



Spindrift

Confuting the
Graphic Arts industry
since April 2003

Volume 10, Number 9 • 5th February, 2013

News Focus • Opinion • Reviews • Testing • Interviews • Brain-teasers • Techno-babbling

Tomorrow, and tomorrow, and tomorrow, Creeps in this petty
pace from day to day.

– William Shakespeare

Dear Reader,

It has been a pretty manky start to the year, with IPEX losing Kodak and Komori, and Polytype exiting the wide format business. The latter may be cause for cheer amongst the company's competitors, and indeed fixes some of the excess of options offered to wide format printers. However, it is sad to see the loss of a great piece of kit and yet more jobs from our industry.

Polytype was not intending to participate in IPEX but the loss of Kodak means the show is suffering some serious leakage. This is worrying, but time is on the IPEX organiser's side. An infusion of imagination isn't impossible, giving the likes of HP, Kodak, Heidelberg, Xerox or Komori a reason to somehow still participate. Perhaps they can be persuaded to run their preferred customer events alongside IPEX? Perhaps they would like to participate virtually with a bit of augmented reality? The organisers are trying to reposition IPEX to a six day digital event, so there's still hope for success. Anything is possible but probability doesn't always match expectations. Only time will tell.

Enjoy!

Laurel, Nessian, Paul and Todd



In This Issue

Colours in the cloud

Paul Lindström discusses the increasing use of cloud computing for colour solutions, and looks at two such systems, Matchmycolor's Colibri and Schawk's ColorDrive.

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Automated success

Precision Printing has been beta testing the new B2 Indigo 10000. Nessian Cleary went to see the press in action but found that Precision has gone a step further, developing its own workflow as well.

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A view from the top

Laurel Brunner attended the recent Fespa Global Summit, sitting through the various workshops and presentations to learn about how wide format companies are negotiating the business and technology challenges of this fast changing sector.

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Recycled board

Many cardboard boxes are made out of recycled materials, including some used for food packaging. But contaminants left from the printing inks could affect food safety, as Morwenna Kearns discovers.

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News Focus

EFI has posted healthy figures for both the last quarter of 2012 and the full year. For the quarter ended December 31, 2012, the Company reported record revenue of \$174.1 million, up 7% compared to fourth quarter 2011 revenue of \$163.1 million. For the twelve months ended December 31, 2012, the company reported revenue of \$652.1 million, up 10% year-over-year compared to \$591.6 million for the same period in 2011.

Xeikon has said that it is in talks with an as yet unnamed company that is seeking to acquire Xeikon. The discussion centres around a public takeover bid for all the shares in the capital of Xeikon, which also includes BasysPrint as well as the Xeikon digital print portfolio.

Ricoh has added a Graphic Arts+ version to its Pro C901 digital printer. This incorporates the new EFI E42 or E82 print servers which include a HyperRIP and improves performance by processing multiple job pages simultaneously. The new models also boast an uprated duty cycle of up to 700,000 impressions – 20% more than previously. There are larger sized toner bottles that require fewer changes per shift, and depending on toner coverage they should deliver on average 67,000 clicks, up from 63,000.

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SAi has launched the International Sign and Printmakers Guild, a member-led organization designed to help sign and print providers grow their businesses and reduce costs. Membership is currently free to any sign shop or print provider. Key to driving new business to guild members, SAi is dedicating www.sign.com as a central place for the sign-and-print buying public to quickly and easily design and purchase custom signs, banners, posters and similar products.

HP has issued a call for entries for the 2013 Sign & Display Print Excellence Awards. This awards programme is designed to formally recognise HP customers on a worldwide basis for best-in-class large-format graphics produced on HP Scitex and Designjet systems. It's free to enter and the winners will be announced at the London Fespa show in June.

EFI announced victory in its Spanish patent litigation with Jose Vicente Tomás Claramonte, the president of KERAjet, S.A., involving EFI Cretaprint's ceramic digital inkjet printing systems. The patent claims pre-date EFI's acquisition of Cretaprint. The Commercial Court in Valencia rejected Mr. Tomás Claramonte's infringement claims and declared that his purported invention lacked any inventive step. There is still time to appeal.

Muller Martini is to show its new Presto ii Digital saddle stitcher at the Hunkeler Innovationdays in Lucerne this month. It will be shown with a high-performance processing folder, two signature feeders, a cover folder feeder, the stitching machine and a three-knife trimmer in combination with an unwinding system, a fold/merge module and a cross cutter from Hunkeler. Three different products will be produced live in a continuous run at the trade fair stand. The cover can be fed copy-specific if required.

Reynders Label Printing, headquartered in Boechout, Belgium, has become the first customer to use Domino's N600i colour inkjet press, first seen at IpeX 2010. The N600i has 600dpi resolution and runs at 50-75 metres per minute across a 333mm web width. Variable-sized droplets allow it to reproduce up to 80 percent of the Pantone colour range. Reynders say that a major advantage is Domino's integration of an Esko front end.

▶ **Inca Digital** has added a new Accelerator option to its Onset wide format printers, which increases the productivity with the same level of print quality. The degree of productivity depends on the particular Onset model and the number of passes but the Onset S40i can achieve a 20 percent increase. See story page 12.

X-Rite has updated its i1Profiler software to v1.4 to include profiling for scanners and support for the latest operating systems from Apple and Microsoft. It's a free update for existing customers.

Enfocus has added the ability to automatically connect to EFI's Fiery XF or Colorproof XF wide format RIPs to its Switch 11 workflow program. This is delivered through a new configurator that comes with update 2 for Switch 11.

Sihl has launched a transparent polyester film for use with solvent and latex inks, specifically developed for window advertising. The new film clings to the surface when the special coating is activated by soapy water, making it extremely simple to apply and to remove. The clear film has a special coating, which when soaked with soapy water activates a cling effect glue. The ClearSOL WetCling Film 125 glossy has a solvent and latex compatible coating and offers an excellent colour reproduction and quality printed image.

Sihl has also launched three new Backlit Films - DuraCure Backlit 170, DuraCure Backlit 130 and LightCure Backlit 145 DS. All three materials offer perfect flatness and are suitable for use with UV printers, as well as Solid Ink and offset systems. LightCure, which is a double-sided matt coated polyester film, can also be printed on laser printers.

Colorific has developed a new kit to convert wide format Roland solvent printers to work with UV inks. Essentially, this is a standalone UV lamp kit that can be added to the front of a printer to cure the UV inks. It's compatible with any Roland printer that uses Epson DX4 and DX5 printheads. Pricing for a 64in wide printer conversion kit starts at €3,000 and pricing for the full solution - a Roland RE 64in printer plus Lightbar conversion kit - starts at €15,600.

GPT has adapted a Mimaki wide format textile printer, which it is now selling as the GPT 190s. It's a 1.9m wide printer with double print heads for faster speeds. It can run at 35 sqm/hr at 540 x 720dpi or 15 sqm/hr in its highest quality mode at 720 x 1440dpi resolution. It comes with a two year warranty from GPT and uses Mimaki inks and RIP.

Videojet has introduced a five litre Bulk Fluid System (BFS) for the 1000 Line continuous inkjet printers. The BFS benefits customers running high volume print applications such as bottles and cans, as well as wire, cable and pipe production lines.

Kodak has licensed Ilford to distribute its Matchprint proofing media including offering technical support. These arrangements began in Europe and the US last November but are now being extended to South America and Asia.

Brian Filler has been promoted from his role as managing director of Screen UK to become president of Screen Europe. He takes over from Kees Mulder who stepped down when his two year contract came to an end. Filler will spend some time working from the Screen Europe office in Holland but will also continue to run the UK operation for Screen.

Luca Maestri, CFO at Xerox, is to leave the company at the end of February to assume the role of corporate controller at Apple. Xerox is looking to bring in an outsider to fill the position.

Agfa has signed an agreement with Eastman Park Micrographics (EPM) whereby it will manufacture microfilm and related photochemicals for EPM, and EPM will distribute these products worldwide under its own brand name Imagelink.





News Analysis

Here we go again

Another month, another story of a high profile vendor pulling out of the upcoming Ipex 2014 show. Kodak has become the latest company to decide against going to Ipex, as part of a general rethink of how it spends its marketing budget and which shows it does attend.

Kodak has said that in the future it wants to connect directly with customers, and will expand its Graphic Users Associations and to run more classroom and conference sessions. It will also make better use of its own demo centres, and will hold more events targeted directly at customers.

Meanwhile, Xerox announced at the beginning of the year that it too would not be exhibiting at Ipex 2014. Xerox too says that it will concentrate on other ways to reach customers including more focussed conferences and social networking.

So far, HP, Landa, Heidelberg, Agfa, Xerox, Kodak and Komori have all decided against going to Ipex. All of these companies are still planning to attend drupa 2016, and many will also go to this month's Hunkeler Innovationdays (which we will cover in next month's issue). Initially the Ipex organisers responded by commissioning a report to show that plenty of international visitors were still planning to come to the London show.

But Informa Exhibitions, which owns Ipex, has now unveiled a new focus that involves integrating the Cross Media show into Ipex to "showcase the latest print and communications for marketing and publishing campaigns." There will also be seminars from the World Print Summit, which "will follow the theme of 'Strategies & Practices of Outstanding Leadership in the Challenging Business of Offline and Online Marketing', where thought leaders from within and surrounding the print industry will come together to address the big issues and opportunities they face," according to the press release.

Trevor Crawford, Event Director for Ipex 2014, says: "Ipex is moving from being a general print event to a highly focused multimedia experience promoting the essential role of print." In essence, Ipex is changing, less about machinery, and more about the business strategies and changing trends within the industry. The challenge is whether or not this is going to be enough to attract a large number of overseas visitors.

The show has also been reduced to six days (Monday 24th March - Saturday 29th March 2014). We can but hope that the show itself will be as interesting as the run-up to it is proving to be.



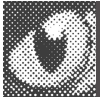
Picture This

We are all for standards and all for encouraging manufacturers and customers to use them. But this poster takes some swallowing. The image was taken at drupa last May and claims that Schmitz Druck & Medien GmbH is the first printer in Nordrhein-Westfalen to be certified for compliance to ISO 15311-2, using a Konica Minolta bizhub C8000 digital printer.

Should we be warning print buyers to beware of printers making erroneous claims? Or should we advise manufacturers to be careful of the endorsements they seek, especially from organisations such as Fogra that really should know better?



The fact is that no such standard has been published. ISO 15311 is very much in its early stages with much work still to be done. Fogra are keen proponents of a digital printing standard and have been pushing this candidate hard. But 15311 is far from seeing the light of day and certainly a long way from being suitable for certification.



A Case Study

Successful cross media integration

The Swedish printer Skånetryck has made the journey from being a conventional commercial printer to becoming a provider of cross media print production services. The company introduced digital print as a complement to its Manroland litho presses some 18 months ago and this has now become the fastest growing part of the business. The seamless integration of the EFI Fiery server with Skånetryck's Agfa Apogee workflow system is the key element to the production system's efficiency.

Skånetryck has a long and rich history – the company was founded in 1897 in Malmö, in the province of Scania (Skåne), hence the company name. Today the company is located in Halmstad, still in the southern part of Sweden, but not in Scania. It's owned by a trio – Claes Johlin, Thorbjörn Kristiansson and Håkan Walhed – the latter



Skånetryck, with roots back to 1897, is located in Halmstad, southern Sweden. Håkan Walhed, managing director outside the building, which also hosts three other graphic arts, related companies.

acting as managing director. Skånetryck has a total of just six employees, but cooperates with three other graphic arts companies co-located with Skånetryck.

Håkan Walhed explains: "It's sort of a Graphic Centre here, with another commercial printer and a bookbinding company, and a pure digital print centre, all in the same building. We cooperate very well, and there isn't much

overlap in customers or actual type of jobs. We handle much of the prepress for our litho colleagues, and buy some capacity from the digital guys." He adds: "We have some bookbinding resources of our own, but buy a lot from the bookbinder next door – very handy."

One workflow - several RIPs

One concern when going digital was whether the production would have to be split across different RIP systems, or could continue using the existing Agfa Apogee



Skånetryck combines conventional litho offset production in its Manroland press, with digital production on Konica-Minolta printers.

workflow system. While the EFI digital front end (DFE) has many of the functions that Apogee offers, it would take additional training and could possibly complicate the workflow if the same tasks needed to be done in different systems. But Skånetryck was assured that the EFI Fiery DFE could be seamlessly integrated with the Apogee system before the implementation went ahead.

"We at Agfa have had several good experiences already of how relatively easy it is to integrate the Fiery DFE into the Apogee workflow," says Michael Brännbäck, support technician at Agfa Nordic. He adds: "The user can choose what operations should be done directly in the Fiery server, or handled by Apogee. Typically imposition and colour management are done in Apogee, as well as queue management. But the Fiery DFE provides all the job- and machine specific data needed in a seamless way, in this case for a Konica Minolta bizhub C7000 digital press, to Apogee. This tight integration of conventional litho print production and digital is of course very important."

Easy-peasy

“The installation and integration was very smooth and non-dramatic,” says Walked, clearly pleased with the result, adding, “A rough estimate is that we save up to two hours on busy days, since both impositioning and other file preparations can be done at our desks – we don’t need to walk up to the control station by the printer.”

He continues: “Within hours from when the technician said he was ready we started real life production – this is how easy the Fiery system is to operate, and how well it is integrated with our Apogee workflow. OK, I later on did some fine-tuning of the ICC profiles for our preferred paper types, but that was about all we needed to do. We must be a quite boring customer to EFI and Agfa, since we have nothing to complain about.”

Joking aside, it’s clear that both the integration and the colour management have been successful – Skånetryck produces a lot of contract proofs for clients, which include



The quality level and colour matching from digital is expected to be the same or better than litho. Here the registration is checked for digital output.

ad agencies and other commercial printers, using the bizhub C7000. This is how stable and colour accurate the digital print is. “We match the printed result in litho offset very well in digital production, better than I expected I must admit,” says Walked.

Next steps

The Fiery system can be extended with MIS system connections and Web-to-print solutions, and this is something Håkan and his colleagues are looking into. But



Thorbjörn Kristiansson at Skånetryck plans and manages all jobs through the Apogee workflow system, with the EFI Fiery server acting as a seamlessly integrated sub system.

since digital production is fairly new to Skånetryck, the increased demand is the first thing to manage.

Håkan Walked explains: “We thought digital would be a nice little complement to our existing production, but it has become the fastest growing side of the business. We need to expand this faster and sooner than expected, and perhaps also include large format production in-house in the mix.”

He concludes: “When we have a clearer picture of our customers’ needs we will look into what MIS system and/or Web-to-Print solution we might need. But we know EFI to be good at those types of solutions as well, so we are quite confident they are likely to be part of such an extension.”





Green Shoots

It has been a busy few weeks for the Verdigris Project. Much of the work has been dedicated to getting ISO16759 into shape prior to final publication. But we have also been trying to get everyone thinking about their environmental messaging. Our Go Google-less blogs have certainly generated a lot of attention with translations into several languages and various organisations helping to spread the word. And then there's the cohort of folks who think we may be mad. Let's hope it makes a difference.

The European Union's Eco-Label

Regulations, rules and compliance requirements are increasingly tangling businesses up in red tape, despite the efforts of politicians. The latest option for the printing industry to consider is the EU Eco-label, which was launched in August 2012. Thanks to the efforts of Intergraf, the European group of printing industry associations, the label's requirements are not completely beyond the bounds of reason for the printing industry. We are working on a longer article to explain this new label, but in the meantime here is a short perspective on what the EU Eco-label means for printing professionals.

The EU Eco-label is a generic label awarded to products and services that can meet the requirements of ten criteria, specific to each product or services group. So far the criteria have only been set for newsprint, tissue, printed paper and graphic paper. According to the European Commission, the label guarantees "Low air and water pollution during production, hazardous substances restricted, use of certified fibres from sustainably managed forest". Intergraf has ensured that the evaluation criteria reflect the needs of the industry, working with the European Commission rather than against it, since this labelling scheme would have come into being in any case.

Intergraf has also worked with the European Commission to make sure that the label can apply to a range of different print substrates and that it is indeed achievable.

Even so the requirements are still pretty onerous. As one might expect, proving compliance is likely to be so cumbersome and expensive that only an elite group of printing companies will be able to achieve it. According to Intergraf, this is in line with the European Commission's goal. They have intentionally created a means of achieving a very high environmental standard that only a limited number of organisations can meet.

This is laudable enough, but given the difficulty most printing companies have with getting their heads around matters environmental, could be counterproductive. What is really needed is an accessible and affordable means of getting people along the green path, and it isn't clear that this Eco-label really achieves that. What does the EU Eco-label mean for the printing industry? Our industry has made huge strides and continues to evolve towards an even more sustainable future. A far better use of funds would be to provide support for environmental efforts already happening at grass roots within the sector.

The Idiocy of the Paperless 2013 Campaign

Greenwashing is bad enough but deliberately attempting to hijack sustainability awareness is downright poisonous. A group of corporations with Google at their head has set up a really stupid campaign. Using an environmental agenda the group is cloaking its need to up revenues through digital process management. They are campaigning to get office workers to rely exclusively on digital processes and electronic devices. According to their website "Paperless 2013 is a campaign to remove the need for paper from paperwork." What they really mean is that it is a campaign to increase companies' dependence on cloud storage, online bill management, accounting and the use of e-signatures.

Rocky share prices of late, particularly for Google, Fujitsu and Xerox, is a hint to what this is really about. Of the other participants in this silly and irresponsible scheme, most are companies working with Google, probably in the hope that they will be acquired. None of them seem to



▶ understand the implications of a paperless world. It could be naivety, but it is more likely to be greedy opportunism, exploiting the desire of businesses to improve their environmental impacts and making them unwitting tools to drive revenues to the group's participants.

Encouraging people to go digital is to be expected of companies with a substantial vested interest in the digital world. However, to use sustainability to justify themselves is irresponsible and an egregious abuse of trust and the green agenda. They claim that going paperless is in the interests of the environment because it saves trees. Except that it doesn't. They omit to point out that the forestry industry

Electronic devices, including mobile phones, which are where these people are trying to direct business transactions, are not recyclable.

plants three trees for every one harvested. They ignore the fact that commercial forests and paper are carbon sinks, renewable and sustainable unlike electronic devices. They do not address their own emissions responsibilities, for instance the billions of kilowatts Google needs to fuel its servers, or the energy required to feed content to users' desktops. This is a fundamental responsibility that should not be ignored.

Electronic devices, including mobile phones, which are where these people are trying to direct business transactions, are not recyclable. They are one of the most serious sources of waste and pollution on the planet and they use finite resources such as oil for the plastics and rare earths for the electronics. Electronic devices are also the foundation of the Paperless group's businesses: they want customers to replace their devices frequently because this drives upgrade revenues. This throwaway mentality is totally at odds with environmental responsibility.

If these numpties want to cut environmental waste, far better to look closer to home. On average a single laundry

drying cycle requires around 4kWh of energy, producing nearly two kilos of CO₂. With over one million households in the USA that is two million kilos every time a householder runs their tumble dryer. It adds up to 104 million kilos or 104 metric tonnes of carbon per year if households only run the dryer once a week! Why don't Google et al set up a scheme to encourage Americans to hang their washing out to dry instead? Because it doesn't add revenues or help their share price, that's why.

We are still a long way away from companies and individuals truly appreciating their role and responsibilities for reducing emissions and environmental impact. Encouraging people to increase their emissions instead of working with sustainable media and tools, is only the latest example of the idiocy that plagues sustainability progress. Ignore the Paperless 2013 campaign and switch to another search engine! Look for the little arrow next to the logo of the engine you use in your browser's search window. Click on it to default to something other than Google!

Getting the Go Google-less Message

We have had an absolute torrent of response to the Go Google-less idea. The request to the industry to switch search engines from Google to something else has been amazing. The idea was to put pressure on Google in the hope of getting it to reconsider the Paperless 2013 campaign. This campaign claims that using paper is bad for the environment and that everyone should use electronic communications instead.

The response has mostly been in favour and many people have switched off Google search and moved to Yahoo! or Bing. It's interesting that so many care enough to bother, but what's more interesting and gratifying is the fact that Go Google-less has stimulated response and a glimmer of awareness beyond the graphic arts.

There is no clearcut absolute in whether we should use paper or electronics: both have their place and are indeed complementary. What is clearcut and absolute is that many people, Google included, conflate office and desktop

▶ printing with professional printing. It is also clear that too few understand that waste management is about energy as well as media. Paper waste can be managed in an environmentally friendly way, not that this is always the case. We need more awareness of energy emissions and their environmental impact and of efficient waste management. This is particularly true in the US where per capita waste is the highest in the world.

The picture is far worse for electronics than it is for paper. Paper companies and their customers have had to improve their environmental impacts in order to survive in a changing market. Efforts to recycle electronics have not yet achieved much in the way of sustainable results, although initiatives such as the European WEEE (Waste

Demonising paper as an unacceptable form of waste ignores its sustainability and forestry's contribution to global carbon dioxide management.

Electrical and Electronic Equipment) help. The belief that using digital communications instead of paper is in the interests of the environment needs to be redressed and reconsidered in the light of resource management and sustainability. For example, there is less copper in the ground than there is in infrastructure and devices. Rare earths used in electronics are finite. Unlike paper, they are not renewable. Print consultant Sean Smyth has kindly sent this link to images of what can happen to electronic waste. <http://www.lightstalkers.org/janehahn>

Go Google-less isn't about dumping Google in toto nor is it an inane crusade against computers, mobile phones, tablets or notebooks, all of which have a profound and positive socio-economic effect. Go Google-less is about encouraging people, especially large corporations who could make a difference, to think about how they use media and resources, to think about alternative print models, and to understand that print is more than a desktop activity. Demonising paper as an unacceptable form of waste

ignores its sustainability and forestry's contribution to global carbon dioxide management. This debate should be about resource use, waste management, emissions reduction and the effectiveness of different media channels for information and knowledge dissemination. A simplistic choice between digital and physical media distracts from the complex conundrum of how we manage our environmental impact and long term sustainability.

The Eco-nomics of Print

There were two very clear themes in the sustainability session at the recent FESPA Global Summit. The most important of these is that environmental sustainability goes hand in hand with business efficiency. Within the Verdigris community we have all known this for some time, so it was great to hear that the message is finally starting to spread.

This is many strides on from the more common misconception in the market that to go green means high costs. The link between sustainability and efficiency should be obvious: process efficiency and waste reduction improve profitability. Efficiency is the underlying driver explaining a 97% reduction in the Australian printing industry's carbon footprint between 1990 and 2010. The figure is based on research into the environmental impact of print conducted by Phil Lawrence of the University of Sydney for his PhD. The small to medium sized printing companies that he studied did not go green because they love the environment. Rather, their efforts to push costs and waste out of their business models has yielded profit improvements and reduced carbon footprints. Money is clearly a great motivator and the hoarding of it a great driver for getting environmental impacts down.

This relationship between business performance and environmental impact reduction is something media buyers increasingly care about. Suppliers with a sustainability policy have the means to demonstrate their commitment to environmental responsibility, instead of spouting meaningless greenwash. As part of an environmentally aware supply chain such suppliers can help enhance corporate sustainability policies. At the FESPA Global

Summit there was some evidence that this message is starting to get through. Katleen Pelsmaker of Tesco believes that “sustainability isn’t just about being green, it’s about making sure our suppliers are there in ten years time”. Sion Stanfield of EcoProcure however pointed out that the key barrier to developing an environmental policy and sustainability strategy is business owners themselves: “You need to get behind sustainability because it is a way to drive growth”.

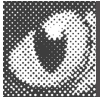
This doesn’t have to be hard for print service providers. Going green can start with the basics such as recycling and measuring waste volumes with a view to improving their control. Understanding how Life Cycle Analysis works or calculating the carbon footprints of products and companies can come later. Paul Noble of Banner Box, a wide format printer in the UK, has been driving sustainability at the company for several years because “efficiency is about the removal of processes through digital [technology] and more efficient energy usage”. Banner Box is even providing a replacement service for soft signage - replacing a customer’s digitally printed flags and recycling the material on their behalf, providing a service to the customer and Banner Box with recurring revenues. It’s an interesting example of how the printing industry can contribute to environmental sustainability, while yet developing new revenue streams.

For more green news, check out
The Verdigris Project:

Verdigris

<http://verdigrisproject.com>





Sharp Focus

Fujifilm Upping its Inking Game

Fujifilm Specialty Ink Systems (FSIS) was borne of Sericol following Fujifilm's purchase of the company in 2005. FSIS is now a "digital company with an analogue heritage ... our aim is to make ink the new film for Fujifilm ... our future is inkjet" according to Peter Kenehan, wide format business director.

The old Sericol factory in Broadstairs, Kent in the UK has recently been completely refurbished and expanded across a 1000 acre site at a cost of €3.5 million. Mostly it is for ink manufacturing and research and development (R&D) to support wide format digital printing. Fujifilm still has a solid income from screen printing, but this is declining as digital revenues rise. Fujifilm sells hardware in order to sell consumables and Broadstairs is the company's global production site for wide format inkjet inks. The Broadstairs factory employs 340 people, 68 of whom are in R&D and 63 of those work purely on UV inkjet.

This factory produces 393 ink products, many formulated for the large range of wide format printing engines that Fujifilm sells as well as for screen printing. Screen inks still outnumber digital inks but the company expects a 28% decline in screen inks and a doubling in digital ones by 2017. Although there is no inkjet ink standard, inks are measured for quality purposes to ISO 2836, fingerprinting and controlling for deviations through XMF ColourPath. FSIS has the capacity to produce over 6,000 tonnes of ink per year and to package 1200 litres of ink an hour! Currently the plant is operating at around 40% capacity. It is certified to ISO 9001 and ISO 14001 (since 1997) however, it sends 7% of waste to landfill, so there is still some room for improvement.

The Corrugated Wrinkle

One area ripe for consumables sales development is the corrugated market. FSIS has been working with Inca to develop a version of the Onset that can output and handle corrugated board for Free-Standing Display Units (FSDU), replacing conventional screen printing with a wide format digital alternative. The new engine is optimised for short

runs and FSIS claims it can print more consistent colour than either screen printing or the flexo presses used for small format Point of Sale (POS) output and transit packaging, all target markets for FSIS. This sector suffers somewhat from overcapacity, market maturity and low margins however, digital has less prepress cost and can offer more short run colour as a result. It is also simpler and the economics add up more positively.

The Inca Onset S40i was launched at drupa for producing printed displays using substrates that are mostly flat but it was not ideal for corrugated applications such as FSDU. Corrugated boards will often be bowed, so they need some means of being flattened prior to printing. Fujifilm's new handling system does just this, turning the

Screen inks still outnumber digital inks but the company expects a 28% decline in screen inks and a doubling in digital ones by 2017.

S40i into a fully integrated and automated system for corrugated applications that works with existing finishing kit. This wide format engine has 28 heads per colour with 256 nozzles per head. A constant ink flow ensures jetting reliability and both drop mass and placement have been adjusted for the application.

Fujifilm is also managing reflected UV light to protect the heads, so they no longer need to be treated as a consumable. Two sealed UV lamps with a guaranteed life of 1000-1500 hours pin the inks individually and control gloss levels. The S40i can print in eight, ten or 18 passes, when printing backlit materials for instance. Fujifilm and Inca have added a new height detector, onboard MIS and an accelerator option, a combination of firmware and software improvements to the standard Inca handling system.

Fujifilm hopes it will make the S40i even more productive and has developed a special ink for the system that has better adhesion (although not to plastics) and flexibility for corrugated substrates. It has a wider colour gamut and



Fujifilm's new corrugated handling system for the Inca Onset S40i.

glossing range than some of Fujifilm's other inks and is bespoke.

According to Tudor Morgan, systems marketing manager for FSIS, there were three parts to this project, two of which are now complete. The ink is formulated and proven and the user friendliness of the Onset S40i improved. The final part, the actual handling system itself, will be launched at Fespa in London this coming June. It will work with all future versions of the Onset and the launch model will have a robot to ensure substrate registration on a preload table. Beta trials are underway with a box producer who has replaced a flexo line with the Onset S40i and is looking to add a second system.

The handling system consists of two huge grabbers that use a combination of vacuum and sucker pads to position blank boards on the bed and remove the printed ones without damaging the printed surface. They can carry a load of 20 kilos each so corrugated and card stocks of 0.5 to 22mm thick and 1x1.6 metres, including severely distorted ones, are just the beginning for this technology.

The handling system is unique to Fujifilm and manufactured by a dedicated handling systems and robotics manufacturer in the UK. The first head has 32 vacuum zones and the second 32 suction heads. The cycle time is eight to ten seconds and the system can print up to 530 m² per hour with the eight second cycle mode. Fujifilm is working to determine the optimal cycle time and productivity. Sheet placement accuracy is within 0.5mm. The handling system is expected to go into beta testing, probably with the same customer that is testing the new inks and S40i, in March. The price has yet to be determined but "will reflect the machine's performance".



Colours in the Cloud

As applied quality and colour management enters into a mature state, so the associated tools seem to become more sophisticated.

A clear trend of late is to move software and databases into the 'Cloud'. We have already reported on some solutions that are cloud-based, like Chromix Maxwell, GMG CoZone and Pantone LIVE. But there are more solutions out there, and new ones seem to be coming thick and fast. Here we will look at Matchmycolor's Colibri and Schawk's ColorDrive.

We'll leave aside the discussion of the pros and cons of working in a cloud-based solution for now, since what cloud computing is really all about could take a long article on its own. But it's clear that efficient colour management does need a central database containing a colour library. And actually not only a colour library, but also a collection of defined standards and reference documents such as preferred test forms for calibration and validation.

This is where the Cloud idea comes in – this database should be accessible by every operator and device connected to the production workflow, including origination and design. This is a sophisticated solution, and correctly applied it also makes way for an elegant and easy to use solution, meaning that the underlying technology and actual data transfer can be hidden behind a nice and intuitive user interface. Much of the data formatting can be made in some flavour of XML, similar to the formatting for web browsers and MIS systems compatible with JDF, and metadata compliant to Adobe XMP.

For colour data, the CxF format is often used or can be imported and exported. CxF (Color eXchange Format) was originally developed by X-Rite, but has since been handed over to ISO, so is an open, non-proprietary standard. And yes, it's based on XML. Any company that wants to advance its colour management solution in this direction, needs to make sure the colour database it starts

to build can be expanded and possibly moved from one system to another in the future. This is why we stressed the importance of open database standards and data formats right at the start of this article.

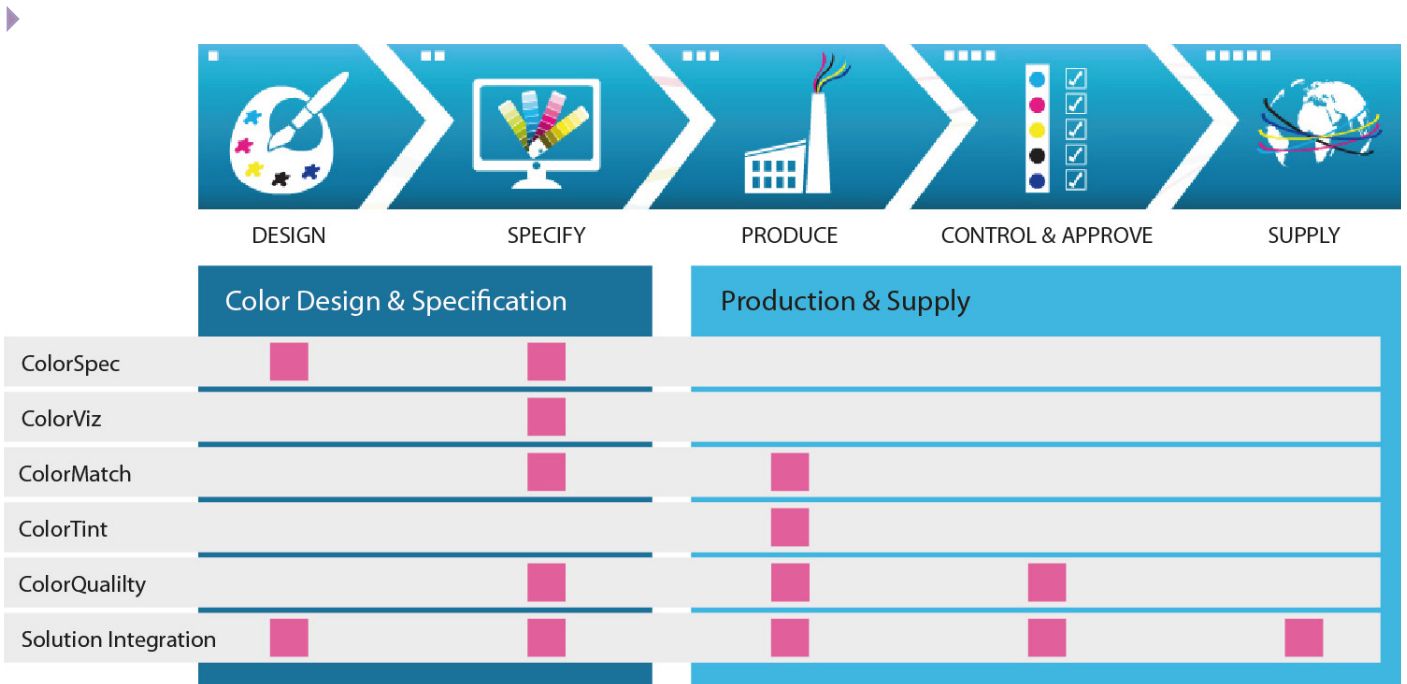
Matchmycolor and Colibri

Matchmycolor has its origins in Ciba Specialty Chemicals, a manufacturer of ink and chemicals. Matchmycolor is a Swiss software developer and service provider, which includes the Colibri software suite as well as technology from earlier software sold under the names of Indigo and



"It's important that the system is both user friendly and offers connections to all the databases that might be involved in the printing process", says Judy van de Langkruis, Director at Matchmycolor.

Mosaic. While the mainstay of this company for a long time has been in development and specification of colour recipes for both ink and materials such as plastics, the software and services side now also includes solutions to be used early on in the production workflow, starting at the design stage.



The Colibri Suite consists of tools for all the processes in the workflow, including the order and design stages.

In terms of development, Matchmycolor has a strategic partnership with a division of Konica Minolta and also with GMG, for high end proofing solutions. It also lists a range of technology partners, such as the packaging printing group Amcor and ink manufacturers including BASF and the Flint Group. On the software side, Matthews Brand Solutions is also a technology partner, which provides good input to those elements in the solution that tie into design and print procurement.

The Colibri Suite of modules covers five areas: Design, Specify, Produce, Control & Approve and Supply. The system is cloud-based and intended to connect all partners in the colour supply chain, including brand owners, designers, manufacturers and material suppliers. The overall goal of the Colibri Suite is to reduce costs and help bring products to market faster.

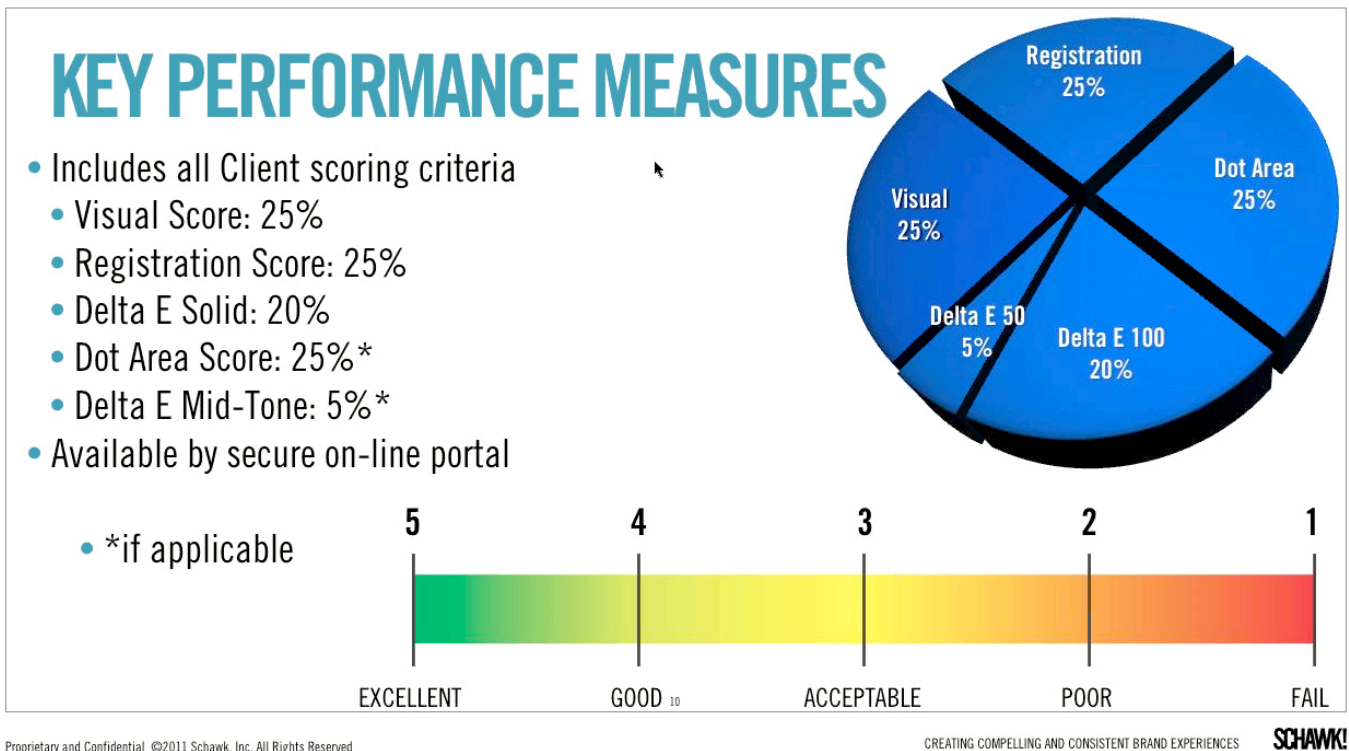
The Colibri Gateway module connects not only to MIS and Workflow Systems, but also to any hardware in the network that is involved in colour management, which can include dosing systems, balance systems and spectrophotometers. In short – no matter what database is involved in the production process, including planning and purchasing, it can be connected to the Colibri Gateway database in the Cloud.

Colobri Gateway doesn't use CxF internally, but Judy van de Langkruis, managing partner at Matchmycolor, is confident that Colibri can handle all the common colour data formats in the workflow. She explains: "We can import and export to a large range of different applications and systems, thanks to our long experience in creating colour recipes, as well as analysing data from press control systems."

On the design side, there are modules to specify brand colours and also tools for 3D visualization. Colour control is a key element, and production statistics can be reported and followed up on in many ways. Matchmycolor and GMG are about to launch the Colibri Color Plug-in, which should provide smooth integration to Adobe Illustrator. This connects both to the Colibri database as well as the GMG OpenColor colour library and enables not only precise hard copy proofing but also simulation of spot colour production, including overprinting behaviour across different print technologies and media types.

Schawk ColorDrive

Schawk started off as a repro house in 1953, based in Chicago. Today it employs around 3000 people worldwide, offering brand management services. The



The scoring system in Schawk ColorDrive includes different parameters for a final score between 1-5, where anything below 2 is likely to be regarded as a failed print run.

head office is in Del Plaines, Illinois, US, with offices in 26 countries. The colour management solution ColorDrive started as a bespoke R&D project in 2002 for P&G (Procter & Gamble), but since 2010 has been launched as a stand alone enterprise class product, which can be used without needing to be a Schawk client in terms of prepress services.

ColorDrive is in essence a cloud-based database, which is targeted at the packaging supply chain. This includes the brand owners, the designers, prepress and printers as well as material suppliers and print procurement companies. ColorDrive can be used together with other print applications. It focuses on improving quality through measurement, and has many tools to gather, analyse and report on colour related data. ColorDrive's central Scorecards report Key Performance Indicators including a Visual Score, Registration, Delta E on solids, a Dot Area Score and Delta E on Mid-tones. The total score is converted to an easy-to-interpret scale from 1-5, where a low score of below 2 will fail the printed product.

Printers can upload data either automatically, or via email. The parameters for all the scores, including the Visual

score, can be set by the brand owner to favour different aspects like colour match, halftone reproduction or print defects, when included in the total score. The scoring tables are flexible to account for the print quality goals specific to a consumer product company.

ColorDrive doesn't use CxF directly, but according to Robb Frimming, director of Schawk Printing Services, it uses XML, and can import and export data from most of the third party measurement tools as well as press control software on the market.

Frimming continues: "Our Ingestion Tool can digest many incoming formats, and automatically convert it into records in our database". From the short demo we had of the system we were impressed by the analysis of the measurement data, not least tracking the variation over the print run – a matter often overlooked in other similar systems.

The Driving Force

It's quite interesting to note that the driving force behind both of these systems for colour management isn't a



"ColorDrive offers a global standard for print quality through the scoring system for the brand owner to compare quality from different printers", says Robb Frimming, director of Schawk Printing Services.

printer or press manufacturer, but companies serving brand owners, that is, print buyers. While we sometimes hear that the print buyers aren't particularly interested in the print quality, but mainly concerned about the price, this tells another story.

A colour management solution encompassing not only the enterprise but also the whole print production process, should both ensure print quality and shorten lead times. And a short time to market is not only of great interest to brand owners, it's most likely compelling to most print buyers. We have a feeling that the solutions from Matchmycolor and Schawk, and similar solutions, will have a strong uptake in the times ahead.

- Paul Lindström



Automated success

Precision Printing was a late convert to digital printing but made up for this with a commitment to automated workflows and a taste for beta testing new Indigos, including the B2 10000.

Located in an industrial estate to the North East of London, Precision Printing was established in 1966 to provide general print services to enterprise companies with



Gary Peeling, managing director of Precision Printing, demonstrating the job tickets used to manage work through the production process.

such things as business cards, direct mail and marketing collateral. It counts household names such as American Express and Marks & Spencer among its clients.

This was a business built on the quality of its print, and so Precision Printing concentrated on offset presses, feeling that digital did not offer the same kind of image quality – the company uses three B2 Heidelbergs: an XL75 ten colour, a CD74 six colour and an SM74 four colour. But as the digital technology matured, so Precision Printing

reviewed its stance, eventually buying its first Indigo 5000 press in May 2005.

Managing director Gary Peeling says he chose Indigo because of the print quality, explaining: “It was only with the series two machines that the quality of digital was such that we didn’t have to explain away the quality and we could match litho and digital and match Pantone colours so we could offer digital printing without compromise.” This proved so successful that Precision Printing ordered a second Indigo 5000 within a couple of months of the first being installed and has subsequently grown the digital side of the business by around 50 percent per year.

Precision Printing still services its enterprise customers, but Peeling now talks of this as a legacy business. It still generates some £6m worth of business each year but with little growth year on year. Instead, the company has developed a range of consumer products such as photo books as well as a lot of variable data work such as personalised direct mail. This has led to some £8m turnover from the digital side alone, with around 50 percent growth year on year.

Automated workflow

Peeling is convinced that the secret of this success lies in the use of automated workflow, saying: “We listened to all the advice and guidance that we were given by HP to try and adopt the best processes and make the best use of the equipment.” He adds: “A big part of this was to concentrate on our workflow and the one thing that has allowed us to grow our business so fast has been the focus on automation.”

To start with, the company used web to print to drive more business to the Indigos, and particularly more high value pages, with web to print rapidly becoming responsible for some 25 percent of the company’s turnover. This includes such things as marketing collateral for Mini and BMW car showrooms, with each dealership being able to order the marketing materials that suit them best, which can be delivered within 24 hours.

However, the company has also looked at consumer products including personalised calendars, greetings cards and photobooks but concluded that it would be better off

servicing those companies that were dealing direct with consumers. Peeling says: “We have mainly expertise in B2B so we had very little expertise in marketing to the consumer side of the industry”, adding “We have a B2B to consumer solution so we provide wholesale solutions for consumer products to online brands.”

It’s a good fit with the more established enterprise side of the business because much of this kind of personalised consumer applications tend to be very seasonal so many big consumer brands either don’t have any production capability or enough to cope with the seasonal variations. But whereas the consumer side peaks around Christmas, this is precisely when the corporate work falls off.

One flow

However, Peeling describes web to print as being “web to nowhere,” explaining: “The thing that inhibits growth most is unit cost, not the cost of the printing but of managing the product through the workflow.” But Peeling couldn’t find a suitable system to connect all the parts together so the company wrote its own software, OneFlow, designed to funnel jobs that come in from the web to print system right through the production to fulfilment. The system won a BPIF innovation award in 2011.

There’s a team of five working full time on developing OneFlow, which is now in its fourth generation. Peeling says: “It allows us to receive orders with any XML data source so we can link to our existing web to print systems, our clients web to print systems and any other computer systems that can deliver the order.” Over the years Precision Printing has used several web to print systems, including VPress, Printable and Tharsten’s web to print extension – Precision Printing also uses Tharsten’s MIS.

The system works with both sides of Precision Printing’s business being equally adept at taking orders directly from a consumer facing customer’s web to print system, as well as linking into enterprise customers’ CRM systems. So, for example, if a Marks and Spencer’s customer orders a sofa, this will automatically trigger Precision Print to send further marketing materials for items such as matching cushions or curtains.

Precision Printing is handling up to 45,000 jobs a day, mainly single copy orders. Peeling explains: “We have dynamic scheduling lists to tell each operator where they need to work next. The jobs are then passed from one operator to the next.” There are monitors dotted around the production floor, which show a dashboard summarising how many items need to be shipped that day, and how well they are coping with these demands. The system also helps the company manage temporary staff, by predicting how many people will be needed, and



Screens on the shop floor tell operators what process to carry out and for which jobs, while tickets are printed out and added to each batch.

in which department on a day by day basis. It also helps Precision Printing set a price per copy without worrying about the number of copies for each individual job.

Now OneFlow is ready for the next stage, a commercial launch. Precision Printing has partnered with a couple of specialist investors and is hoping to offer OneFlow as a standalone software package in May of this year.

The Indigo 10000 beta

At the end of September last year HP delivered its new B2 press, the Indigo 10000 for the start of a six month beta test. There are ten beta sites in all, this being the first in Europe and only the second worldwide. Precision Printing has form when it comes to beta testing Indigo presses, having previously hosted the beta versions of the Indigo 7000 and 7500 models. The company now runs three 7500, one 7000 and one 7600.

Peeling is actively involved in HP's customer network, DSCOOP and sits on HP's development council. He says: "One of the good things about being involved in a beta test is that you get access to the people who have developed and built it and our staff become very expert on the machine and how to get the best from it and who to speak to when things aren't going as they should do."

Production director Andy Skarpellis says that even though the 10000 is a completely new platform with new engineering, it has probably been the best of the betas they have done: "I think that HP have invested a huge amount into R&D. The installation was unbelievable. Within three days we were producing test work with it and printing live jobs within two weeks."

He says: "The uptime is as per the beta agreement so we are on target for that." He says that HP had made significant progress since June prior to delivering the beta units, sorting out most of the glitches, particularly in regards to colour consistency and registration. Skarpellis says that HP primarily market the machine for its ability to handle longer runs, but that Precision Printing has seen benefits



Andy Skarpellis, production director, with the Indigo 10000.

in short run work simply through using the bigger sheet more efficiently to cut down on wastage. The bigger sheet size has also led to new applications such as personalised folders where the bigger sheet allows for a pocket in the folder.

An Indigo beta normally takes six months, with a mid-beta upgrade delivered after initial feedback. This

At a glance

The B2 Indigo 10000 is a fourth generation Indigo engine. It has all the typical Indigo features, including the ability to take up to seven colours with full duplexing. Its maximum sheet size is 750 x 530mm making it compatible with existing B2 finishing equipment. It's designed to shift the breakeven point against an offset press and can produce up to 3,450 simplex sheets per hour, which equates to 230 A4 pages per minute.

It will be followed by beta programmes later this year for two further machines based on the same chassis. The Indigo 20000 is a web press aimed at the flexible packaging and labelling markets. It can handle thin films down to 10 microns and runs at 34mpm. The Indigo 30000 is another sheet fed press for the packaging market, capable of handling boards up to 600 microns.

All three machines were shown at last year's drupa show.

upgrade was installed at the start of this year and has increased productivity by around 15 percent. Skarpellis adds: "We can run from 100 to 400 gsm paper now quite comfortably."

The beta test is run in CMYK, but Precision Printing is planning to add orange and violet to this, giving it the Indichrome inkset that it uses as standard. The company also uses white ink, though Skarpellis doesn't expect this option to be ready for the 10000 until later this summer.

The 10000 also takes advantage of HP's Enhanced Productivity Mode, which can produce full colour jobs using just cyan, magenta and yellow, which saves time and reduces the click charge for each job. Skarpellis estimates that it is suitable for up to 75 percent of the applications: "It's not something we use a lot but we may well in the future. Our main concentration at the moment is to achieve litho quality with digital." He adds: "We are using it to move some offset work to digital with the paper range. Our customers can see a litho quality on a litho sized sheet but with personalisation."

Precision Printing might be an Indigo shop but Skarpellis has kept an eye on the other printers on the market, noting that the iGen 4's matt finish capability was of interest to



The B2 Indigo 10000, the first beta site in Europe.

him but adding: "I think that what HP has done with this platform has taken it to the next level."

Conclusion

In truth, we expected this story to be about the trials and tribulations of running a beta test. And, given HP's track record with the Indigo presses, it's not surprising to find that the new 10000 is on course for completing its beta test.

But the real story here turns out to be just how fast Precision Printing has grown the digital side of its business. Clearly this is down to having applied the logic of automation, even right down to developing a bespoke workflow. We've long felt that HP lacked a really integrated approach to its workflow, so perhaps once Precision Printing has finished beta testing the Indigo 10000, HP would consider beta testing OneFlow with a view to offering it to other Indigo customers.

- Nessian Cleary



A View from the Top

Fespa Global Summit's purpose is to bring together like-minded souls for networking and general hobnobbing. That is its only real deliverable so the organisers have huge scope in what they can select for the various session and workshop content.

Fespa took full advantage, with sessions covering market opportunities, techniques for business building, sustainability and new media. It all sounds a bit chaotic, but that was the point: creativity, imagination and



Delegates at the Fespa Global Summit, London.

appreciation of why media channels can no longer be discrete and print's function within the mix. The Fespa Global Summit is about ideas and business development options, not just for wide format printers but for everyone in the media supply chain, print or otherwise.

Identifying clear themes from this event is hard: you really had to be there to get it. Offering a vast array of perspectives on print, the organisers did a great job of finding compelling presenters from throughout the supply chain: from workshops on social media to main session speakers arguing that print is becoming new media. What is clear is that the success of any media project depends on its execution, which means logistics and process management as much as technology.

Golden (-ish)

One such presentation came from Icon World, which was responsible for signage and dressing a couple of 2012's major events, including the London 2012 Olympics and UEFA 2012 events. As well as producing over fifty miles of printed fence fabric for London 2012, Icon World had to liaise with local governments throughout the UK and ensure that all sponsors were kept happy. Very impressive indeed.

However, we also heard about a massive profit opportunity massively missed because prepress technology was not as well organised as it might have been. According to Andrew Hodson, Icon World's sales and marketing director, production staff were "knee deep in proofs ... we managed our colour by trial and error". For London 2012 there were 42 different brand colours printed on substrates as diverse as coated stock to building wraps so the trial and error method must have been hugely expensive.

Yet Icon World managed to turn a profit on London 2012 because the project was well planned and executed. Even so, colour management and automated colour processing workflows could have saved Icon World a fortune and seriously bumped up the bottom line.

Colour management is fundamental, and especially so in the packaging market: shoppers tend to be suspicious of variants that might be fakes. Michelle Adams of Marketing Brainology (yes, really) presented some ideas about how brand owners can appeal to women who, according to her research, make most buying decisions in shops. There is "way too much stimulation" for consumers to make easy choices, so creative design and innovative presentation are key.

This much we knew, it's a variation on the squeaky wheel getting the grease idea. For Mohan Prabhakar of TBWA Singapore, there can never be too much stimulation because media engagement is about creative engagement that produces responses by any means available. In this context print can be used to stimulate response on its own and via digital media, acting as a catalyst for response from readers and audiences.

Point & Click

This is the message that any print service provider should heed. Fespa Global Summit had numerous examples of interactions between print and digital media, such as the Ikea 2012 catalogue. Over 212 million copies are printed annually worldwide and Ikea is now using the catalogue to drive all sorts of additional digital experiences, from linking to websites through to augmented realities viewed on mobile devices.

The digitally delivered content is based on the printed catalogue and encourages customer engagement for additional sales: interior design ideas, combinations



Mark Fellows of ad agency, McCann.

of furnishings and textiles, and so on. Mark Fellows of McCann, the ad agency that worked with Ikea on the catalogue, eschews QR codes for aesthetic reasons (they are quite ugly). Instead a small icon indicates that scanning the photo next to it using the camera on a smartphone will trigger extended content.

This type of work is not only for mass market catalogues. Simon Jobling, of m2end augmented reality services, provides personalised interactive experiences that print

drives in order to enhance consumer engagement. Print becomes a sort of media remote control and m2end customers such as Lego have seen a 35% jump in sales. Projects can be massively ambitious or cost as little as €8000, but they generally have print at their heart.

QR codes are considered to be the preferred means of linking print and digital media. JCDecaux has “half a billion poster sites around the world that change every week”, according to David McEvoy, the company’s marketing director. This is heaven for the wide format market however, many of these are digital screens often with QR codes. JCDecaux can use them to drive print sales, for instance, of newspapers where clues to an online game are printed.

Rob Robsborough of Scanbuy in the US reckons QR codes are perfect in markets where smartphone penetration tops 50%. Mr Robsborough gave the example of posters on station platforms where passengers could use QR codes to order groceries and other goods digitally. Thus print becomes a digital enabler adding considerable value to ads because it captures spontaneous response: impulse buys based on a printed image. Print thus drives return on investment in other media.

Crooner Meets Rapper?

The concept of cross channel marketing hits new heights in the hands of someone truly motivated to exploit it. One way that Microsoft has upped the use of its Bing search engine has been to use Bing as a tool for leveraging content on a range of media channels. The search engine becomes a sort of content GPS. For example, working with rapper Jay-Z who wanted to promote his memoir, *Decoded*, pages and snippets from the book were released piecemeal across all media channels. The content related to Jay-Z’s real life events and the crucial locations such as the clubs he first gigged and the neighbourhood where he grew up. Bing hosted an online scavenger hunt for clues based on Mr -Z’s lyrics, as to where the next pages or quotes from the book would be presented. Using Bing, gamers could find all the pages and have their own digital copy of the book. The project yielded 1.1 billion media impressions. A triumph for digital media over print one might think, except for the fact that the printed book was on the New York Times bestseller list for 19 weeks and



Duncan MacOwan, Fespa's head of events and new media fields questions from the audience in the Integration of Print session.

earned over \$1 million in sales. It also did Bing no harm. Not everyone has Microsoft's help or cash to fund such ambitious digital media projects, but the coordination of channels and the integration of ideas across them provides print service providers with interesting possibilities. It is all a matter of understanding what works in a given market for a particular product and exploiting those channels and characteristics.

The Not So New Means of Engagement

This is what most of TBWA Singapore's media arts philosophy is about. Mohan Prabhakar speaks not of consumers but of audiences. He says that everything is media and that our concept of media neutrality is dead so advertising is now about engaging audiences in a creative experience. This isn't necessarily true: creative experience is the soul of effective advertising, but what is perhaps changed is the digital dimension. The trick for brand owners is to find the right environments for their messages and to identify ways that messages reinforce one another across channels.

Zaid Al-Zaidy of TBWA London agrees. He sees advertising moving away from being claim-driven to being about engagement. He considers print is "a strong interruptive medium ... because three of our five senses can be satisfied by paper". The question for printers and prepress companies is "how do we make print live up to new world demands?" Of course the audience sat there mostly open mouthed as Mr Al-Zaidy buzzed through truly amazing examples of how "print is a brilliant jump-off point into a more immersive world". The combination of print media and mobile communications creates all sorts of new ways for audiences to interact with content and smart advertising agencies are producing some astonishing campaigns.

Creativity is not the sole preserve of advertising. It is also coming from the printing industry. David Liebich owns Genesis Graphics, which puts large format graphics onto aircraft. The logistics and safety issues are daunting, but this company is bringing print to new audiences, not just advertising the carriers but also promoting events. Every surface is an opportunity!



Green & Greener

The sustainability message also got an airing at Fespa Global Summit. Two themes were visible in the sustainability session: environmental knowledge is still mostly absent from supply chains; and too little is done to improve the basics of digital workflow understanding and quality control. Sustainability is about processing efficiency because it removes processes and waste from workflows, resulting in reduced energy usage and costs.

Closed loop environmental policies, with printers taking back customer waste, are also yielding renewable revenues for companies such as Banner Box in the UK. This wide format printer replaces one customer's fabric flags on a monthly basis, recycling the old flags on the customer's behalf. Katleen Pelsmakers, responsible for print procurement at Tesco, wants to work with suppliers in this way because "sustainability isn't just about being green, it's about making sure our suppliers are there in ten years time".

Survival then is about partnership, knowledge sharing and developing a supply chain mentality rather than confining your business thinking to its own private silo. Survival is also about business performance and much of what was aired at Fespa Global Summit described ways of using media to enhance market performance. The graphic arts industry has every reason to be hopeful about the future, and every reason to fear it.

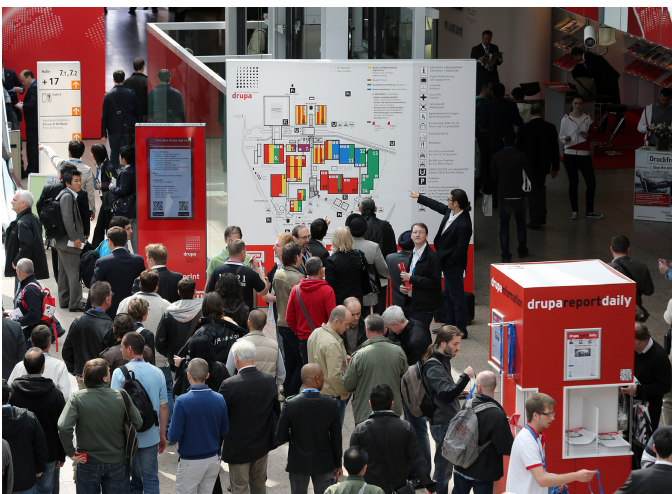
- **Laurel Brunner**



Food for thought

Recycling the daily newspaper has, happily, become second nature for most people, as putting rinsed milk bottles out for the milkman was a regular evening task of yesteryear. Since it is expected that newsprint will be disposed of, it is produced from low-grade paper, with bleaching rarely used as in graphic arts and publishing grades. Therefore, recycled newspaper stock is in many ways ideal for producing everyday food packaging, such as breakfast cereal boxes, which are also made to be thrown away after use. And, of course, a grey-coloured finish from remaining ink in the material is hardly an issue when on the inside of a box.

Given the sheer amount of packaging that a modern society gets through, it is important to be as ecologically sound as possible and the use of newsprint as a starting



drupa 2012 featured innovations in the recycling process.

point helps with this. However, the everyday lifecycle of newsprint to recycling plant to packaging printer to supermarket shelf was stopped abruptly and brought to the attention of British shoppers in 2011, when Jordans Ryvita, part of the Associated British Foods group, ceased use of recycled stock for its breakfast cereals due to health concerns.

Jordans Ryvita, which made its name in the UK for its environmental sensitivity and actions to protect

Verdigris

This article is part of the Verdigris series of stories about understanding the environmental impact of print. The Verdigris project is supported by Agfa Graphics, Digital Dots, drupa, EFI, Fespa, Heidelberg, HP, Kodak, Pragati Offset, Ricoh, Splash PR, Unity Publishing and Xeikon,

<http://verdigrisproject.com>

wildlife, reacted to a study carried out by the Food Safety Laboratory of the Canton Zurich, Switzerland which found that mineral oils were leaching out of the newsprint ink still contained within the recycled board of cereal cartons and into the food contained within.

According to research leader Dr Koni Grob, around 89 food products from a sample of 119 bought from a German supermarket exceeded the UN and World Health Organisation agreed safe limit for mineral oil saturated hydrocarbons (MOSH) - 'most' by over ten times. The issue was compounded by expectations of MOSH levels rising to an average of 50 times more than the limit 'and many will exceed it several hundred times' long term – the longer the food was kept in the packaging, the more dangerous it was expected to become. Of the 30 or so samples that didn't exhibit MOSH contaminants, "nearly all" were "because of an inner barrier" said Dr Grob.

Dr Grob explained that the results of some animal studies on mineral oil contaminants in food had uncovered cancer and chronic inflammation of a number of internal organs, caused by oil mixtures amassing in the body over time. Owing to their large surface area, breakfast cereals are especially susceptible to absorption of the gaseous hydrocarbon molecules that make up the mineral oils.

Now, there's no suggestion that any products from Jordans Ryvita were included in the Swiss test. But the findings were enough to cause the company to rethink its own packaging, and several other food providers followed suit. Global cereal brand Kellogg's also announced plans to reduce the amount of mineral oil in its own recycled

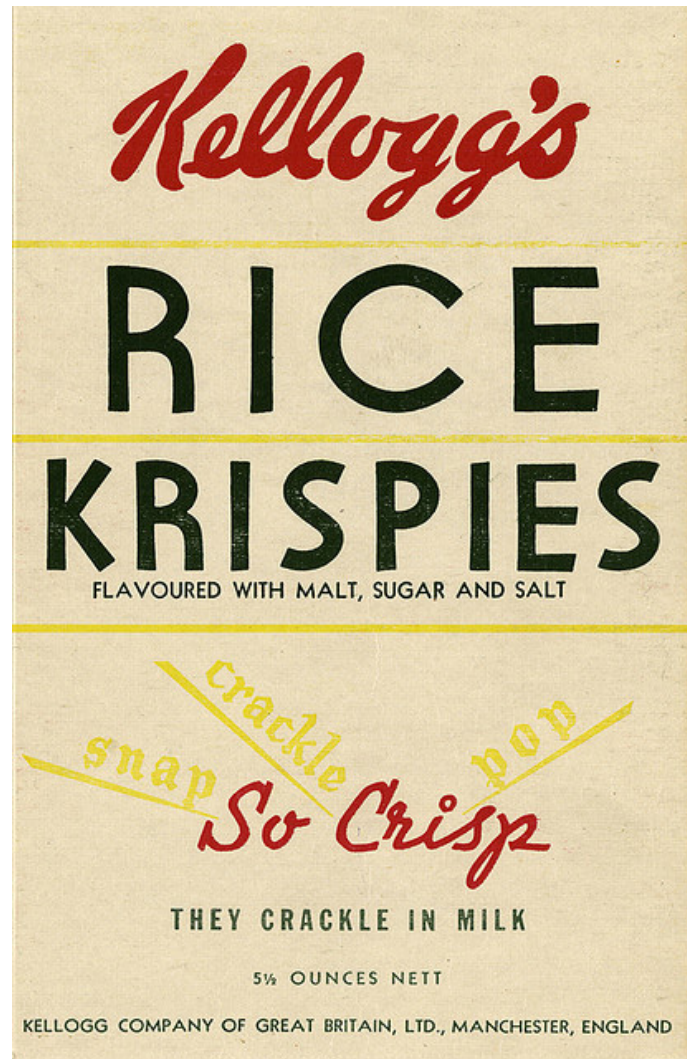
cardboard packaging. “While experts tell us there’s no immediate health concern, we are looking at our packaging,” Kellogg’s stated. “We are working with our suppliers on new packaging which allows us to meet our environmental commitments but will also contain significantly lower levels of mineral oil. We are also looking at alternative inner liners for our packets.”

Weetabix took a similar tack, specifying newspaper pulp as the problem in a statement to the BBC in the UK: “Weetabix is actively engaged with its packaging suppliers to consider alternative recycled packaging that doesn’t contain recycled newspapers,” it said.

The British media homed in on words like ‘toxic’ and ‘cancerous’, saving the messages of calm from the UK’s food industry representatives – and indeed Dr Grob himself, who stated that consumers would have to ingest contaminated foods over a long period of time to be at risk – to the end of news reports or giving them little attention. Indeed, it was newsworthy in itself that such major household names as Weetabix and Kellogg’s, and the famously environmentally conscious Jordans Ryvita, were changing their packaging in the face of such advice.

The Food Standards Agency (FSA), the governing authority on food safety in the UK, followed up the Swiss research on contaminated foods with its own studies on recycled packaging and ink ingredients found in it. Its tests detected one or more of the ink components under scrutiny in 84 of its 350 samples of packaging, including amounts of the photoinitiator benzophenone in 37, or 11 percent, of the samples. In a batch of 51 samples, all were found to contain MOSH.

The FSA concluded that there was no cause for public alarm, stating that a risk assessment carried out on the survey’s findings did not identify any specific food safety concerns. “The FSA’s advice is that there is no need for consumers to change their eating habits with respect to food that has been packaged in new or recycled cardboard,” was the message. UK food industry representative group the Food and Drink Federation released a similar statement: “Swiss food safety authorities have concluded that consumers who eat a balanced and varied diet have no need to worry.”



Kellogg's has changed its cereal boxes many times since this Rice Krispies carton from 1938 – including to packaging with a lower mineral oil content in 2011.

The International Association of the Deinking Industry (INGEDE) has highlighted that deinking newspapers as part of the recycling process can help to reduce mineral oils and thus the health risks associated with them – but emphasises that there are nominal concerns to begin with.

“Clearly, that stuff should not be in our food. But there are many other chemicals that also should not be somewhere and that should be taken care of when you start hunting migrated mineral oils,” comments Axel Fischer, chemist and head of public relations at INGEDE. “Not to [mention] the proven health concerns associated with the fats and oils you deliberately ingest. Anyway, deinking is a way to get some of them out of the system.”

There is concern however, that the printing industry will still be perceived publicly to have an environmental record as muddy-grey as the recycled paper it uses. Much has been done by the sector to improve its practices and its reputation, but a headline-grabber like well-known companies dropping recycled stock could have a negative



According to McDonald's, the cardboard packaging used for its foods is comprised of 72 per cent recycled paper.

effect – even if it is followed up by clear messages to its safety from authorised sources. Many food businesses have continued to use recycled material in their packaging but bad news travels further and for longer.

In addition, questions may also be asked about why the cereal brands, packaging producers and printers did not act on the problem earlier, particularly when both Weetabix and Kellogg's announced they would switch to board with lower or zero mineral oil contaminants, possibly suggesting data was available to them to compare safety in this regard. It could be that more printers are now using mineral oil-free inks and therefore switching to these inks was an overdue move.

Fischer's point that deinking paper might reduce the risks of mineral oil contamination even further may be one for the printing sector to consider as part of the wider campaign to raise consciousness of both environmental and safety issues – subjects that should go hand in hand.

During the inaugural EcoPrint show in Berlin in September 2012, print technology developer Ricoh surveyed visitors' opinions on sustainability and the EU Ecolabel, which aims to help consumers identify products and services with

an overall lower environmental impact. This uncovered “an obvious gap in knowledge and understanding” of standards concerning the label's use, according to Gareth Parker, value proposition manager for Production Print at Ricoh UK. The research surveyed respondents from 25 European and Middle Eastern countries, 90 per cent of whom were print service providers.

“PEFC and FSC-sourced paper and food packaging safety certification came out as one of the most important factors for respondents,” explains Parker, but this is in contrast to deinking, also covered in the survey. “Deinking was not highly rated as an area of concern, with four percent of respondents seeing it as critical to sustainability, 28 percent rating it as important, 22 percent not important and 48 percent did not understand its relevance.”

Parker sums up the conclusion of these discrepancies: “Sustainable printing is very much a growing issue and our belief is that a great deal of education is needed to raise the profile of sustainable print. Sustainability still needs clarification in printers' minds.”

It is, therefore, not only a case of promoting print as a sustainable and safe industry to consumers, but within the sector itself. With everyone – from equipment developers to print service providers – on the same page regarding the use and outcome of recycling technologies, end users and the public will be reassured that the everyday products they use are not harmful. Furthermore, with wider knowledge, the print industry will be prepared to answer the public's questions about the safety and environmental impact of their products, before they arise.

-Morwenna Kearns





Quiz

This month we are going all wide format. See how you get on with this quiz. If you are in the packaging, screen or digital wide format sectors there should be something to tickle your little grey cells. Answers at the end.

1. What is the main reason to invest in digital wide format?

- a) It is more efficient and cheaper to run.
- b) You need fewer staff with digital.
- c) Achieving common colour appearance across substrates is easier.
- d) All of the above.

2. What is the price differential between investments into screen and digital printing systems?

- a) 100:1
- b) They are the same.
- c) It depends
- d) 10:1

3. What is the single most important factor to consider in colour management?

- a) A digital prepress system.
- b) The substrate
- c) ISO compliance
- d) Inks and toners

4. What is pinning?

- a) Adjusting registration.
- b) Ensuring colours line up.
- c) Curing individual colours in a UV wide format digital printing system.
- d) Front to back imaging accuracy.

5. What growth area are too many wide format developers focused on?

- a) Variable data
- b) Solar cell printing
- c) Printing on food
- d) Ceramics

6. Is deinking of UV prints possible?

- a) No.
- b) Yes if you have a single loop deinking system.
- c) Yes but it isn't yet economically feasible.
- d) Only for certain substrates.

7. Which wide format digital press manufacturer recently withdrew from the market?

- a) Kodak
- b) Polytype
- c) KBA
- d) HP

8. What can you do to reduce the environmental impact of your business?

- a) Work with customers to improve workflow efficiency
- b) Improve recycling and waste management
- c) Monitor remakes and proofing cycles with a view to reducing them.
- d) All of the above or change industry and become a monk.

9. Which of the following groups of ISO standards should wide format printers care most about?

- a) ISO 14001, 9001, 16759
- b) ISO 2856-1, 42000, 12646
- c) ISO 39000, 15312, 15339
- d) ISO 14067, 724, 5775

10. Name the screen and digital printing industry's leading association.

- a) Pira
- b) Fespa
- c) BPIF
- d) ISO

11. Which new media channel is most complementary to print?

- a) Any media that includes a scannable QR code.
- b) Facebook, Twitter, Linked-In and other social media.
- c) SMS messaging
- d) e-Mail





12. Which artist was mad keen on screen printing?

- a) Picasso
- b) Van Gogh
- c) Titian
- d) Warhol

Answers

- 1. d
- 2. c
- 3. b
- 4. c
- 5. d
- 6. c
- 7. b
- 8. d
- 9. a
- 10. b
- 11. a
- 12. d

You get four points for each correct answer for a maximum of 48. So how did you do?

0-24 This is not brilliant but perhaps you aren't too familiar with the role digital technologies are playing in wide format printing. Get out more often and see what your competitors are getting up too, before you get left behind.

25-36 Marginally better but there are clearly some areas where you need more knowledge if your business is to grow successfully.

37-48 Depending on where you are on this rather wide scale, you are probably at the forefront on your market, engaged and successful. But do not give way to complacency because there is always more to know and more opportunities to uncover.

