. *Simon Eccles* explains how it was set up and produced.

This month's front cover has a spot UV varnish layer produced by the JETvarnish, a B2 format inkjet that's purpose built for the job by MGI Digital Graphic Technology in France. You can read the technical details about the JETvarnish in the Centrefold article on pages 28 & 29. This story is about how we actually went about creating the cover.

We've known about JETvarnish since its launch at drupa in 2008, and followed its progress from a B3 machine intended primarily for overprinting digital print, to a B2 configuration that's suited to popular offset formats too. By 2009 MGI was talking of adding a second row of inkjets to the single-pass print head in order to add a variable spot colour or other effects.

Given *Digital Printer's* dedication to actually using the kit that we write about, the JETvarnish was an obvious candidate. Last year, for the December issue, we produced a cover with a raised, 'digitally embossed' UV varnish finish, produced by Scodix in Israel. The previous December, in 2009, we produced a raised-image cover using Kodak's Dimensional Ink process on a NexPress at X1 in Slough. So we knew it could be done, given a bit of shipping of palettes.

Alternative methods

Although superficially similar in technology terms, both Scodix and MGI insist that their systems are not direct competitors, with the Scodix1200 being entirely focused on creating tactile effects and the JETvarnish intended for highlighting with several gloss levels. A handful of digital toner printer makers can also offer a clear spot coating on fifth units now, but these don't have the rich high gloss of UV. Also they are confined to inline printing of the effect, where JETvarnish works with pre-printed sheets, including offset, up to B2. The only real issue is a need to take care with



Our covers going through the JETvarnish at MGI in France.

offset anti-setoff powder.

We started planning this cover project in earnest in January after a visit to MGI's new UK distributor, MGI Technology in Hemel Hempstead (see *DP February*), a month after our Scodix cover was distributed. There are no JETvarnish installations in the UK yet, though the first one is said to be fairly close, so MGI offered to run the sheets through a JETvarnish in France.

MGI Technology is also handling the MGI Meteor DP60 sheet fed digital press, the UVarnish compact UV flood varnisher and the DF360 multi-function finisher. Managing director David Evans is putting a lot of effort into JETvarnish initially, as he feels it is unique in the UK market. So a real-life demonstration of the process in action seemed a good idea all round.

We discussed various options of a variable data digital cover, or using spot colour to personalise it. It turned out that MGI's spot colour facility is still at the prototype form,

due for release later this year. This is likely to be black only at first, but the company has already developed a smaller format four-colour UV inkjet using similar technology. This is the JETcard, shown late last year, intended for direct imaging onto plastic cards. There are also intriguing hints of a metallic facility in future for JETvarnish.

Digital over offset

So we settled on what you see, with covers printed in the normal way, two-up using B2 offset by our usual printer, Buxton Press. The only difference is that they were printed ten days in advance of the main sections of the magazine, rather than as part of the same run.

After printing the approximately 3500 untrimmed B2 sheets were shipped off to the MGI factory in France, where they were varnished by one of the company's own machines, as shown above.

The cover artwork was designed and laid out by *Digital Printer's* staff. Choosing an

appropriate image was something of a collaborative effort between us and MGI's marketing people, who are more familiar with the visual possibilities of the process. After toying with clock faces and raindrops on car headlamps, in the end they suggested a strawberry splashing into water. We took the idea and found a library shot of a whole bunch of strawberries, which allowed us to wrap the image around the back cover too.

The colour part of the layout is entirely conventional, except we had to use Adobe InDesign where the magazine normally uses QuarkXPress throughout. We set up the cover in XPress, but it didn't work when we tried to convert it to the greyscale varnish layout.

For some reason any text converted to 'solid black' actually appeared as dark grey, while the black within the imported splash image file was a true solid. We tried converting the file to PDF and running it out on a proof printer, and still got grey text where we wanted black.

Time was tight, so when fiddling with the settings and a bit of Googling didn't reveal a solution, we scrapped the Quark layout layouts in InDesign, which didn't have this problem.

Grey level gloss control

When the JETvarnish front end receives the digital artwork, it interprets different greys as commands for three different gloss levels. Anything from 0 to 20% grey is not printed at all. From 26 – 50% gives one droplet of varnish per pixel (at 360 dpi), which cures to a satin gloss. 51 – 75% grey triggers two droplets per pixel, for a 'normal' gloss. 76 – 100% triggers three droplets for 'ultra' gloss.

Immediately after the inkjet head prints the varnish, the sheet is passed under an infra red source, which heats up the varnish and makes it flow together slightly to give a smoother surface. Then it passes under the UV lamps which cures it instantly.

This lets you set up a range of effects. If you converted the colour image from the job to a



Another shot of the covers on the feeder.

monochrome halftone and used that as a negative, you'd get ultra gloss in the highlights, medium gloss in the lighter mid tones, satin in the darker tones, and nothing in the shadows.

If you actually wanted halftone effects in the varnish image (say for vignettes and fades), you'd probably have to convert the whole document to a TIFF or EPS and use a Photoshop filter to create halftone dots. Our design didn't need that.

Instead, we used manual methods for our cover, helped by an initial chat with Kevin Abergel, international sales and marketing manager at MGI France, plus a handy artwork preparation guide contained within the 48 page JETvarnish user tutorial.

Varnish artwork

The strawberry splash image was imported into Photoshop and converted to 360 dpi, then a new layer was created. The strawberries and the splashes were painted over in shades of black and grey by a mixture of auto-selection and manual brushing.

The original colour layer was then deleted and the image converted to greyscale, then saved as a new document.

Next, a copy of the original full colour InDesign cover layout was made. The strawberry colour image was selected and replaced by the black varnish layers. As the two files were the same physical size, the black replaced the colour in register.

Then the masthead, cover lines and awards button were all converted to shades of grey or solid black, to give different gloss levels.

The varnish layout was then saved as a new greyscale PDF and sent to MGI in



The final InDesign colour artwork file. This was printed two up of B2 offset sheets and supplied to MGI in France for varnishing.



This varnish image PDF was created out of the colour layout.

France, which adjusted it a bit more and used it as the basis of the varnish overprint. In particular, our A3 artwork had to be imposed into two-up format aligned to the B2 printed sheets.

The PDFs were also converted to TIFF bitmaps for output through the JETvarnish front end.

As we had the luxury of a few days before the main sections were printed, MGI requested a copy of the colour layout too, and printed some short run SRA3 test sheets on its Meteor DP60 digital toner press. It then ran these through its JETvarnish to check the effect was going to work before the main B2 sheets arrived.

After varnishing, the completed cover sheets were shipped back to Buxton Press, to be bound to the main printed sections.

The result is what you have in your hand. ■

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