

The most useful guide to Drupa 2016 starts here

The enduring problem of Drupa is that it is so vast, that there is so much to see, and that the time to do so is so limited. Editor Gareth Ward has spent more time at Drupa than any other journalist. Here he gives his partisan view of where to go and what to see.

ON ARRIVAL AT MESSE Düsseldorf it is easy to spend hours with a current press supplier, reducing the time that can be spent in 16 other halls. As with any expedition, tackling an exhibition of this size demands preparation.

Creating a preview to help with this preparation is also fraught with choices: should we attempt to divide by the stages of production, ie prepress, followed by litho printing, by digital printing and then by finishing and software?

That is a traditional way of looking at it and works when the stages of production are distinct. That no longer really applies, either because the divisions have been blurred by integration and technology or because the companies no longer adhere to them.

Heidelberg will sell litho and digital presses, finishing equipment, prepress and workflow software and consumables; Agfa sells inkjet presses as well as plates, workflow and now pressroom chemistry; Fujifilm's interests are even broader. So it continues.

IT IS POSSIBLE TO DIVIDE BY broad sectors of the industry: packaging, commercial printing, display printing, books and so on. While flexo presses are not going to be printing books or magazines, some suppliers are adapting flexo and gravure machines to print cartons, while some with a commercial print background are looking at packaging.

Packaging is of increasing interest to digital press suppliers, using the same plat-



forms for commercial printers. Commercial printers are likewise encouraged to consider packaging applications, display print and other value added services. Division by industry sector is only useful to a point.

Then there is the division according to the main themes of the show. The response to new printing technologies, mainly nanography, will be one. Whither inkjet printing will be an even more prominent question than in the two previous shows.

THE NUMBER OF INKJET developments recalls the 45 or so platesetters shown at Drupa 1995, many never to be seen again. It is also clear that automation, the Cloud

and what the Germans call Industrie 4.0 will be everywhere. You can see this cloud, it will not rain on anyone, but it will be ever present over Drupa.

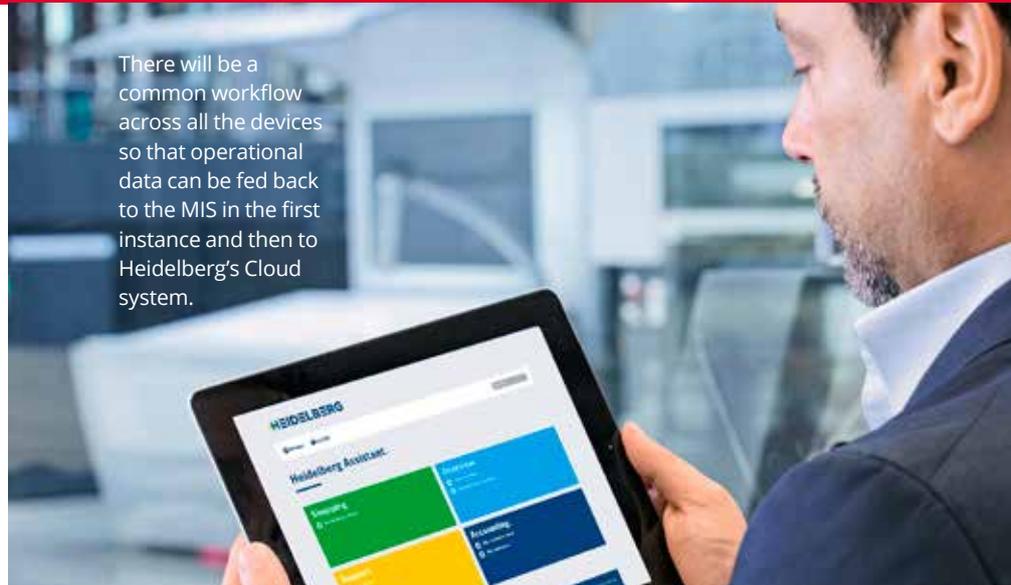
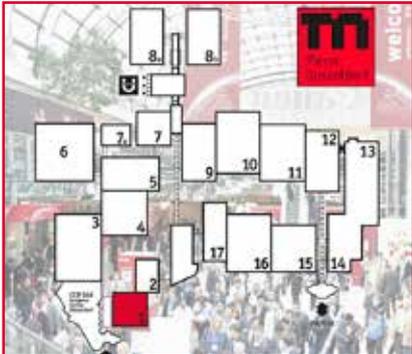
The strong subtext is how to cope with shrinking print runs, faster turnarounds and squeezed margins. Printers have to do this without adding to costs. The software, the presses and the finishing equipment have to be aligned to that end. Because this is going to be so pervasive, it is invidious to try to partition a discussion of what is at Drupa in this way.

INSTEAD THE FOLLOWING PAGES try to describe what is in each of the halls in a sequence of walking from hall to hall, what are the highlights in each space with an entirely partisan view of what these might be.

Inevitably there will be products of staggering significance that are missed and the descriptions of what individual companies are showing will be briefer than they deserve. Check printbusiness.co.uk for more in depth explanations of what each of the key companies will be showing and some grouped comparisons, around plate technology for example.

We hope you will use this to plan ahead before you get to Düsseldorf and when at the show, check the magazine or website before plunging into a hall. Failing that individual consultancy can be had for the price of a beer in the bars of the Altstadt. ...

HALL 1 Heidelberg...



There will be a common workflow across all the devices so that operational data can be fed back to the MIS in the first instance and then to Heidelberg's Cloud system.

FOR MANY THE HEIDELBERG HALL at Drupa will be the focus of their visit to Dusseldorf, above some of the evening entertainment even. There is certainly enough on show to keep a visitor engaged for much of the day, though those looking for a B2 or smaller press are likely to be disappointed.

Instead there will be four B1 machines: a six-colour XL106 with double-coater configured for versatility and value add applications, an eight-colour XL106 perfecting press with LED UV curing for fast turnaround commercial printing, a CX102 as the cost effective machine and the new Primefire 106 inkjet press.

THESE ARE SUPPORTED BY THE Linoprint CV and CP machines, to be renamed Versafire from Drupa and with additional capabilities introduced by Ricoh. Heidelberg has sold more than 1,000 Ricoh digital presses since the partnership was first struck and in return, Ricoh is offering the Heidelberg digital front end as an alternative to an EFI Fiery DFE.

It is optimised for integration with an

offset workflow creating an output agnostic production system that bears examining. Printers can no longer afford to run parallel workflows for offset and digital which forces a decision on which route to go early in a job's progress.

THE JETMASTER 250, an inkjet machine for decorating the outside of regular shapes (footballs being a prime example) is on show and will have a new name: the Omnifire 250.

Heidelberg has been developing a universal chuck system to make this a more versatile machine able to cope with a variety of different object types. For companies with a commitment to personalisation, this is something to spark the imagination.

It uses a Xaar inkjet head. Other Heidelberg moves to inkjet use Fujifilm Dimatix heads. These are on the Labelfire DCS 340, the machine developed in collaboration with Gallus using a combination of technologies to produce a label in a single pass. Commercial deliveries are underway. It is a machine designed to break through short run barriers.

The same printheads are used in the

Primefire 106, the press that will be at the centre of Drupa 2016 for Heidelberg. It has released a few details of this machine: it prints on a single side of a B1 sheet at 2,000 sheets an hour as either a four-colour or seven-colour press. The first markets are going to be in packaging where seven colours will cover almost the entire PMS colour range.

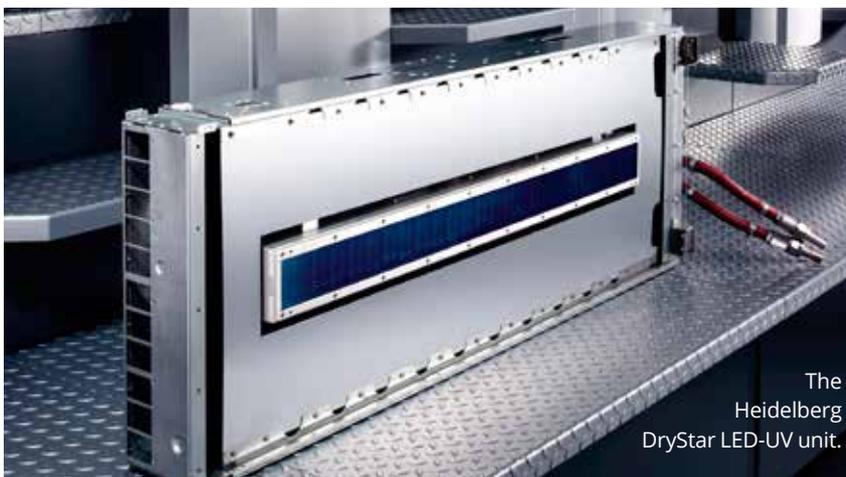
A pre coater applies a conditioning fluid which ensures rapid separation of ink pigment and the water carrying the colour. The ink is effectively pinned in place to keep the image sharp. The print unit is a vast drum holding the sheet in place with a vacuum system.

IF THIS IS ASSISTED IN ANY WAY, Heidelberg has not disclosed. Nor has it described what happens after a protective coating is applied in the delivery. Some kind of split stack is assumed to reject sub standard sheets (identified by onboard scanners) and to deliver to different piles so that the press can run nonstop.

There will be a common workflow across all the devices so that operational data can be fed back to the MIS in the first instance and then to Heidelberg's Cloud system.

This has a number of functions: it can be used to benchmark similar printers to help identify areas to enhance performance; it can be used to monitor press performance and thus to move to a predictive maintenance model where engineers intervene ahead of a breakdown, planned to minimise operational disruption; and to point to a future where the press orders the consumables it needs, references colour against the details held online; downloads paper profiles and so on.

This is the start of what the German speaking countries are calling Industrie 4.0, otherwise the Internet of Things, where ...



The Heidelberg DryStar LED-UV unit.

... device shall speak unto device and opens the path towards lights out operation.

Heidelberg is billing it as Simply Smart, the way to the Smart Print Shop.

THE IMMEDIATE ISSUE IS A NEW Prinect Portal for a single view across all production operations and connecting to customers. There is a new operating interface for press minders, the Prinect Press Centre XL2 designed to reduce the decision making steps that need to be taken at set up, and simplifying press operation to reduce the training requirement. The entire operation employs a touch sensitive screen.

THIS HAS BEEN DEVELOPED after examination of real world operation of Heidelberg presses showed that up to 100 choices might be necessary at makeready, each introducing the possibility of an error. With shorter print runs and the consequent increase in makereadies the time to set up a job could be longer than the running time, let alone the pressure on an operator towards the end of shift when errors are more likely.

HEIDELBERG IS NOT UNIQUE IN thinking about this issue and user experience is sure to be a key theme for Drupa.

The eight-colour XL106 for example is configured for this type of work with a Heidelberg-designed LED UV system to ensure that printed sheets are completely dry in the delivery.

The company has withheld details of other changes being introduced on the XL

series presses, but the promise of announcements is in the air.

While Heidelberg has dropped out of binding and stitching, it retains the Stahl folders and is building a portfolio of finishing equipment for carton production, working with China's Masterwork.

The TH/KH82-P is the new folder, using a shingle feed, but without the dedicated impositions that the TX96 requires. The new folder can reach 16,000 16pp A4 sections an hour, matching output of the XL generation presses.

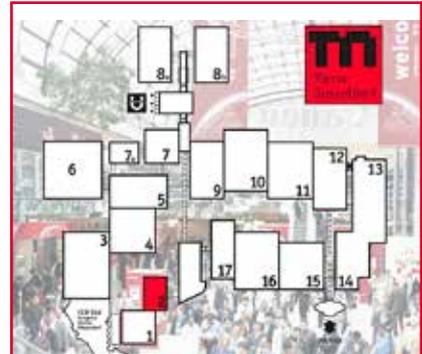
The highlight of the Masterwork products will be the Duopress which can combine foiling and the cut/crease operation in a single device. The Diana Smart carton gluers will include Masterwork's high speed inspection system.

AS EVER POLAR WILL BE alongside the press line up. These include the Dicut Pro, a more automated version of the Dicut Eco laser cutting table introduced last year. The cutting area is 700x500mm, suited to carton and intricate card cutouts from digital print.

The Polar D115 is the new guillotine model, again aimed at users of larger format digital presses. The Pace technology with full automation of sheet handling is also on show.

The Steinemann Dmax inkjet varnishing machine is again aimed at adding value to digital print. It runs at up to 10,000 B1 sheets an hour and can apply different levels of spot or area varnish, on the same sheet if needed, and will be a partner to the Primefire 106.

HALL 2 ... and partners



HALL 2 HAS TRADITIONALLY BEEN occupied by Heidelberg, perhaps with its partners like Polar. And while Heidelberg has reduced its commitment to the single hall, Hall 2 will have a new Heidelberg press and will feature other partners.

The press is the new Anicolor 75, a seven-colour B2 version of the keyless inking sheetfed press which will be part of the IST Metz stand. IST Metz has long been a partner for Heidelberg with regard to drying technology, and while the press manufacturer is taking direct responsibility for UV curing on its XL presses, IST continues to provide UV systems for its other machines.

For Drupa this includes the Anicolor 75, being targeted at short run packaging where six colours can be left in the press and the seventh unit used to apply a coating.

IST has fitted the LED UV to this ...

Heidelberg's Anicolor 75, being targeted at short run packaging where six colours can be left in the press and the seventh unit used to apply a coating. It will be on IST's stand.





"This Drupa, more than any other, printers will face a wider choice of printing technologies," says UK managing director Peter Benton (below). For offset presses, there will be first sight of the Alpha.C Eco and Beta.C Blue (above) systems for small to medium format presses.



Muller Martini will show the Vareo and its take on Industrie 4.0 with Connex (below).



... machine. The changes are deeper than the addition of the UV technology, addressing more of the requirements for short run production than the first generation of the press could provide.

Then there is the Anicolor Booster, a push button means of increasing the flow of ink to the plate and blanket and enabling the press to cope with both coated and uncoated materials.

Faster wash up will also increase the number of jobs that the Anicolor can handle in a day.

IST's own stand will cover the scope of UV from conventional and LED systems suitable for retrofitting on sheetfed litho presses to specialist systems for narrow web label and large format inkjet print, the latter areas with partner ITL. ITL has worked on UV systems for inkjet and other styles of digital printing.

At Drupa IST will introduce Hycure as a unit which can house either a conventional UV lamp or an array of LEDs. A printer can start with one technology and switch at a later date. The company advises printers new to UV to look at LED as highly suitable to straightforward four-colour work. It can offer a tuned lamp system with the same benefits of instantly dry sheets, but with a lower cost for a retrofit system.

UV COMES INTO THE consideration of Technotrans, another of Heidelberg's traditional partners that is in Hall 2. The unit may need cooling, even if, as with LED for example, no heat reaches the sheet. The SmartChiller, on display at the show is an "ideal solution for small to medium" applications. There will be a pumping system suited to UV inks and an agitator system to keep the more viscous inks moving.

Likewise digital presses require cooling, particularly the larger format machines, an area where Technotrans has been successful partnering with HP. For offset presses, there will be first sight of the Alpha.C Eco and Beta.C Blue systems for small to medium format presses and for larger format machines respectively. Both offer energy efficiency and the ability to adjust the level of chilling required.

Technotrans' peripheral units will include the sorts of monitors to allow remote diagnostics and servicing. Management of ink batches is one area where this sort of system can be advantageous.

"THIS DRUPA, MORE THAN ANY other, printers will face a wider choice of printing technologies, both in the digital and offset sectors," says UK managing director Peter

Benton. "Technotrans remains at the forefront, working closely with its OEM partners but also retrofitting equipment in the field. Peripherals provide control, consistency and are key to a profitable pressroom."

Kama's position as partner to Heidelberg has been undercut by its formal partnership with Masterwork. Nevertheless, with Kama producing finishing equipment for smaller sheet sizes and with an emphasis on short runs, it retains a place. Indeed, the market opportunity is increasing because of the short run trends.

The Drupa line up will include the Flex-fold 52, developed to operate with digitally printed cartons featuring automatic set up and working in collaboration with the company's fast set up die cutters. The newest of these is the ProCut 58 launched at the start of this year. It too is intended for digital print, handling a sheet to 580x400mm to cope with the extended formats that many digital presses offer.

The AutoRegister system has been redesigned for faster adjustment and to cut the need for makeready sheets. The same system can also offer a foiling module, switching from one process to the other in around ten minutes. Throughput remains up to 6,000sph.

The existing line up of die cutters with integrated stripping and blanking and folder gluers will also feature.

The surprise occupant of Hall 2 is Muller Martini. The Swiss finishing systems manufacturer has previously been found at the far end of the site, but collaboration with Heidelberg makes sense to move the finishing closer to its new partner.

MULLER MARTINI WILL SHOW the Vareo small automated perfect binder it introduced at the Hunkeler Innovation Days last year. It will operate a SigmaLine book product system showing on the fly format changes and it will demonstrate a Presto II Digital saddle stitcher delivering variable content products from a mix of litho and digital sections.

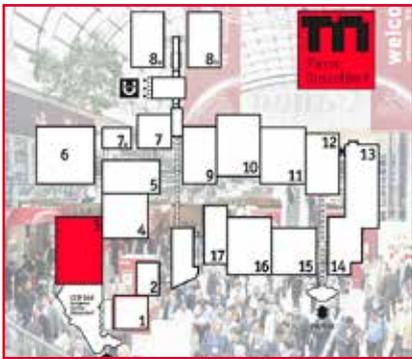
This will use barcodes to identify each job and trigger the delivery of a folded section or a sheet from a digital press. At the delivery, each product is sorted into the ideal sequence for mailing. The trimmer is fully variable to cope with different thickness or products and the job data is recorded for auditing or trouble shooting.

This points the way towards Muller Martini's take on the Internet of Things, what it calls Finishing 4.0. This expands the Connex production control system into a unit for collecting production data and

feeding this to servers to improve maintenance and servicing. It will use barcodes to shift production data and to set each machine according to the specifications of that job leading towards 'touchless' manufacture of print products.

This integration of print and finishing means also that other Muller Martini equipment will be spread across Drupa's halls to demonstrate other aspects of a fully automated workflow and print production.

HALL 3 Inks & Foiling



HALL 3 AT DRUPA HAS BECOME China Town with aisles filled by Chinese companies hoping to find distributors for their products rather than to find European customers. If they do secure sales, it will be to visitors from Asia.

For the western visitor, entertainment can be had by figuring out the haphazard translations, especially of company vision statements. There may also be fun in trying to recognise the inspiration behind that B3 litho press or this folder.

This does not apply to all Chinese companies. Many have first rate technology that rarely leaves Asia, sometimes because there is no support and sometimes because the equipment falls short of European safety standards.

BUT HALL 3 IS ALSO THE traditional home of the inks, varnishes and foil companies and this remains the case. It also houses a number of providers that cannot find space elsewhere.

For example, you will find Omet in this space. This is the Italian narrow web producer that at Labelexpo last year introduced an inkjet module based on Domino engineering. It also has offset technology for producing labels.

The ink companies worth talking with



Kurz will showcase what it calls Digital Metal where the metallic film is applied to an area printed by dry or liquid toner which it adheres to.

include Huber Group and Flint Group, both of whom are promising new inks for LED UV and for packaging UV. For printers contemplating a move into this technology, conversations with the consumables suppliers are essential. Achieving a tailored solution is both more important and trickier than with standard offset inks, the operating parameters are tighter.

UK consumables business Ultrachem is introducing a new range of blanket washes and other solvent based cleaners to give a comprehensive coverage of the litho and flexo print technologies. It has recently added distribution of Actega's water based flexo inks, suited to label and corrugated printing.

LIKE ULTRACHEM, ECS operates through a world wide network of distributors from its Nottingham premises. Its presence in Hall 3 is a promotion from the rabbit warren of Hall 7. The product range covers four solutions to both aqueous and UV coatings.

A number of exhibitors deserve greater footfall than in the past because through added value foils and varnishes, they can produce the extra impact that many print buyers are looking for. Kurz has always been dominant, often with a striking theatrical performance to pull in passers by, since nobody within 50 metres can fail to be stopped in their tracks.

THE COMPANY IS INTRODUCING new styles of holographic foil including an optical lens effect, dew drop effects and snake skin holographic foil. These can be hot or cold applied.

It will showcase what it calls Digital Metal where the metallic film is applied to an area printed by dry or liquid toner which it

adheres to. This allows variable content foil application, an extra dimension for invitations perhaps?

FOILING IS IN GROWING DEMAND in packaging for the value enhancing impact and for product validation purposes. A number of the holographic, colour shift and special effect holographic foils will meet these requirements. The Deep Lens effect delivers an image which seems to protrude from the box surrounding it.

In terms of application technology, Kurz is introducing Distorun as a module for narrow web presses to apply a foil with enough accuracy to lay down a single holographic image in register.

Gietz, a neighbour in the Hall 3, is among the leaders in foil stamping technology, either with standalone machines in different formats or as models for inline ...



Hall 3 is the traditional hall of inks and is home to both Huber Group and Flint Group, both of whom will be showcasing new inks for LED UV and packaging UV.

... production. It announced a partnership with Gallus in this area at Labelexpo with the Rofo 450 which can be added to any narrow web line.

In the past this hall has also housed screen printing lines, something that has fallen away as that technology has been superseded by large format inkjet. But screen remains important in specialist areas, some fabric and much industrial printing for example.

This accounts for the presence of Sakurai. The company will point out that it is the longest serving Japanese supplier at the show and this year will have two screen presses alongside a litho press. The screen machines are sought after for printing control panels and displays on glass or other awkward substrates.

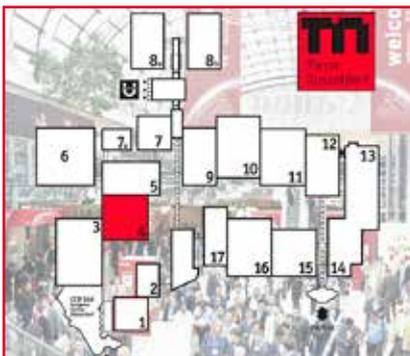
The litho machine is a five-colour double circumference B2+ format Sakurai 580 with LED UV. It prints to 785x585mm on a 790x600mm sheet at 15,000sph and includes a coater and extended delivery. Sakurai has a number of UK customers working with LED technology, created in partnership with Baldwin, including at Seacourt where the LED press is also a waterless litho machine.

From Hall 3, we turn to the second conurbation of Chinese exhibitors in Hall 4.



Sakurai will have a litho press in the shape of its B2 format 580 with LED UV. The company will also point out that it is the longest serving Japanese supplier at Drupa.

HALL 4 Lucky dip



HALL 4 CONTINUES THE CHINESE theme with further sport to be had looking at the names of businesses from Shanghai and Beijing. It is somewhat of a shame that Beiren, perhaps the largest of China's printing press manufacturers, will not be bringing its offset presses.

The best known of its consumables producers, Xingraphics, will be present. This is largest of the country's offset plate producers and the fourth largest producer in the world. It is quite capable of doing its own R&D work. This has resulted in a

number of like for like products, offering low chem systems if not as yet develop on press plates.

During Drupa it will be promoting Primus Plus, using a hybrid plate technology which it claims can save up to 30% of water used on press and 15% of ink.

This can more than match savings achieved by develop on press or chemistry free plates. The technology also results in a scratch resistant high contrast plate which has a broad operating latitude.

THE PLATE IS SUITED TO LONG runs where the cumulative effects of the ink saving potential will be greatest. Even if the water saving is just 15%, this results in an ink saving of 8%. And less water on the paper means faster drying, the opportunity to use less expensive substrates, savings in blanket wash stoppages, spray powder use and so on.

It has been tested in European conditions and performed as expected. If Xingraphics can overcome prejudices and prove that it can ship a reliable consistent plate to Europe with the right level of support, a breakthrough is possible.

Contitech, better known for its sponsorship of the European Champions League as well as for its Continental car tyres than

its printing blankets and rollers, is nevertheless a significant player. Last year it bought sleeve and roller manufacturer Tegu Walzen und Sleeves to expand its flexo business.

IT IS ALSO THE PRODUCER OF Conti-Air and Phoenix Xtra blankets. The Black Pearl blanket embeds thousands of glass beads into the blanket body and is used for demanding applications in packaging and security printing.

Another that has been on the acquisition trail is Toyo Ink. The huge Japanese company last year followed up the acquisition of Arets UV in Belgium with DYO Printing Inks, the largest ink company in Turkey, at the end of last year. With the Arets acquisition, Toyo has begun to produce H-UV suitable inks in Europe.

THE MISHMASH OF COMPANIES in this hall continues with US company Nanografix, which provides security holograms for protection of packaging, while also from the US, Pitney Bowes will have one of the largest stands in the space.

It has expanded from franking and mailing machines into providing printing equipment through a deal with HP to rebadge some of the PageWide T series ...

... inkjet machines and into personalised videos to help people understand their bills and statements.

Equally impressive will be Scodix which attracted visitors like ducks to bread at the last show. Its location alongside HP helped, but the array of effects that could be created by being able to inkjet a polymer resin, hardened under UV light, had never been seen before. This was a new area for printers to exploit.

The first machines were able to create raised image effects, halftone effects with spot varnishing and all manner of ways to enhance the printed page. By the last Drupa, Scodix was able to include glitter as part of the offering, used to decorate greetings cards and some styles of packaging. It can now offer nine styles of digital enhancement.

AS WELL AS SCODIX SENSE, the original raised image technology, these include foil application to create a wide range of effects when used with the polymers. Spot as a selective spot varnish as an alternative to using a coating plate; metallic, glitter, vari-



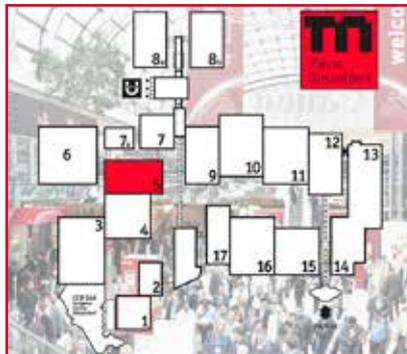
Scodix attracted visitors like ducks to bread at Drupa 2012.

able data, braille and new additions, crystals to produce jewel like effects on a greetings card and cast and cure, which in collaboration with the foiling unit can deliver a hologram effect.

This requires the addition of a dedicated foiling unit which has been built by UK company Compact Foilers following a detailed assessment of all potential partners. At Drupa the company will launch the Scodix E106, decorating a B1 sheet at rates up to 4,000sph. This is aimed squarely at packaging printers, perhaps those using Heidelberg inkjet or Landa digital presses to print low volumes of high value packaging.

THE E106 CAN DELIVER THE FULL range of effects in a single pass. A Mabeg feeder ensures consistency at speed for presentation of the sheets while a three point registration system checks the position of each as it undergoes the Scodix treatment.

HALL 5 Kodak is king



KODAK DOMINATES HALL 5, though not perhaps to the extent it has in the past. This is the first Drupa since financial restructuring, and the first since announcing its decision to parcel off its inkjet operations.

This is no lame duck technology, however. Kodak Prosper heads are in widespread operation in high speed applications and the population of Prosper presses is increas-

ing, albeit too slowly to satisfy Kodak's requirements.

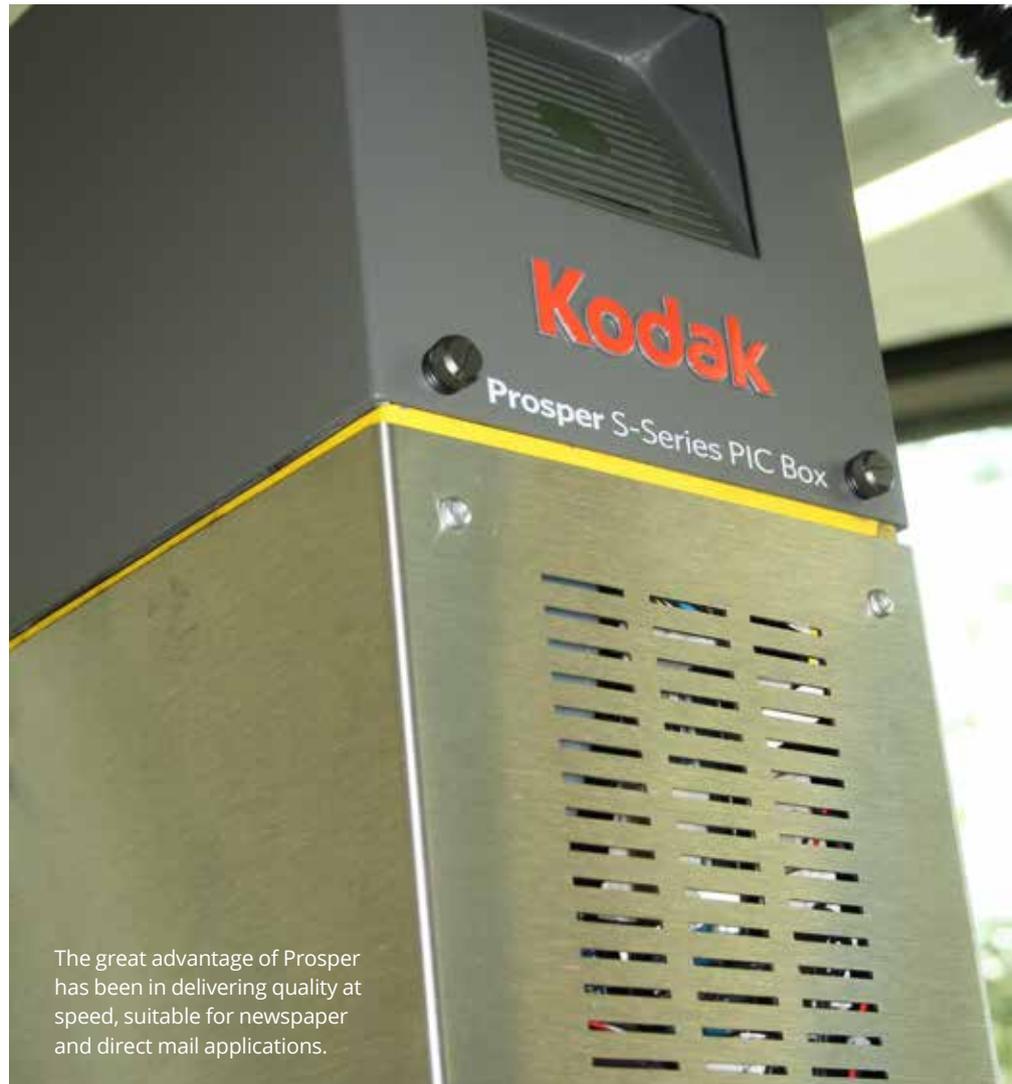
The great advantage of Prosper has been in delivering quality at speed, suitable for newspaper and direct mail applications.

The key announcement for Drupa is a new generation continuous inkjet head, the Ultrastream. This steps up the quality of the printhead, at the cost of speed, which remains a more than acceptable 150m/min.

KODAK BELIEVES IT WILL BE a head for others to build into presses and print applications, from large format to commercial and packaging printing. At Drupa the plan is to show the head mounted on a narrow web base producing samples for visitors to consider.

There is more in the bag. The Sonora develop on press plate family is extended into a UV capable version. The Trendsetter platesetter gains a high speed version able to image 68 plates an hour. Aqua Image is a new range of pressroom chemistry.

The Nexpress digital press platform adds the 3900 with the ability to cope with ...



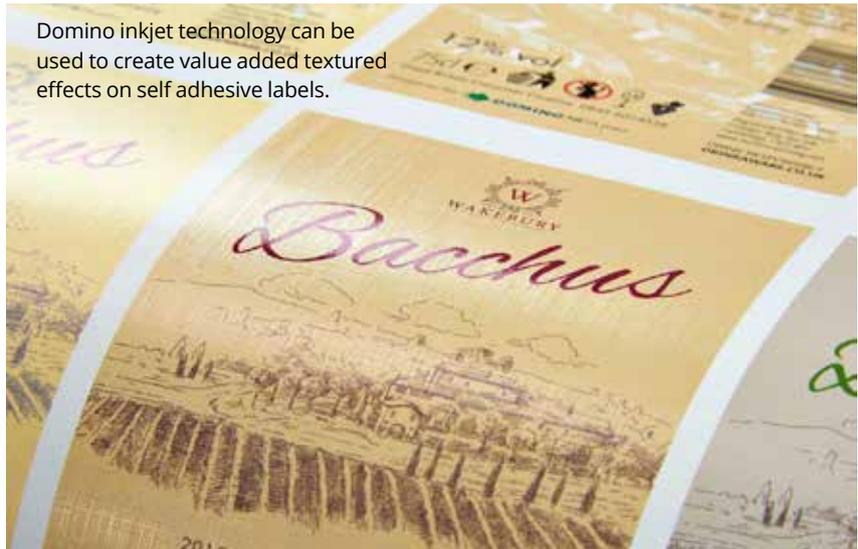
The great advantage of Prosper has been in delivering quality at speed, suitable for newspaper and direct mail applications.

... some carton boards and synthetic materials, a white toner and the opportunity to shuffle the colour sequence of the five toner slots.

The Flexcel NX flexo plate becomes NX System 16 to address a broader range of options. Kodak is beginning to enter wide web markets, with the quality of the plate particularly suitable for the new generation of mid web machines aimed at higher quality and shorter runs. The NX-C is for corrugated printers, again positioned for higher quality.

The Prinergy workflow joins the Cloud to provide greater analytics and cost control to customers. There will be integration stories to tell including with Ricoh's Totalflow workflow.

Domino inkjet technology can be used to create value added textured effects on self adhesive labels.



The Kodak Flexcel NX flexo plate becomes NX System 16 to address a broader range of options.

MGI offers digital foiling and embossing as well as inkjet applied spot varnish.



Workflow is also on Epson's mind with a control system that can operate multiple large format machines as an inkjet farm, positioned for high volume online print businesses selling posters and canvases.

The crowd puller will be a demonstration of a unit designed to recycle office paper into a reusable paper. This is something that has never been seen before and a development project within Epson. It is a long way from being commercialised and that may prevent it making the journey from Japan to Germany, but even as a video the Paperlab is astonishing.

IT IS A CHANCE TO CATCH UP WITH developments in large format print, in proofers and printing for textiles, all using the Precisioncore thin film piezo print head. Epson is pressing ahead with a new plant to expand production of heads and printers. The label printing area is just one that Epson is targeting for growth.

Label printing is key also to Domino, now a division of Brother. Its N610i label press is recognised as a leading inkjet press for higher volumes. Now it is starting to supply units, either complete print head systems or print bars, to third-party manufacturers.

AT DRUPA THIS WILL INCLUDE a 782mm wide version that can add variable content to a B2 sheetfed press and its own K630i mono press that is linked to an Ibis booklet maker to produce variable format booklets at up to 7,000 an hour.

It will show a module for digital foiling, using inkjet heads to apply an adhesive for the foil to adhere to. It will also demonstrate the impact of Textures by Domino, using the white ink channel to print a range of tactile effects.

MGI will do something similar on the JetVarnish 3D Evolution that is coming to Drupa. This is a B1+ format machine offering foiling, high lift spot varnish and flood

varnish as a full range of embellishment options.

Glunz & Jensen uses inkjet to image plates. The method is the only additive way to produce a printing plate, making it the most environmentally friendly form of platemaking. At Drupa it will launch the PlateWriter 3600 Pro, offering B1 output (up to 940 x 1140mm) and a more resilient image.

THE RESIN IT FIRES TO A GRAINED aluminium plate is hardened in an integrated finishing unit that makes the plate suitable for 50,000 impressions. It is positioned to replace first generation platemaking units or polyester plate systems that are no longer supported.

A third plate provider in this hall comes from Spanish producer Ipagsa. It has the span of plate types, including low chem, and an OEM arrangement with Cron to supply a platesetter capable of imaging UV sensitive conventional or thermal plates.

THE INKJET THEME IS ALSO covered by Riso, where the ComColor X-1 is a high speed cutsheet inkjet printer, popular with mailing houses, and attached to a bridge can run from white paper to an envelope inserting line.

Memjet has perhaps failed to live up to the revolutionary hype, but can deliver the same style of output as Riso, but also large format print and label printing. It works through OEMs, Delphax announcing a four-page inkjet press using Memjet heads at the last Drupa and these are starting to be installed.

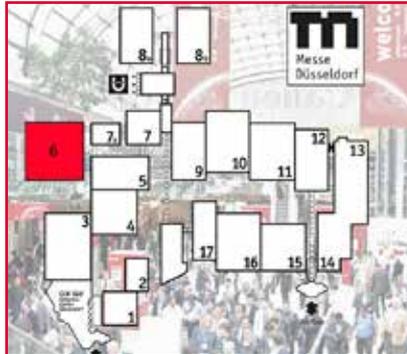
IT HAS ALSO SUPPLIED ITS 'waterfall' technology aqueous heads for the WebJet 200D, a press pitched at producing mailing letters to be inserted. It can run into an MB CasNet 52 folder to produce finished inserts.

Oki, which has long offered a white toner option with its five-colour printers, is adding a neon option and extending white to the Pro Series printers, launched as the Pro7411WT and Pro9420WT.

THE PRO6410 NONCOLOR can print a white as a fluorescent colour to act as a security mark invisible until exposed to UV light. But the biggest appeal will be the ability to print bright fluorescent effects on standard colours on materials to 250gsm and lengths to 1,320mm banners.

The neon effects are something that new acquisition Seiko has offered in large format printing for some time, showing an early benefit of this merger as well as a low cost value add option for printers.

HALL 6 Start of finishing



HALL 6 STARTS TO INTRODUCE finishing technology suppliers, previously confined to the far reaches of the fairground forcing an unwanted fitness regime on printers looking to match a litho press with a new folder or stitching line.

The reasoning is that these companies are showing technology that is suited to either digital printing or to short run litho. It is a demonstration at Drupa that the separate parts of the industry are integrating.

Hence Duplo, Horizon, Smyth, Watkiss, Vivid Laminating Technologies and DGR will have technology focused on digital production.

Horizon, represented in the UK through IFS, will bring the new BQ480 perfect binder as an upgrade from the best selling BQ470. The Smart-Stacker is its integrated unit for coping with B2

sheets, primarily from an Indigo 10000 but increasingly from the growing population of B2 digital presses providers. The AF566F Digital folder comes in Smart and inline versions. There are also solutions for complete book production lines, either inline or in a near line set up.

Duplo has yet to reach these customers though with its multi-finishers has set the standard for a device that can slit,

crease and fold, automating production of a number of products. The booklet maker line up is extended with the 600 Pro combining stitching, folding and trimming from digitally printed and collated sheets. It partners the iSaddle Pro unit announced earlier this year.

Watkiss is joining forces with CP Bourg and Challenger to present the Centre of Print Finishing Excellence to meet a wider spread of customer needs than each can supply alone.

The three have worked on integration and automation to culminate in a demonstration that includes a CP Bourg sheet feeder running into a Watkiss PowerSquare 224 booklet maker; a Challenger three-knife trimmer fed from the new Bourg Preparation Module and the Challenger CMT-130TC, an on demand book trimmer operated from a feeder or inline to a binder.

Smyth will continue the digital theme offering units to deliver sewn sections and books from digitally printed sheets, either fed by hand or in various automated configurations. It includes the Smyth Magnum for oversized sewn books.

MBO will be the dominant stand for UK agent Friedheim International with 11 folders either under its own name or that of H+H. It will launch the Le Mans, a high speed folding system designed for high automated industrial production.

The Monza system will deliver folded ...



Vivid Laminating appears to straddle both small format lamination and large format inkjet.

Horizon, represented in the UK through IFS, will bring the new BQ480 perfect binder as an upgrade from the best selling BQ470.



... sections in logs, designed to increase productivity through one man operation.

H+H WILL FOCUS ON pharmaceutical leaflet production and a new Stamina carton folding line including a rotary die cutter from Bograma to create a sheet to glued product in a single action using cameras to monitor quality. Bograma will also have offline rotary die cutting and a RoboStack system to automate handling of printed and cut glued labels and other small format products.

GUK will provide a further option for folders, particularly for pharmaceutical folding.

VIVID LAMINATING APPEARS to straddle both small format lamination and large format inkjet. This is also the hall for Durst, Italian supplier of large format, label and ceramic print presses. The latter does not belong at Drupa. Instead flatbed machines focus on large format display and corrugated printing.

Durst is pressing into packaging with a new aqueous UV ink that is reported to deliver a high quality result thanks to thin films of ink and eco friendly print because water is the carrier fluid. It was first seen at Fespa in 2015 and should be a key pointer to the future of print production, at least in this area.

CALDERA IS ALSO FLYING THE FLAG for large format printing with the sort of workflow system that is going to be neces-

sary as the large format sector moves away from artisan production to more professional set ups. Last time around Xerox 'hid' its Memjet powered large format press on the Caldera stand. Might something similar be planned for 2016?

Xaar will introduce the P4 thin film piezo print head, its first head designed for aqueous inks which it will be trying to interest OEM developers in adopting, perhaps even from sheetfed press providers.

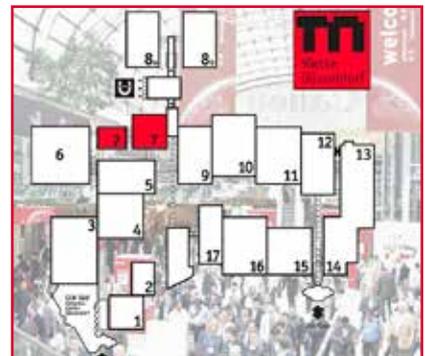
LAST YEAR IT PRODUCED THE XAAR Printbar as a first sub system product for integration into different production lines to add an element of digital print. It was shown at Labelexpo last year with opportunities in labels and other forms of packaging.

The UK technology company is also bringing the latest Xaar 1003 print head for industrial and large format applications.

A SECOND BREAKTHROUGH technology developed in the UK will be demonstrated by DataLase. This uses a coating that is applied on a standard printing press, say a label press, and which is activated by a proprietary laser system to print a promotional message. DataLase has come from a coding background, used to adding batch numbers or sell by dates. The development promises to be one of the talking points of the show.

The final theme for Hall 6 is inserting where Kern and close partner KAS Paper Systems will have the latest in inserting and mailing software.

HALLS 7a+b Another level



HALL 7 IS THE THREE-LEVEL HALL that houses companies that have not yet become large enough to afford a space on the main floor of the show. These are software companies with single products that might just be the digital widget to solve a host of expensive problems. Or not.

Those in the Drupa Innovation Park on the ground floor of Hall 7 will be lacking in marketing skills, perhaps even language skills. It is almost impossible to pick out companies that might be worth a look. It's a lucky DIP.

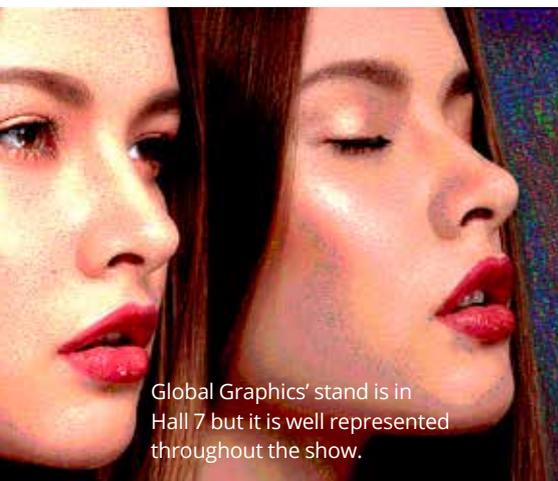
The adjacent Hall 7a is for those that have escaped the DIP and is frequented by high tech businesses. This is where Massivit will show a giant 3D printer, where Chili Publish will have its advanced online editing tools, complemented ...

... by the truly innovative Rendro PDF viewing technology.

This is where Tharstern will have its MIS, where Taopix has photobook software, where Bodoni, Alwan and Mellowcolour have solutions to colour consistency and colour management issues.

Global Graphics will have a stand in Hall 7 as well as representation on numerous stands around the show because they are using either Jaws or Harlequin Rips. In this hall the company will discuss the advantages that smart thinking and software can bring to inkjet press vendors who have not yet considered half tone screening to be truly important. If inkjet is to make a real breakthrough into commercial print, they will find that screening technology is needed.

Chili's Rendro software will be equally important. Despite the universality of PDF, there is no standard way to control the viewing of print standard files, as each device whether desktop, tablet or mobile phone, has its own way of rendering the file. With transparency, knock outs and similar features being interpreted differently, there are consequences for workflows where the PDF is used a sign off proof, particularly on a mobile device.



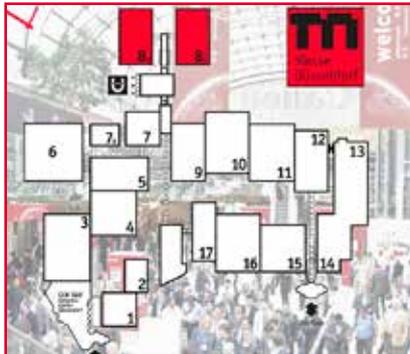
Global Graphics' stand is in Hall 7 but it is well represented throughout the show.

Rendro, apparently Welsh for rendering, tackles this and ensures that the PDF is seen correctly. It is going to appear in workflows across the spectrum and is already part of the Enfocus tool set.

There are workflow tools from Onevision, the powerful Hybrid Solutions packaging software together with Creative Edge's 3D viewing and printing applications. 3D is also part of the Stratasys stand.

Both benefit from being small halls in comparison to others on the site, which can make them less oppressive than some of the others. Next it is through the atrium to Hall 8, divided into Hall 8a and Hall 8b and home to much of the digital printing technology at Drupa.

HALLS 8a+8b Entirely inkjet



HALLS 8A AND 8B SHOULD BE named the inkjet halls. They came into use for the 2008 show when HP showed the technology that has become the PageWide T web presses, Fuji unveiled the Jetpress and Screen the Truepress JetSX.

HP has moved away to occupy a hall of its own, while that Screen machine is unlikely to put in an appearance. The Jetpress 720S as it now is, remains as the centrepiece of Fuji's display for Drupa 2016.

And across the two spaces there will be other inkjet machines from Canon, Konica Minolta, Ricoh, Xerox and Agfa as well as from Screen.

ITS MAIN ATTRACTION WILL BE a Truepress Jet520HD, the latest generation of its webfed inkjet press. Earlier versions have been successful in transactional, functional document and book printing, now the latest provides the opportunity to print marketing documents at high quality. To demonstrate this, Screen will run from marketing automation software to create highly personalised catalogues, to be finished on a Horizon stitcher.

The 350UV label press will run an anti counterfeiting application involving tracking and individual barcodes, while the large format 3200UV appears in a new Mark 11 version. Like other equipment this will be part of the trend to link all print equipment to the cloud for maintenance and diagnostics, named the Trust Network Service.

SCREEN ALSO PLANS TO DISPLAY equipment that uses print related technology applied to printed circuit board production, for biomedical scanning and quality inspection in the car industry. And there will be a rather more conventional update of Plate-Rite platesetters.

These are also used by Fujifilm which is across the atrium in Hall 8b. It too is wedded

to a future in inkjet printing, the results of which are visible in the partnership with Heidelberg.

Its B2 Jetpress 720S forms the heart of the stand along with large format inkjet, represented by the UviStar 320. This is a new machine being launched at Drupa rather than at the recent Fespa show. It is joined by the latest Acuity flatbed machine, the LED3200R, and the high performance Onset X-2. There is also a packaging press project in collaboration with Miyakoshi using UV inkjet.

For those with tired legs, the discussion zone is shaped to replicate the experienced of a Japanese tea house.

The Fujifilm stand flows into that of Xerox, with an overlap representing Fuji-Xerox, the company that builds many print engines for Xerox and is the sales and support channel for Xerox in Asia.

Xerox too has caught on to the inkjet opportunity and will have three approaches on view. The Rialto was introduced more than a year ago as a support to a larger webfed operation. It uses the same paper as the larger Impika machines, and delivers single cut sheet pages, suitable for variable content letters.



The KM-1 B2 press was very much a concept machine but is now in production.

The new machines are the single-engine Trivor 2400, a first product devised between Xerox engineers and Impika's inkjet expertise.

The Brenva HD is a first cut sheet machine, sharing the look and feel of the iGen engines and printing similar two-page formats. Speed is higher, but quality below that of the latest iGens, at least for now.

There will be an emphasis on packaging, exploiting the fifth colour unit on the iGen5 and ability to print to 600 micron boards. Digital packaging, it says, will grow at 22.5% CAGR between 2014-19.

The overriding theme is 'Let the Work Flow' pointing to developments in automation across the application areas featured. As



Ricoh will have the VC60000 inkjet web press along with improved versions of the Pro C7100 and Pro C9100 cut sheet presses which have already proved highly successful machines



Fujifilm's B2 Jetpress 720S forms the heart of the stand along with large format in the shape of the UviStar 320.

well as packaging these include direct mail, catalogues, books and photo products.

There will be no Cirque de Soleil performances and therefore no floor to ceiling wall at the division between the Xerox stand and that of Konica Minolta.

This remains a source of simmering friction between the two companies, but has not prevented KM taking the same space as in 2012. Then its display was rather sparse and minimalist.

The KM-1 B2 inkjet press was very much a concept machine. Now it is in production and the first presses are in full operation. This will provide good feedback on the sorts of applications that it can target.

Agfa will occupy one end of the hall with

a combination of large format, plates and workflow applications, based naturally in the Cloud.

The plate portfolio stresses what Agfa calls Eco3, economic, ecological and extra convenient in commercial and newspaper versions. The process free Azura TU plate extends to VLF formats, there are new higher speed platesetters for commercial and newspapers.

In wide format the direction is towards integration through the Asanti workflow and high productivity with the Jeti Tauro using a three-quarters automation system. In workflow Apogee reaches V10 including integration with Arkitek, the cross platform publishing system for newspapers and magazines.

The final large block in this hall is taken

by Esko, a must-visit location for those in packaging. The range of products touches every aspect of packaging production from design and concept to paletisation.

On the way, sister company XRite Pantone will feature PantoneGo to manage brand colours, extended to include a Private Cloud to hold and share special colours.

This will be one of six zones that form a packaging journey culminating in Kongsberg cutting tables in the finishing zone. As of Drupa, the range will be divided into flexible versions and high productivity versions. The printing and ink management zone will focus on colour management for flexible packaging for fixed palette printing to improve press utilisation. ...

... It pairs with the flexo platemaking area where there is a new integrated imaging and processing system, launched as the CDI Crystal 5080 XPS. It means greater throughput for flexo plate production.

Back into Hall 8a, Canon and Ricoh dominate the centre of the space. Ricoh will have the VC60000 inkjet web press along with improved versions of the Pro C7100 and Pro C9100 cut sheet presses which have already proved highly successful machines.

ONE OF THESE IS the introduction of a TotalFlow digital front end, essentially the same as the Prinect DFE developed by Heidelberg for the Ricoh machines.

Again there is an emphasis on finished applications and integrated production, including the use of cloud services to improve workflows, including variable content applications using the Mathis Software data cleansing tool.

Ricoh will also show further inroads into large format. Like KM Ricoh is a major printhead producer, used on the VC60000, and by a growing range of large format and industrial print suppliers. This includes print heads for 3D, but it is not clear whether Ricoh will show 3D printing.

CANON CERTAINLY PLANS TO SHOW and discuss its plans for 3D printing along with developments in webfed inkjet to take it into commercial print applications alongside transactional and book printing. And while it will talk about packaging applications for its cutsheet presses, work on the Infinistream a liquid toner press for carton printing, has ceased.



The ImageStream is the inkjet press that will take Canon into commercial applications.

The ImageStream 2400 is the inkjet press that will take Canon into commercial applications, printing on standard offset papers without pre treatment. The ColorStream 6000 Chroma uses a new high pigment ink set to achieve commercial print quality.

THERE IS A CUTSHEET INKJET press the i300, which like the Xerox sheetfed inkjet press, produces two-page output at speeds that toner cannot match. The toner flag is waved by the 100ppm C10000VP launched at the end of last year.

Like many, Canon has been reticent about details of the exhibits. There is, however, a hashtag #UnleashPrint whose purpose becomes clear at the show.

Xeikon has persisted with liquid toner technology it showed

in a development form at Drupa last time. This is now part of the Trillium One which Xeikon has developed in partnership with Miyakoshi.

It is currently a 60m/min web press, though with a development path that will double the running speed in the foreseeable future. Xeikon hopes that this will establish it in document printing, offering print on coated papers, with high ink coverage and delivering high quality at affordable rates. These are areas where inkjet has been relatively weak.

XEIKON WILL REINFORCE its strength in packaging and labels with the first offerings in its Fusion programme aiming to link non Xeikon products in a digital workflow controlled by the Xeikon controller.

A first development in here is a new cutting and creasing platen to match the Xeikon web width and with a lesser cutting area than a conventional machine to keep costs under control.

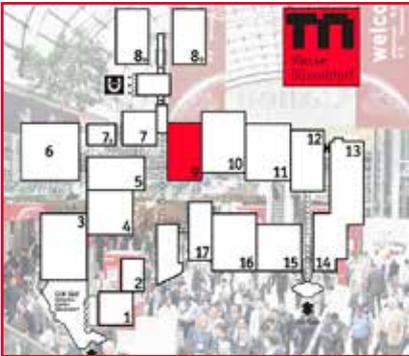
The twin hall 8s will provide enough to justify the trip to Drupa on their own. Fortunately perhaps the visitor has to return to the main show ground via an atrium with plenty of opportunity to catch refreshment before embarking on Hall 9. ...



Xeikon hopes that the Trillium One will establish itself in document printing, offering print on coated papers.

HALL 9

Landa land



AFTER HALLS 1 AND 17, HALL 9 will be the most visited at this year's show. The reason is simple: Landa. The introduction of Landa Digital Printing was the unquestionable highlight of 2012 and the one really memorable presentation.

Chairman Benny Landa is promising to do the same again, albeit with a new chief executive and management team in place to convert deposits into real orders.

There will be three presses in operation. Two will be S10 models, one running with perfecting, and a W10, the press aimed at flexible packaging. There will be armfuls of samples for every visitor and five presentations per day led by the originator of nanographic printing himself.

In addition, there will be a new product, being called metallography. Like a cold foil, this attaches the metallic effect to an area determined by a latent image created by a glue which can be fired by inkjet. Unlike cold foil systems, there is no wasted film and no carrier sheet to pay for and then dispose of.

Instead the nano sized metal flakes attach

to the prepared substrate and the rest shake free to be applied on the next revolution. It will be part of an Omet narrow width press and will be a technology demonstration rather than purchasable system.

There is more to Hall 9 than Landa. Alongside the LDP stand are those for print quality control systems supplier AVT, finishing technology from Highcon and EFI. All are part of the Landa project, supplying components to the press or one of Landa's investments in the case of Highcon.

It has three machines on show, the Highcon Beam offering a higher operating speed, the Euclid II, Highcon's original digital creamer/cutter and the Pulse. The Israeli company is also to use its digital cutting skills in a 3D model making machine that cuts successive outlines from board which when placed on top of each other become a solid object. It will be much faster than conventional model making and cheaper and like Massivit creates an extra dimension to display printing.

THIS HALL HAS PLENTY OF THAT. At the top end of the hall there is a collection of large format suppliers including Mimaki, SwissQPrint, Roland DG, Seiko and Mutoh that showed new products at Fespa Digital recently and are unleashing them on the commercial print industry. Of note will be the Mimaki JV and Roland DG's Print-Vis which create new price points for their performance.

EFI sits between these two worlds. It has developed the Fiery front end to drive the Landa press at the required speed, and has been expanding its interests in large format inkjet printing. There is a new top of the range Vutek HS125, its fastest yet; the fruits from the acquisition of Matan as a provider of super wide rollfed machines, Reggiani

as a textile printer provider and Shuttleworth to slot into the productivity software division.

Most of all, however, will be a new press that takes EFI into the heart of the corrugated packaging market. This is a reeffed press for preprint applications, narrower than the giant HP PageWide 1100S which has a print width of 2.8 metres, but still challenging the corrugated market. While aimed at corrugated, the platform will have broader applications in future.

ANOTHER WITH DESIGNS ON corrugated is Spanish company Barberan. It has a machine using Seiko printheads for post print corrugated developed from its experience in producing printing presses for printing wood laminates. It has installed a number of machines for the corrugated sector.

A handful of Chinese companies complete the hall, most looking for representation in Europe and North America. The outlier is Miyakoshi, a Japanese company with a tradition in printing. Some will recall web offset presses for business forms production in the 1980s. More recently it has supplied Océ with the ColorStream high speed inkjet presses. It is also working with Xeikon and Fujifilm.

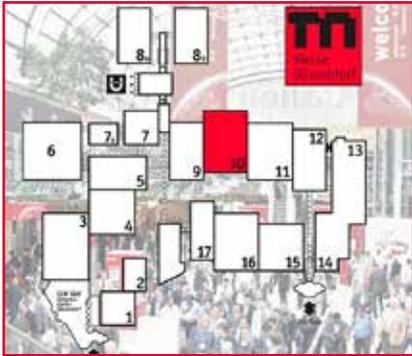
The project with Xeikon on a high viscosity liquid toner press (HP Indigo presses use a low viscosity liquid toner) has resulted in a machine with the Miyakoshi badge as has work with RMGT to deliver a sheetfed press using the same core technology.

Its purpose at Drupa is as much about securing further partnerships as selling machines. Last time where these technologies were in concept form, the stand was almost deserted, attracting few visitors. That should not happen this time. ...



Landa will be showing two S10 models, one running with perfecting, and a W10, the press aimed at the flexible packaging industry.

HALL 10
Specialism...



HALL 10 BEGINS THE RUN OF halls filled with specialised equipment for printing on all manner of things that do not qualify as commercial printing. That said there are islands of interest in these halls that are worthy of attention.

The prime exhibitor in Hall 10, for example, is Bobst, the leading supplier of finishing equipment. Unfortunately its post print digital press for corrugated is simply too large to bring to Drupa, so visitors will have to be content with video, samples and for those with serious intent, the invitation to visit one of the beta sites. Plans for a webfed carton press using inkjet technology will be explained, though again there will be no press.

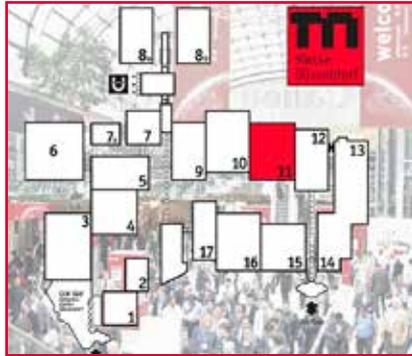
Instead there is to be a high speed platen, folder glue for cartons, new mid web flexo press and a narrow web label press from Bobst Firenze which is configured to compete with digital presses. The seven-colour machine prints with an expanded colour ink set to eliminate the need to print with special colours and wash up between jobs. The plates are locked into position with automatic registration to shorten makeready. What it cannot do is offer variable data, but it shows that UV flexo is not rolling over.

Comexi provides further flexo print technology while FFEI, SF Services and others provide a focus on labels. These are part of a Picon enclave that also includes web to print software developer Infigo and Imprint MIS, both Drupa debutants. Both also have new versions to show off.

Rollem also features as part of the Picon zone, featuring machines for high volume finishing, cutting and slitting business cards or playing cards for example. It is bespoke engineering of the sort the UK excels.

Cito is also worth a stop to look at inline cutting dies that are attached to the final unit of a sheetfed press.

HALL 11
...Specialism



HALL 11 CONTINUES THE THEME of featuring highly specialised equipment for the most part. There are companies that it may be worth visiting to see how to print on coffee cups. Many in this hall are also Chinese companies that can create intricate paper processing machines.

The key exhibitor is Autobond, promising to show inline foiling to go along with lamination and inkjet spot varnishing. It is not a Scodix, but for a more modest outlay can deliver value add finishing that can command a higher margin than standard print.

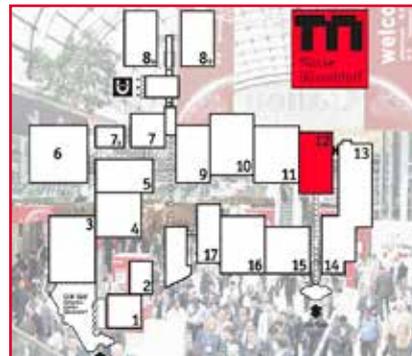


US stalwart Brandtjen & Kluge delivers specialist foiling technology, while D&K competes with Autobond in terms of laminating equipment.

A newcomer to Drupa is Canadian technology company LasX. It offers digitally controlled laser cutting for finishing a collection of products that might be formed from a sheet from a digital press. In collaboration with a Brandtjen & Kluge machine this can result in a full carton line. Here the laser is user to score a fold as well as to make the cut.

Another of the traditional denizens of this hall is drill specialist Dimuken, while Asahi is a spill over from Hall 10 in offering flexo plates that achieve very high quality print reproduction and again move towards reducing the need to run spot colours by printing with a seven-colour set and fine resolution plates.

HALL 12
Here there be dragons



VISIT HALL 12 JUST TO BE ABLE to claim that you have set foot in each of the halls at Drupa 2016. There is little point otherwise.

Corrugated converters can head for the British Converting Solutions, fresh from its winning the Queen's Award for Enterprise in the International Trade category. The latest introduction is the BCS Boxer, a simple to operate corrugated box maker which can be fitted with integrated inkjet printing.

There is a laser cutting from Trotec and a number of others; strapping systems from Mosca and slitting and winding equipment from Atlas Converting Equipment.

GEW will offer UV lamp technology, now extending into LED systems which can be retrofitted to any number of presses, including those up to 2.5 metres wide. This is covered by the latest Nuva units. These use mercury lamps but can be upgraded to LED.

There is a multipoint measurement system to check that the correct UV dosage has been delivered to any point, so avoiding problems associated with an incomplete cure. For more specialist applications there is the ability to cure a wider range of products, including thin films.

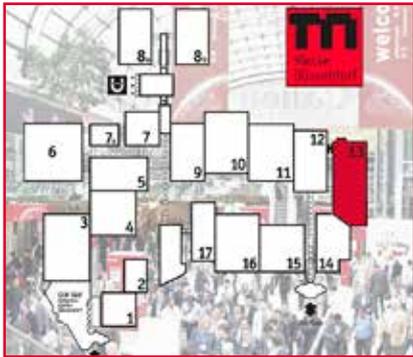
Cyan X puts in an appearance to promote its X-Presser, a unit to accompany its eco-seal self seal coating. As well as simple to work with coating, envelopes, once opened cannot be resealed, offering a measure of tamper evident security for mailings.

The company will also be promoting Foil-tone's retrofit inline cold foiling technology, Ikeuchi humidifiers and a basket of pressroom chemicals.

The Picon area will also include Edale, not showing its label presses, but promoting its engineering skills to other manufacturers to build on success it has had with the Digicon line for HP Indigo.

And that's it, possibly the least significant hall for commercial printers at Drupa. ...

HALL 13 Used and glued



AFTER THE ARIDNESS OF THE previous two halls, Hall 13 at least provides opportunities for refreshment: it is the hall occupied by secondhand machinery suppliers, who for the most part will be operating stands which lean heavily on hospitality and conviviality.

For those companies contemplating a Drupa purchase, the dealers are on hand to help organise the departure of existing equipment.

In and among the dealers, Benford UV can discuss the advantages of adding single-lamp UV systems to existing presses based on experience of multiple installations in the US. As well as the Eco-cure system, Benford is well versed in installations of standard systems in the delivery and as interdeck dryers.

Hall 13 used to be home to the giants of the finishing industry, but as many companies moved to Hall 6, the remainder of the exhibition was forced to shuffle around. Some finishing equipment remains in this vast space.

Planatol is worth a visit to look at Planamelt, an adhesive which is as strong as a

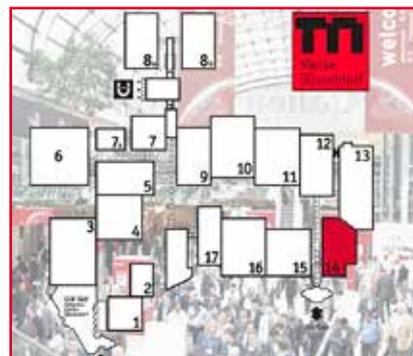
PUR glue and as easily to use as a hot melt. There has been considerable interest in the glue and uptake since a report appeared in *Print Business* last year.

Baumer HHS is inviting customers to its plant, which is 15 minutes away in Krefeld, as well as discussing glue on its stand. The company happily markets this as Drupa Extended, to include Xcam camera systems, Xtend 2 controllers and Xmelt holt melt adhesives.

The company reckons that it cannot do justice to the glues, applicators and quality control systems within its stand space, particularly with regards to the applications and configurations that are possible.

And with that, the explorer will turn for home with the last leg of the journey along halls that bring more printing presses as well as finishing equipment.

HALL 14 Manrolands



IF FINISHING EQUIPMENT HAS been used into Hall 14, it does not dominate. That goes to the two Manroland companies, Sheetfed and Web Systems, which, as a combined business, used to be resident in Hall 6.



The Manroland Sheetfed stand will feature the newest Roland 700 Evolution, the latest incarnation of a well proven press design. The company will show the value added features that can be applied to the press including inline cold foiling. There will be an LED UV unit and improvements to plate changing, the ink train and moves towards one touch start up.

THE PRESS WILL ALSO INCLUDE a new operating console and interface with touch screen controls. There will be an emphasis on the wider service and support that Manroland Sheetfed can offer, this being a universal theme as the volume of new presses the market can absorb is expected to remain muted.

Druck Chemie, the consumables supplier that is part of the same Langley Holdings group that owns Manroland Sheetfed, is also in the same hall though not next to its sister company.

Manroland Web Systems will focus on the inline finishing capabilities of its FoldLine and FormerLine systems. These are matched to the latest generation of inkjet web presses to deliver book blocks, newspapers or magazines through the system without slowing the press. The units can switch between formats and are built like folders from a web offset press rather than being beefed up paper processing machines.

THE ARGUMENT ABOUT WHAT IS needed in terms of finishing for inkjet printing will be a recurring discussion for Drupa. Will the best approach be to adapt technology developed for high speed web offset and gravure machines, or will lightweight solutions be sufficient for the limited speeds and web widths that inkjet operates at?

Manroland will also be able to talk web offset, remaining confident that it can meet requirements from both heatset and ...



Baumer HHS reckons that it cannot do justice to the glues, applicators and quality control systems within its stand space, particularly with regards to the applications and configurations that are possible.

... newspaper printers, but the longer term future belongs with digital.

This is the direction for the remainder of the hall, dominated by finishing equipment suppliers. Zechini is an Italian business that has focused on print on demand hardback book production. The X-Book Evolution is aimed at the shorter runs with X-Case Plus for medium runs.



Zechini concentrates on print on demand hardback book production.

There are also units for end papering and back lining and the promise that any visitor registering at the stand will have a tree planted in their name.

Zechini is represented in the UK by Friedheim International which also has Baumann and Wohlenberg in the same hall. Wohlenberg plans to show an 18-clamp Vento binder running with two hot melt applicators, cover feeder and two pressing stations into a fully automatic three-knife trimmer.

THE BAUMANN HALF OF THE STAND will focus on its interpretation of Industrie 4.0, calling it Cutting 4.0. This has a single jogging system feeding two or more cutters via a BMR buffer unit which has 20 slots. It is intended to allow operators running one job to select the next stack which will be presented without a waiting period.

Blumer has a new Labelbänder for square cut labels to add a further level of automation to this sector. Constantin Hang is Friedheim's drilling equipment provider.

More interesting will be the increasing automation of finishing systems allied to a focus on shorter run production. Swiss company Imaging Solutions has concentrated on equipment for photoproducts and will also be present as part of a system in the HP halls and running a canvas stretching unit on the Fujifilm stand.

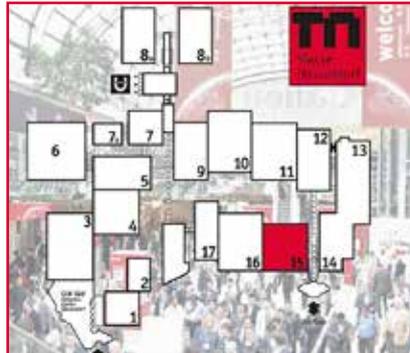
IT WILL LAUNCH THE FASTBLOCK 04, designed to produce up to 1,000 lay flat case bound books a day with all adjustments for format, creasing, casing in and so on carried out automatically. The FastBook Basic is the entry level unit for 50 lay flat books a day. The FastBooklet is designed to create softcover pocket books from smartphone apps aimed at digital natives.

There is automated materials handling from Beck's and Rima's palletising robots, web finishing from Gammerler and so on. There are also outliers: CMC is showing polywrapping, envelope inserting and its latest carton wrapping equipment, first shown at the last Ipex, aimed at the e-commerce sector.

Air Motion Systems is the lead provider of retrofit LED UV technology, now being extended into flexo and other print technologies. It plans to launch a unit to blend wide spectrum UV and the narrow spectrum of LED UV. This will tackle criticisms about the availability of coatings and special inks for LED only systems.

There is a new unit to fit low pile delivery sheetfed presses which have been excluded from upgrades because of the space restrictions. Its third introduction is an air cooled approach to removing heat build up in the diode block from LED technology.

HALL 15 Flexo muscle



THERE WILL BE SOME LARGE FLEXO machines in Hall 15 as well as Komori's sheetfed presses, Ferag finishing equipment and the Goss stand which also hosts sister company Presstek.

Windmoeller & Hoelscher is a German manufacturer and consequently has signed up for Industrie 4.0, under the Packaging 4.0 concept. It plans to announce a new generation of flexo and gravure presses, offering the degree of intelligence to automate set up and to feed operational data back to the central hub.

The display at Drupa is necessarily limited and like Heidelberg, W&H will run an open house at its 3,000m² centre in Lengerich, three times the space it has inside Drupa.

Czech packaging press manufacturer Soma will concentrate on the Optima flexo press designed for short run production.

It comes as a mid width and the wide web Optima 2 version. The concept is that by using fast change plate sleeves and a fixed colour sequence, the press can hit at least 90% of normal production requirements, but with faster changeover reducing running costs.

CURRENTLY SOMA IS TALKING of five technologies that are part of the press and which will deliver the vision. This includes a modular approach allowing separate upgradability of reel handling and other finishing.

It is not talking about the inking system at this point. Improvements to waste management and the control system are also under wraps.

Goss will also be talking packaging, using litho rather than flexo on the Sunday Vpak press. It will not be running presses, cost and space preclude this especially with a range that covers commercial web offset, newspapers and with Contiweb, peripherals sold through other suppliers. These now include HP which is working with the company on supply of reel stands for the PageWide T series presses.

The commercial print focus will be on the M600 and Sunday presses; the newspapers will feature the Magnum Compact developed for short run newspapers and also for book production, recalling how Harris (one of the Goss ancestors) was a popular choice for fixed format book production.

FERAG IS RELATED TO GOSS, both in supplying the same customer base, and also in being a fixture in this part of Drupa. Its main product introduction is the One2Out. It combines different production strands into a pre collated bundle of advertising flyers. It addresses a market which has powered web offset in Europe, but which is almost unknown in the UK.

However, this can be used for direct mail as well as newspaper inserts. There are new features on the EasySert inserter built around the Ferag collating drum. A major implementation at a Swiss newspaper opens a way for print publishers to increase their appeal to advertisers. Details will be forthcoming at the show.

QuadTech will also spread across commercial web offset and into the expanding packaging space. Four key products are due to be featured: a colour quality control system for packaging converters; a defect detection system for the same customer; a colour measurement tool again aimed at packaging applications and a colour to colour registration system for newspaper printers.

These will extend the scope of its ...

... AccuCam, MultiCam, SpectraCam and Autotron products. QTI has also put together a programme of third-party speakers from colour management, from inks suppliers and software providers to discuss wider industry trends that Quad fits in with.

Presstek is taking a corner of the Goss stand with a presentation that covers its DI presses and its plates and platesetters. A Presstek 52DI will be printing on plastics with the Eco-UV drying system.

There is a new colour measurement system for the press and the launch of two plates in the Dimension range: Dimension Pro 2, a thermal CTP plate and a violet sensitive version. And there will be a develop on press plate, the GemPlate, to go alongside the Zahara, chem-free waterless plate.

The main draw for this hall for most printers will be Komori. The Impremia IS29 is the B2 inkjet press which is commercially launched at the show and the NS40, the press with Landa's technology that will not be commercially available until next year.

More printers will be interested in the launch of the Lithrone GL29, a new flagship for the four-page format. The precise specifications will not be released until the show and the press itself will not be available until the end of the year.

It shares the approach of the GL40 and has ink mist collectors to deal with one of the problems of high speed running and control systems to pick out the smallest of defects.

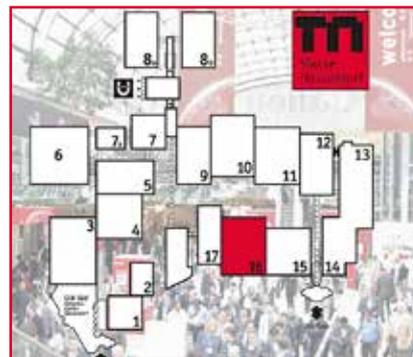
There will be no web press on show, making the Lithrone GX640+C the largest machine on the stand. This has an 18,000sph top speed, faster wash up for inking rollers, synchronous plate change and PDF comparator. A tandem perfector version of the GX platform will be the paper press running with minimal make ready between jobs.

There is the Lithrone G37 as a new sheetfed press which will be the first Komori press to be supplied with LED UV rather than H-UV. This will be H-UV L and is considered an entry level option limited to four-colour printing on papers.

The K-Station 4 is the latest system to link the press to production workflows and MIS and will be explained as a technical demonstration showing how it can link to mobile as well as desktop devices.

Equally Komori will show the first guillotine built under the shift in focus to becoming a Printing Products Engineering Provider. Further developments can be expected in this direction while the introduction, to Europe at least, of Komori's own range of consumables is another step towards full integration of press and the systems that are part of printing.

HALL 16 Press for action



HALL 16 WILL BE FAMILIAR to any regular Drupa visitors: Winkler & Dunnebler with envelope making equipment, Kolbus bindery, Cerutti and KBA are all regulars.

Some like RMGT, the combined force of Ryobi and Mitsubishi Heavy Industries, have been squeezed from Hall 17 by the might of HP wanting that hall to itself. Alongside is Baldwin, Compact Foilers, Meccanotecnica, Vits, Böttcher and Hell Gravure Systems to fill the gaps.

W+D WILL LAUNCH A NEW envelope maker specifically for short run direct mail applications. Details are scanty at the point of writing, but will stress simplicity of operation and connectivity to semi-automatic boxing machinery.

There will also be the W+D 234 DL, an envelope overprinter that uses four-colour drop on demand inkjet heads able to run up to 30,000 envelopes an hour.

Cerutti is focused on gravure printing, either for publication gravure or packaging. The latter is a stronger market as the opportunity for publication gravure becomes restricted. The focus will be on packaging through the best selling R98X press and into carton printing.

The die cutters produced by Iberica are part of the stand including a new registration system and the Optima 106, a cost effective B1 die cutter.

KOLBUS WILL ALSO HAVE a strong focus on packaging having introduced its first box making units four years ago. The line incorporates grooving, case lining and magnetic catch application. Each unit will adjust to cope with different format boxes, rather than needing to make ready using new tools.

Now the division responsible for luxury packaging takes its place alongside perfect binding and the TFold technology for inkjet web presses acquired from the remains of Timsons press building operation. This is now the WF100 Webfolder able to process 1.5 million pages an hour.

The company will unveil the KM200 zero makeready perfect binder able to adjust on the fly for format changes as well as pagination differences. The key to this is the HD-HD 143 three-knife trimmer that is controlled through the software. It is as comfortable dealing with thousands of books of the same style as with frequent changes between books.

THE ZERO MAKEREADY ETHOS applies to the BF513 hardback book line taking this functionality to the 30 books a minute sector.

The KM610 is a new perfect binder aimed at magazine and catalogue production, accelerated from 5,000 books an ...



Komori's Impremia IS29 is the B2 inkjet press which is commercially launched at the show and the NS40, the press with Landa's technology that will not be commercially available until next year.

... hour to 7,000bph in this version. This too connects to the new trimmer.

Vits plans to show a special products finishing line that includes a web feed from a litho printed reel and an inkjet reel combining the best of both worlds to deliver a new twist on inline finishing applications.

COMPACT FOILERS, which supplies Scodix with the CF75 Ultra unit, has its own operations supplying inline foiling equipment for sheetfed presses. Its CF1000 portable foiler separates the unwind and rewind from the docking station so can be moved to different positions in the press or to a different press with its own docking station.

Baldwin has been at the forefront of LED UV developments and comes to Drupa with what it is calling 'broadband LED UV'. This is a combination of different LEDs produc-

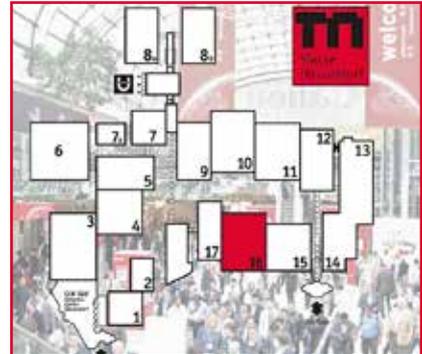
tered delivery to run non stop. The RMGT 9 A1 press will be an eight-colour perfecter to demonstrate fast turnaround capabilities.

Across the hall, KBA well also be running a long perfecting press as close to non stop as possible. This is the eight-colour Rapida 106 which will vie with the six-colour Rapida 145 with coating as the star of the stand. A Rapida 75 Pro in a five-colour configuration will complete the line up. This is a new press with many of the advanced features of the Rapida 76 B2 press.

It will show inkjet printing as the RotaJet77 in a single-sided configuration suited to decor and packaging applications. With a second print tower, it will print books, publication and advertising collateral.

KBA has refocused on opportunities in packaging with the Neo XD LR flexo press. On the adjacent Vinfoil stand, a Rapida 105 will have the Dutch company's inline foiling

HALL 17 HP source



HP HAS BECOME THE LARGEST exhibitor at Drupa, filling every square metre of Hall 17. Even at its peak, Heidelberg would share some of its space with



ing energy at different wavelengths to spread the ability of LED UV into use of conventional chemistries and photoinitiators.

The benefits will come in consumable development and on perfecting presses where by working with multi frequency LED UV, Baldwin can match the intensity of light delivered to both sides of the sheet despite there being a difference in the throw from lamp to substrate.

RMGT has equally pioneered LED UV, creating one of the great surprises at Drupa 2008 when it unveiled the technology for a limited range of applications and substrates.

IT WILL CONTINUE TO FEATURE LED UV on the new press line up of B2, A1 and B1 presses. The RMGT 10 is the B1 machine, sold through Mitsubishi channels and the RMGT A1 press sold through Apex Digital Printing in the UK.

Both have LED UV. The B2 format is represented by the RMGT DP7, the liquid toner digital press jointly developed with Miyakoshi.

All presses now share the same styling. The six-colour RMGT 10 is configured as a carton press. It includes new feed and shut-

system. A Rapida RDC 106-3 is a press dedicated to running inline die cutting for labels and packaging applications at 14,000 sheets an hour.

THE 20,000SPH LONG PERFECTOR will once again bristle with technology to drive automation and minimise operator intervention. TouchTronic touch screen technology will allow operators to access anything needed in two clicks, one button for a job change. It will be fitted with LED-UV.

The six-colour Rapida 145 will be the largest sheetfed press at the show with a triple-length delivery to include a sheet deflector to ensure than only perfect sheets reach the final delivery pile and so avoid problems when sheets with hickies or colour variances need to be removed before finishing. Instead, if carton printing, good blanks can be included back in.

There is also the inclusion of KBA 4.0 as the implementation of Industrie 4.0, featuring remote diagnostics, benchmarking and preventative maintenance to help printers extract the maximum performance from their machinery – something that every printer should desire.

partners like Polar. Nor would Heidelberg have more than 50 printing machines on the floor representing almost every aspect of HP's line up.

The missing piece will be the PageWide T1100S, a monster of a machine that has taken inkjet to a 2.8 metre print width. It is simply too large and the customer base too clearly defined to bring to Drupa.

That apart there will be new machines across the spectrum of HP products, from latex large format, Scitex flatbed, PageWide T web presses and of course Indigo presses. HP has not taken the opportunity to develop a sheetfed B1 Indigo, the explanation being that carton printers looking at digital printing are focused on the half-sheet format.

BUT HP IS QUITE CAPABLE OF B1 or even larger formats with Indigo. The Indigo 50000 is a twin-engined web press printing to this format with customised or personalised catalogues, short run books and photoproducts in mind. While taking its place as the head of the Indigo line, the new press will not be available until next year.

Nor will the B2 format Indigo 12000. This is a press with a new imaging system address-

ing 1,600 spots per inch. It means more accurate placement of colour and as a result smoother tints, gradations and flesh tones.

It will also improve the quality of the three-colour Enhanced Productivity Mode that is being used extensively to increase throughput of the Indigo press. The first presses to this specification will be in beta at UK sites this year.

There are upgrades to the B3 presses: the Indigo 7800 becomes the 7900 and the 5900 is at the top of the Series 2 machines. This can print with a fluorescent pink toner that is newly introduced and the first of a line of high impact colours that is under development.

THERE ARE IMPROVEMENTS to the Indigo 20000, the press designated for flexible packaging print. It gains a new thermal laminator to finish flexible packaging as quickly as it can be printed.

There is a shrink sleeve white toner in addition to the high opacity white announced last year at Labelexpo. To achieve the density of a screen applied white, several shots of the toner are needed with a high capacity pump added in expectation of heavy demand.

There is a new way of profiling spot colours and locking them to specific materials. The press will print a series of patches to simulate the spot colour required. These are compared to the client's brand colour and the measurements captured for later recall.

This applies across the wide web press and the narrower Indigo W6800 machines for label printing.

The key development here is to boost productivity by linking two print engines in series. The W6800 doubles the throughput to a maximum of 80m/minute. The first print engine will print alternate frames with the second operating as a slave engine printing the even numbered frames. Quality is controlled by the first unit.

AB GRAPHICS HAS DEVELOPED a new inline die cutting unit that can run to 150m/min, coping comfortably with the output of the print engines.

The introduction of partners for inline application focused processes is a key feature for the whole presentation. As well as AB Graphics' range of finishing lines for labels and flexible packaging, Tresus's coater will run inline with the Indigo 3000 carton press. There will be inline finishing from Horizon to produce books and from Imaging Solutions for photobooks.

Partnerships also feature in the PrintOS project. This is intended as a layer of applications that both improve the effectiveness of a print business through benchmarking and data analysis provide by HP, and also by making other application specific software available through the hosted Cloud service.

HP hopes to have a store of 50 or so apps in time for Drupa. They will include apps to

automate receipt of files and moving them to a production workflow, for creating books and of tracking jobs through the system.

PrintOS starts with the Indigo platform but will quickly extend to cover the large format and PageWide products. In the large format arena, HP is launching the Scitex 9000 at the show having decided to commit to Drupa rather than introduce this at Fespa Digital a few weeks ago. It is aimed at post print corrugated, or more likely the use of corrugated for point of sale applications.

The web presses are enhanced by the commercial availability of the HDNA print head. In a parallel move to the Indigo 12000, the head adds 1,200 ultra small nozzles which fire low weight ink droplets to extend the grey scale options on each imaging point and so smooth gradations and open the way for this type of inkjet to tackle commercial print applications.

A PRE COATING SYSTEM can operate inline or offline to optimise standard offset papers for inkjet printing. A post printing coater is also available which lifts the gloss level of the print to provide a more litho feel and look.

The HDNA print head is available on the PageWideT490 HD, running at 150m/min in quality mode or 300m/min in standard mode. The printhead will also be available on the T240, a new version of the 520mm wide press that arrives at the end of this year. ■

THE 19th HALL Gareth Ward's guide to post Drupa Düsseldorf

When the demonstrations stop, Drupa visitors will head for the town, for food and beer, and of course to discuss the highlights of the day whether they be the impressive production or the demonstration that went wrong.

The **Altstadt**, old town, is the magnet that draws like no other, especially if the show is blessed by a few warm days when the printer can perch on tables along the main pedestrianised street and watch colleagues go by. There is almost as much to be gleaned about Drupa on the streets and in the bars of the Altstadt as in the halls of the Messe.

Firstly food. **Spargelzeit**, asparagus time, will be coming to its end. This is solid white asparagus that can appear in a multitude of guises as a starter or part of a main course. It can even appear in a dessert for the truly dedicated.

Then there is meat. Much of it pork and lots of it. The **Schweinehaxe** is a challenge for even the hungriest Anglo-

Saxon. It is the part of a huge porker that is in contact with the ground, roasted and served with several ladles of sauerkraut. Beer is essential. As is some kind of digestion tablet.

In the Altstadt, head for **Zum Uerige**, the most traditional of traditional Bierkellers. This is where to don the lederhosen and feathered cap if so inclined. The locals will look askance. Beer is served from small kegs which are tapped and emptied with breathtaking speed. Your consumption of the distinctive **Altbier** is recorded by a chalk mark, totted up as you leave.

Im Goldener Ring and **Zum Schlüssel** offer a similar traditional experience though with a less frenetic atmosphere thanks to more emphasis on the food than drinking. **Tanta Anna** delivers perhaps higher quality a more refined experience for this part of the town. Slightly away from the beaten track is **Vente**, a personal favourite. Nobody hurries you away

and the food is worth dwelling over. Be aware, however, that four years ago many of these establishments were insisting on cash payment rather than accept credit cards because of the levy imposed. Be prepared.

In the past UK suppliers have sponsored at least one of these bars and we happy to report that this continues with **M Partners** taking over the **Tir Na Nog** pub on Bolkerstrasse. There are other Guinness serving establishments around the centre, many offering the opportunity to catch the sport.

And then there is **Bei Fatty's** around the corner in Huhnruckstrasse. This is the doyen of all Düsseldorf's Irish pubs, the ceiling decorated with football scarves. Force your way to the back bar if you want to sit down, or else stand in the street and receive glasses of beer handed out through the window. On a good night the joint is jumping. Then it's time to return to the exhibition.