



There is no sin, but ignorance.
– Christopher Marlowe, 1592

Dear Reader,

What a year this has been. And how longingly are we all yearning for the seasonal break, in which to ponder recent events and those forthcoming? The year ends with Manroland's slight reprieve, with access to €55 million worth of debtor-in-possession financing. Breathing space in which to sort itself out, or not.

What should we learn from the Manroland paradigm? That print is dead? No. Thriving digital press manufacturers give a lie to that idea. Print is alive and, if not yet kicking then at least limbering up in the corner. The manufacturer landscape has changed however and it is ignorance of this that has been Manroland's most serious sin.

Traditional press manufacturers have invested hugely to develop extremely sophisticated technologies that don't need replacing very often. This is great for customers, but less great for future sales. Several have invested hugely into very high ticket sales and marketing, despite overcapacity in many markets and despite fundamental changes in wider media markets. The market wants print media with enhanced relevance and customisation. It wants very fast production to exploit on-demand and web-driven business models. This seems to have been overlooked by Manroland.

Traditional manufacturers' forays into digital press technologies have lacked investment into changing their cultural perspectives. Largely passive alliances with digital printing machinery manufacturers was never going to be enough to staunch the haemorrhaging. Mighty press manufacturers can no longer afford to believe they are bigger than the market.

Ignoring criticism and analysts commentaries is bad enough, but wilful ignorance of the market and customer needs can lead only one way. Manroland is on a rocky precipice. Let's hope its competitors take heed. And in the meantime have a fantabulous festive season.

We'll be back in February.

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In this two part story Laurel Brunner explores some of the myths surrounding environmental issues in the print industry. Some of these things are simply misinformed, but in other cases there are steps that printers can take to turn potential problems to their advantage. But ultimately the biggest myth is that print somehow hurts the environment where in fact it is a hugely sustainable form of mass communication.

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News Focus

Océ has launched a new monochrome series of its JetStream roll-fed inkjet printers, which will be targeted mainly at book printers. There are three new printers, running at 100, 150 and 200 mpm. All take 30ins wide paper and offer 1200 dpi apparent resolution. There's also a faster colour machine. The JetStream1900 is a compact duplex machine running at up to 127 mpm at 600 x 480 dpi resolution.

HP has bought the German MIS company HiFlex for an undisclosed amount. HiFlex has recently committed itself to cloud based services which chimes well with HP's own efforts. HP has said that it will use the HiFlex offerings across its portfolio and that HiFlex will continue to develop its solutions.

EFI has bought yet another MIS company, Alphagraph, the German company behind Prinance, Printy and Primus. These products will continue to be developed and supported but EFI won't sell them to new customers. Alphagraph will become part of EFI's APPS software portfolio, which generated 44 percent revenue growth for the first nine months of this year.

Kodak has formed a new business unit, inkjet technology partnerships, to help companies develop customised

solutions using its Stream inkjet technology, which forms the basis of the Prosper heads and presses. Kodak's expertise in areas such as printheads, inks, integration and data control could allow customers to come to market quickly.

Highcon, an Israeli start-up founded by two ex-Indigo engineers, has announced a new digital creasing and cutting machine called the Euclid which should be commercially available in the third quarter of next year. It uses high speed lasers rather than a die and is aimed at the direct to pack market.

Mimaki has announced a new dye sub printer, the TS34-1800A, to be available at the start of the year. This 1.8m wide printer can print up to 32sqm/hr at 540x720 dpi. There's also a six colour mode which produces 17.7sqm/hr at the same resolution. It's aimed at both soft signage and apparel markets. There's a bulk ink option which can reduce ink costs and an optional drying fan that enables continuous media take up at high speed.

Dynagram has introduced inpO2 Wizard, an affordable imposition tool for use with Acrobat, boasting some fairly high end features from the more expensive inpO2 4.0. Imposition styles include saddle stitch and perfect bound and it can handle complex folded layouts as well as press marks and work with PDF documents of any length.

VIGC, the Flemish Innovation Centre for Graphic Communication, has followed up its study indicating that lower TAC (Total Area Coverage) would lead to ink savings, with two new tools, the Max TAC Evaluation Kit plus Max TAC ICC profiles, which are necessary to achieve the lower TAC settings without loss of image quality.

X-Rite has released its NetProfiler 3.0 update which lets users calibrate spectrophotometers in different departments to a single standard. The new version supports handheld devices as well as benchtop models.

Agfa has released version 6 of its Fortuna software used for security printing, including around 75 percent of the world's banknote production. New features include a rainbow printing tool, also known as split-duct printing, a colouring process for protecting against colour separation

Spindrift

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▶ and copying by subtly merging colours. There's also a new special rasters tool for better reproduction of raster images and a new Guilloche editor for better control over intricate patterns.

Adobe has bought Efficient Frontier, a privately held company specialising in multi-channel ad buying and optimisation. Adobe will incorporate this platform in its Digital Marketing Suite, giving it a social analytical function and a Facebook social marketing capability. The deal won't close until the first quarter of next year when the details will be made public.

Heidelberg has given a glimpse of some of the things it will show at next year's drupa show. This includes new MIS and Web2Print solutions with better integration to the Prinect workflow. Heidelberg will also show new features for its CtP systems such as smaller, more efficient processors, higher 5080 dpi resolution for security printing and a fully automatic auto dual cassette loader. Heidelberg will also extend its services portfolio, we expect into the cloud.

Dutch software specialist **EasiSign** has upgraded its eponymous sign making program to v6, now compatible with Windows 7, Vista and XP. There's a new merge feature to handle batch production of vectors, bitmaps and text files. It can also handle CSV files. Any lines in a design can be designated for different uses such as print and cut lines. There have also been improvements to the nesting and the estimating functions.

From 1st January **Swiss Post** will be distributing and processing payments for magazines and newspapers from the UK into Germany, offering publishers a cost effective way to expand into Europe. There are roughly 97,000 British citizens living in Germany with a further two million visiting every year.

Techno CNC Routers has launched a new series of HD routers which use all-steel construction, THK rails and rack and pinion drives. The routers feature brushless micro stepper motors and six zone adjustable vacuum bed. Cost is around €20,000.

A report on the Western European photobook market from **Futuresource Consulting** claims that the sector will grow by 20% this year to over €650m. Consumer awareness is still low, though strongest in the UK and Italy. More people are also starting to store their photos on cloud services such as Facebook and Flickr.

On Demand Communications, which owns UK franchise operations Kall Kwik and Prontaprint, has gone into administration with 30 staff being made redundant.

PODi, the digital printing initiative, has teamed up with XMPie and creative agency DME Studioson to create a cross media event for its AppForum in Las Vegas in January to demonstrate personalised video. The AppForum is a three day conference aimed at educating people on the benefits of personalisation.

X-Rite has issued free updates for some of its colour management solutions including ColorMunki Display software, i1 Profiler and i1 Display software all available from xrite.com.

Pixart, the Italian Web to Print printer that supplies customers throughout Europe, has launched a free pocket sized guide to papers for small format printing. The Print easy, Live better guide classifies papers according to weight, type and finish.

Fujifilm is to launch the Astalift skincare range into the UK and European markets from February 2012. The range has found success over the past four years in Japan and has been on sale in China since 2010. Astalift is a comprehensive anti-ageing skincare brand containing skin-replenishing collagen and astaxanthin. Whatever next!





News Analysis

Clearly the main story of the moment is the crisis that has engulfed Manroland, which has filed for insolvency. This appears to have begun when a potential investor, the Swiss private equity firm Capvis, walked away from a deal. This is not the first time that Manroland has been involved in talks regarding some form of investment or merger, only to see them fail at the last hurdle. But the real problem is the underlying financial crisis, which has led to a general drop in orders for offset presses and a squeezing of profit margins coupled with over capacity in this sector. Indeed, the immediate news saw big rises in share prices for KBA and Heidelberg.

Nor have Manroland's main shareholders been keen to help. Allianz Capital Partners, which owns 75 percent of the company (with MAN holding a further 23 percent) has already poured over a billion Euros into Manroland in the last five years. Allianz is also the biggest investor in Heidelberg and had tried to engineer a deal between the two companies two years ago but this failed to materialise.

The insolvency has had an immediate effect on parts and servicing, no doubt a major concern to existing customers. It also appears that some customers have paid deposits for presses that have not yet been delivered, and could now face some uncertainty.

For now, Manroland has secured a €55m Mass Credit finance facility from a consortium of 15 banks, which is allowing the company to continue to trade, though this is really just a temporary relief. In all, Manroland employs 6,500 staff, 5000 of those in Germany. Those staff at the three plants in Germany are being paid until January from an insolvency fund, with the German government having ruled out any further state aid for the company for now.

Manroland does still have considerable assets and insolvency administrator Werner Schneider has said that there is interest from some quarters, but has warned that this will most likely end with the company being broken up.

As a result of this crisis several of Manroland's local companies have also run into problems with Manroland GB having already been placed into administration.

Manroland's subsidiary PPI Media, which develops editorial, planning and production software, is trying to distance itself from Manroland and is actively looking for new investors.

Not surprisingly, wide format manufacturer Roland DG has stressed that it is not connected with Manroland and not facing any problems as a result of this crisis.





Seasonal Cheer

Keeping with the tradition of commandeering an old seasonal classic for our own insidious purposes, here is this year's offering, rife with timely industry commentary and (hopefully) lots of holiday cheer.

(To the tune of Oh Come All Ye Faithful)

Oh come all ye printers, offset, flexo, digital
Oh come ye, oh come ye and be of good cheer
Data is king, but print is still so sexy

Oh come let us adore it
Oh come let us adore it
Oh come let us adore it
Pri-int's the word.

Think of the numbers, of books and mags and signage
New forms for print that Google can't replace
And on demand is saving so much waste

Oh come let us adore it
Oh come let us adore it
Oh come let us adore it
Pri-int's the word.

Let's all look forward, banish all the gloom
People want printed words, to hold in their hands
Keep the faith, in printed publications

Oh come let us adore it
Oh come let us adore it
Oh come let us adore it
Pri-int's the word.

We won't give up on the graphic arts
Or on our readers, we do so adore
We send you wishes for a prosperous New Year

Oh come let us adore it
Oh come let us adore it
Oh come let us adore it
Pri-int's the word.

As with last year's "carol", the Digital Dots crew will be performing this little ditty live in the streets of London on the 21st December, after many festive beverages have been consumed! Naturally the event will be captured on video and posted on YouTube the following day. Just search "Digital Dots Christmas Song 2011" on the 22nd or thereafter if you want to witness middle aged people embarrassing themselves in public.





Picture This

This image shows a laser being used to check the straightness of the framework that forms the chassis of one of Inca Digital's giant Onset printers. The heavy steel framework is built under contract by another supplier and then shipped to Inca's Cambridge factory, where it is first checked to ensure it is true, and then the printer is built around it. It takes roughly three weeks to produce one of these printers, with around five in production at any one time.



Green Shoots

Following three all night sessions in a row at the recent UNFCCC COP/17 climate negotiations in Durban, South Africa the *Durban Platform for Enhanced Action on Climate Change* was agreed.

- The 195 participating countries are committed to negotiating a legal agreement so that by 2020 all nations' emissions will be controlled, and with more ambitious reduction targets. The Kyoto Protocol was extended for one year in the hope that it would get a result. After one year it will be terminated.

- The infrastructure discussions moved forward for the Green Fund of \$100 billion starting in 2020 to help developing nations control and reduce their emissions without compromising their growth and development.

- A protocol for legal enforcement of the Durban Platform's decisions is under development and will be applicable to all parties. This work will begin in the first half of 2012 and the progress shall be reported in future conference sessions.

- This work will be completed as soon as possible, but no later than 2015, for adoption at the group's 21st session, to ensure that it will be implemented from 2020. Kyoto Protocol supporters will continue to work on reductions on their own.

- How all of this gets done is to be decided by next June including "mitigation, adaptation, finance, technology development and transfer, transparency of action, and support and capacity-building, drawing upon submissions from parties and relevant technical, social and economic information and expertise".

- Commitment was given to raise emissions reduction targets based on where we are following a review in 2013 - 2015. A work plan is under development to look at how countries can enhance their "mitigation ambition" and to look at ways of closing the gap between reality and ambition. Any ideas should be submitted to the secretariat by the 28th February 2012!!

Kodak has launched a sustainable support program for its printing and publishing customers in the UK. Existing and potential Kodak Nexpress digital press customers can work with waste control specialists J & G Environmental to dispose of all consumable waste and all Operator Replaceable Components (ORCs). The stuff will be collected, sorted and returned to Kodak factories for refurbishment and reuse.

According to *Südwest*, a pedagogical media research centre in Mannheim, Germany, young people consider reading newspapers and books right now as being 'in'. The study



worked with around 1,200 12 to 19 year olds and, according to results, 44% read regularly. This is a 6% increase from the last time the study was done in 1998. Girls are keener book readers than boys and e-books played virtually no role. The study found that only 1% of participants say they read them. Around 42% read daily newspapers, with 18% reading their editions online. Newspapers are considered the most credible news source, with television and radio second and third. The Internet was considered the least reliable news source.

Fujifilm Europe's five wind turbines in Tilburg, The Netherlands are up and running apparently (we haven't actually seen them). Fujifilm worked together with Eneco, Dutch specialists in electricity, gas and heat generation, transmission, trading and supply. The company serves some two million business and domestic customers and its installation at the 63 hectare Fujifilm site is expected to have an installed capacity of 10 Mw.

Fujifilm is purchasing all of this capacity, which is about 20% of the total required, as part of its efforts to achieve 100% sustainable operations at the Tilburg factory. It is expected that the wind turbines will reduce Fujifilm's CO₂ emissions by 12,000 tonnes per year. Two large water purification units for water recycling have also been installed. The company reckons it currently reuses 13% of produced waste and recycles 68%.

We hope to bring you more on this in the New Year.

For more green news, check out
The Verdigris Project:

Verdigris 

<http://verdigrisproject.com>



Practical certification

ISO standards prove beneficial to industrial large format inkjet production.

In November the Swiss printer Christinger Partner announced that it had succeeded in achieving ISO standard certification for its large format production line, including, among other devices, an HP Scitex TurboJet 8350. The certificate is according to the Ugra (the Swiss Centre of Competence for Media and Printing Technology), adoption of the PSO (Print Standard Offset) certification scheme which is an implementation of the ISO 12647-2 standard.

The PSO certification is by far the most successful scheme worldwide, with more than 500 printers certified to it around the world. So what makes this particular certification special? Well, since the ISO 12647-2 standard was mainly developed for lithographic print technology, meaning offset, it is significant that the HP Scitex TurboJet, a high volume large format inkjet printer, has been certified to be able to achieve its tolerances.

So why did Christinger opt for this type of certification? We asked the managing director Karlheinz Kaiser who told us: “We used to have offset presses as a part of our press fleet some years ago, and while we subcontract the offset printing today, our customers in most cases expect the [same] even and predictable printed result as of offset on coated papers.” He added: “By far the most of our customers accept high quality offset as the preferred preference for their print production, so this was a choice we made soon after the PSO certification was introduced in 2005. We were granted our first PSO certificate already in 2006.”

But many large format printers can achieve a larger colour gamut than offset, especially on very glossy photo papers so we wondered if there would be a loss in image quality in adopting an offset standard? Kaiser explained: “Working according to PSO and ISO 12647-2 doesn't prevent us from accepting other types of requests from customers.

If a photographer or designer insists we use the full gamut of a certain device, our knowledge of colour management allows us to do this. In fact a spin-off effect of the PSO certification is that the level of colour management is now distributed to most of the staff, and we can handle almost any request from a customer.”

He continues: “What's good about the way Ugra implement PSO is that it's not just about the printing part, to be able to print in accordance to the ISO 12647-2 printing standard. It's also about maintaining a workflow



“For us the main motive to go through a certification process,” says Karlheinz Kaiser, Managing Director at Christinger Partner, “is the final benefits to the customer. They get consistent and repeatable quality, be it for brochures, displays, posters or POP materials.”

that assures document integrity through preflighting, where we use the PDF/X-3 file format, and verification of any digital proof that is used. At the moment our customers trust us to the degree that about 90% of the jobs are printed without any hardcopy proofs beforehand! And for the last two years we haven't had any complaint regarding print quality, and that is with a production of 200,000 m² per year, or some 10,000 files processed!”

We at Digital Dots have seen this trend for a while – the ISO 12647-2 standard also being used as the reference for digital print production. We contacted Erwin Widmer, managing director of Ugra, to ask why they had chosen to audit and certify digital printers according to a standard that originally was intended for offset printing. “There have been plans to introduce standards for digital printing technologies for a long time in ISO TC 130, the technical committee handling ISO-standards within the graphic

arts industry. But the only one so far that is published is the ISO 12647-7 for hardcopy proofs, and that is not suitable for production print runs. But any digital printing press that can be operated to print within the tolerances of ISO 12647-2, and a workflow that complies to the intentions of PSO, we think is as good a candidate as any to be certified.” explains Widmer.

He continues: “And the benefits for the print buyer are the same in any case – the Ugra PSO certification helps to transport the customer’s requirements through the whole



Mr Luzi Bytyqi (chief turbojet operator) to the left, and Mr Oliver Schmitter (colour management specialist and project manager for the Ugra PSO-certifications), proudly holding the certificate at Christinger.

company in a crystal clear – and automated – fashion and leads to better quality and higher satisfaction. But if and when there are more specific ISO standards developed for digital print production, we will of course consider those for certification as well.”

It’s clear to us that the key to success when striving for compliance to ISO-standards are both state of the art colour management, and a widespread understanding by the whole staff of what is needed to secure quality management in the whole workflow. Karlheinz Kaiser at Christinger comments: “The process is a comprehensive and time-consuming one and we felt that if we were to make it successful we should engage our key suppliers HP and our colour management software supplier GMG. We ran workshops for the whole company together with GMG, teaching them about the setup of the PSO certification scheme and what it means in terms of quality

control. One benefit of this unified approach is that the print quality is now independent of who prepared the file or who operates the press.”

Since GMG have played an active part in this process, we spoke to Victor Asseiceiro, technical project manager at GMG, who spent a good deal of time at Christinger. We asked him if there were any particular considerations that had to be made when controlling an inkjet volume printer like the HP Scitex TurboJet, compared to an offset press?

Asseiceiro replied: “For us it doesn’t matter much what kind of printing device we have at hand, whether it’s a gravure press, an offset press or some kind of digital



While we wait for specific ISO standards for digital printing, an ISO 12647-2 based certification can be successfully adopted also for industrial large format volume production, says Erwin Widmer, managing director at Ugra.

press. What matters is to get the correct colour readings for the type of substrate, and the kind of screening that is used. In the case of large format digital presses, we have found that the quality of the measurements might increase if you can use a slightly larger aperture in the



“One of the challenges in colour management is to achieve accurate and consistent measurements. Using a slightly larger aperture in the spectrophotometer is one positive factor in large format printers,” says Victor Asseiceiro at GMG.

spectrophotometer. Not all spectrophotometers give you the option to switch between different apertures but, for example, the Barbieri spectrophotometer that Christinger uses does have this option. Due to the tight tolerances in the certification process we had to use a similar device as the certifying body would use, when comparing measurements, even though we think it isn't really the optimal spectrophotometer for this kind of device and resolution.”

“Instead of creating ICC profiles we offer what we call the Smart Profiler software, and build calibration and device link profiles for the different presses and printers, to be handled in the module we call the Color Server. This has helped Christinger to manage the colour across the press fleet”, concludes Asseiceiro.

It seems clear that Christinger has achieved what it set out to do with the certification – a consistently high output quality, and as a side effect the workflow has been optimised for higher output. The proof of this is that the throughput volume has increased every year, with the same or even a smaller number of staff. And the absence of complaints or rejects regarding colour quality from the customers is yet another confirmation of the concept. We can just congratulate Karlheinz Kaiser and his staff for having the vision to take this strategic decision very early on, and for keeping this vision alive!

- Paul Lindström



Diversification key to digital success

Recently we had a chance to look at book production with the Digital Print Group based in Nuremberg, Germany.

Recently we dropped in on the Digital Print Group, based in Nuremberg, Germany to see how this forward thinking company is expanding despite the current economic troubles. DPG started in 1997 as a copy shop with five employees. This year its turnover is €8.5 million and it employs around 80 staff, the majority of whom work in software development.

So, how did this success happen? Oliver Schimek general manager explains: “We are growing every year because we make solutions.” He adds: “We have our own system engineers who make online shops for customers and we



The Digital Print Group is housed in this building, not far from Nuremberg airport.

have two photobook titles, Druckstdu.de and Prixopolis.de, and an interior design brand for corporate wall decoration as well as a calendar brand called Amerantus.”

Roughly 25 percent of business comes from these brands, with a further 35 percent from industrial customers, which is mainly instruction books, marketing materials and financial reports. The remaining 40 percent of

business comes from the book industry - DPG has been into short run printing since 2001 and prints some 25,000 soft cover, and 55,000 hard cover books per month. This includes over 800 different titles, 500 of which are generally reprints.

In this way DPG is making a lot of different products in book form, and this has allowed it to invest heavily in good quality book production equipment. Naturally,



This Universe collating and stitching unit was only the second worldwide to be installed.

being a digital company, DPG is a short run specialist, with an average print run of just 98 books. Schimek says that until recently digital printers have had to specialise in short run saying: “The machines have short set up times but there’s no high capacity.”

However that is about to change with the recent arrival of an Océ 3500 four colour inkjet press that is capable of producing 25m A4 prints per month. This is the third 3500 installation in Germany, but the first in the graphics space, the others having gone to transactional printers. The DPG approach is to market a specific product line that can be made with this printer rather than just trying to attract as much business as possible in the vague hope of filling the capacity every month.

Schimek says: “We think there’s so much possibility with this machine that we think there will be good opportunities and we will be able to fill up the machine with well paid volume if not high volume. To get volume is no problem but to get volume with margin is difficult.

▶ We are a little company with €8.5 million turnover but we get more benefit from offering complete solutions rather than relying on the customers to think of the solution.”

DPG has also tried to persuade customers to think in terms of shorter runs that are more suitable for digital printing, as Schimek explains: “We sell to publishers the idea that



Books are lined up ready to go into the Diamant MC Hybrid bookline, separated into batches according to their thickness.

you print 500 and then 500 and another 500 rather than 2000 because there’s less risk if you don’t sell. Also they can go to colour for educational books which they hadn’t thought of. And we can provide customers from 1 to 2000 books with a partner for both.”

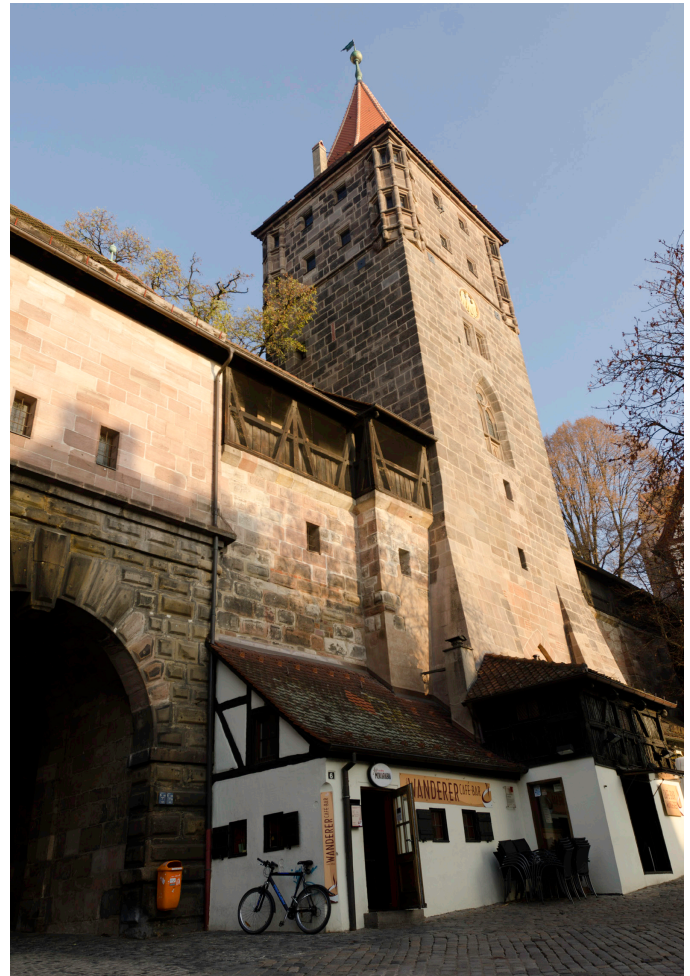
DPG already has two Océ VarioPrint 6250s but Schimek says: “We are going out of the black and white market and moving to colour because we think that’s where the growth is.”

DPG did look at other inkjet printers but chose the 3500 mainly for its print quality. Resolution is 600 x 600 dpi but because of grey scaling this appears closer to 1200 x 1200 dpi. DPG has the standard four-colour version but the press can take up to six colours. It has a web width of 540mm and runs at 75m/min. It can produce up to 60,000 A4 pages per hour and is cost effective against offset at runs of up to 2000.

Determining the price to charge for jobs can be a little tricky. There is a service charge based on the number of feet of media printed but there is also the cost of the ink to take into account and this depends on the ink coverage as to the cost of the job. An ink estimator tool comes with the printer. But as Schimek notes: “As we work longer

with the machine then we will have more knowledge of how to process the job.”

But Schimek has already discovered that using the inkjet is a third of the cost of using toner. He says that print quality of the inkjet is easily good enough for most books, adding: “The Océ has a new technology with black ink called Pigment 2 which gives very good quality in black and white text which will come in 2012 which will give



Nuremberg’s old town is famous for its beer cellars – with the average citizen in the Middle Ages consuming around 500 litres of beer per year!

more flexibility on the paper that we want to choose.” DPG is already running the Pigment 2 ink as a beta site and for now is using Mondi DNS paper.

Meanwhile, DPG is printing around 70,000 photobooks a year on two HP Indigo machines, a 5000 and a 7000. The photobook market is very seasonal, typically being mainly from October to December. Schimek says that



David McGinlay, sales director for Muller Martini UK, standing next to the Diamant MC bookline at the Muller Martini plant in Bad Mergentheim, Germany.

it's not really a problem having so much of the business in a small part of the year: "You can fill the capacity on the printers for different seasons by printing different products but the finishing has to be as flexible."

DPG has supplemented the photobooks with a healthy calendar business. Schimek comments: "This is our own brand. We sell directly to the customers so it's the icing on the cake." They make 45,000 calendars in 21 days in December, producing around 1000 calendars per hour.

Book finishing

There are a number of different finishing options for book production, including a Horizon binder which is generally used for short runs of 50-100 books. Next to this is a Universe sewing unit for collating and stitching books together. DPG bought the second one in the world and it's capable of producing up to 40,000 books per hour.

DPG has also just invested in a Diamant MC Hybrid hard cover bookline from Muller Martini which was installed three months ago. There are several versions of the Diamant line but the hybrid version is capable of dealing with the short runs associated with digital printing as well as longer run offset work. It's available in two versions, producing up to 35 or 60 cycles per minute but always runs at 30 cycles per minute in digital mode to give it time to adjust for minor variations in thickness between books.

Most book production lines use a single motor to run all the different functions, but at drupa 2008 Muller Martini

introduced the MC Diamant line which has up to eight servo motors, which means that there's less wear on the motors and a failure in one servo doesn't cripple the entire line. It's a big machine carrying out a number of different processes including positioning and rounding the book, gluing the spine and ribbon to attaching the case.

Not surprisingly, Muller Martini sees a bright future for this machine given that the market for photobooks is predicted to grow dramatically. DPG uses it for a variety of different products, from photobooks to instruction manuals with a choice of flat and round backs. The difficulty with short run hard covers is that slight variations in the thickness of the book block mean that the machine has to be constantly stopped for format changes. But the Diamant line has been designed for quick changeovers and can cope with up to 2mm difference in thickness so the books are made in batches with just a couple of minutes needed to change from one 2mm batch to the next.

The end result is extremely good with the cover firmly attached to the book block. There are different options for trimming and rounding off the cover, and there's no wastage with the first book out of the machine being ready to sell.

It's an impressive machine, but then everything about DPG speaks of an unwillingness to compromise. Walking around the Digital Print Group's factory it's clear that Schimek is not short of ideas, though he may be running out of space given the sheer amount of kit shoehorned into the factory.

- Nessian Cleary



Misconceptions and Myths of Green

This is the first of a two part Verdigris article examining some of the myths and misconceptions preventing printing companies from adopting a more aggressive environmental strategy for their businesses.

There are still many printing business owners who believe that leading the company towards a more environmentally friendly direction is expensive and difficult. Printers want to improve the environmental footprint of their businesses, but they may hesitate for fear of unknown costs and consequences. They and their customers can be discouraged by a range of misconceptions and myths relating to print's green agenda.

Some of these concern problems beyond the control of most printers and print buyers, however there are some misconceptions and myths that are less difficult to dispel. We look at the myths in the second part of this article, and deal here with some of the most common misconceptions.

Misconception 1 - A green agenda will cost too much for my business.

Cost is the most frequently cited reason for a printing company to avoid taking steps to reduce its environmental impact. However, cost doesn't need to be a barrier. Of course, there can be costs associated with, for example, installing solar panels or insulation. However, most investment into green initiatives should eventually generate a return.

For companies who are not in a position to make capital investments, encouraging staff to turn off unnecessary lights, air conditioning and heating will at least help cut energy bills. Setting up recycling bins in offices, reception areas and canteens, and improving production workflows to reduce waste are also obvious aids to a

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reduced environmental footprint. The cost of such efforts is trivial and easily affordable. Indeed they may even save the business money.

Misconception 2 - A green agenda is too complex for me to implement.

Complex systems can begin with a simple idea or target, perhaps something as basic as a ten percent reduction in energy bills, or reduced fuel consumption for delivery vehicles. Deciding what you want from an environmental impact strategy is the starting point for your environmental policy, and this process is not complex.

Establishing the policy, liaising with customers, briefing staff are all relatively simple steps you can take to improve your environmental impact. You might find the thought of this hard or even overwhelming, but once you know where to start ideas for implementation will come in accordance with your business values and goals. It might perhaps be difficult to get started, but the process is as complex or as easy as you want to make it.

Misconception 3 - A green agenda is unnecessary for the printing industry.

Ignoring the market's interest in the environment will ultimately undermine a printing company's success, whether it's a newspaper printer or a producer of sign and display work. Giving up on print in the belief that it is doomed to disappear is a dismal and shortsighted

▶ response to market changes, and especially to the rise of digital media. Print and digital media are mutually supportive and print will be around for as long as it provides a value addition to other media. Consider the success of print titles such as Simon's Cat (www.simonscat.com) which started life as a YouTube video or digitally printed photobooks ordered via the Web. Both of these examples demonstrate how digital and print media can be mutual beneficial.

Whether one accepts the climate change reality or not, all industries must understand that their activities contribute to greenhouse gas emissions. The printing industry



Efforts to improve cost effectiveness generally have a positive impact on the environment, from the design of airliners to digital presses. Cost savings drive business improvements, and environmental impact improvements.

needs a green agenda, if it is to take its environmental responsibilities seriously and wants to be in line with the concerns of its markets and those of consumers. Printers should drive and participate the conversation, rather than be subject to the whims of the wider market.

Misconception 4 - A green agenda will slow down my production.

Adopting a green agenda does not mean less efficient production. There is no reason why prepress and press technologies need to be slower in order to reduce their impact on the environment. In fact a more efficient and fully automated prepress workflow is likely to be faster and produce less waste on press. The time taken to automate a workflow or improve colour management should be

treated as time spent in improving cost effectiveness, production capacity and profitability. This is part of managing the business and reduced environmental impact is a positive side-effect.

Misconception 5 - A green agenda will make my business less efficient.

Removing inefficiencies is a key goal for any successful business so, of course, a green policy that makes the business less efficient is worse than useless. However green initiatives do not have to make processes inefficient. The objective is to develop and adapt an environmental policy that improves production and management processes to be more efficient and less wasteful. This can be achieved through such initiatives as optimising delivery schedules and routes, and ensuring that all machines and digital systems are fully functional.

Misconception 6 - Reducing my company's environmental impact is pointless.

For many years print has had a positive and relevant story to tell when it comes to the environment. Paper is a sustainable resource, based on a harvested crop that is continually replenished. It can also be recycled up to six times.

A PhD thesis published earlier this year by Phil Lawrence, of Sydney Australia's University of Technology, confirms that printing has indeed made huge progress when it comes to the environment. He reports that quantitative and qualitative research showed a substantial reduction in the printing industry's environmental impact over the last 20 years: "Printers have been forced to adopt new and highly efficient technologies into their businesses ... the printing industry has become about 97% less environmentally damaging than [it] was in the Kyoto base year 1990". These efforts have been made in the interests of efficiency and cost reductions, but the knock-on effect has been an extremely positive environmental impact. And printers continue to work to reduce their impacts across all sectors so environmental efforts are not pointless.



There are other mountains harder to climb than coming up with an environmental policy for your business.

Misconception 7 - Adopting a green strategy is a waste of money.

Reducing waste is what a green policy is always about and that includes saving costs rather than wasting money. In any enterprise however, money is wasted if it is invested without establishing a means of return or of measuring that return. From human resources to capital equipment, business investments must be made wisely, with risks managed and implementation fully resourced. An environmental policy is no different and requires management to ensure a good result. Low cost initiatives, such as organising spaces for optimum energy use, or deals to sell waste materials are unlikely to be a waste of money. The waste comes when investments of time or equipment are not fully leveraged.

Misconception 8 - Efforts to reduce the environmental impact of print are unlikely to have an impact.

As Phil Lawrence's work has shown, there is a very high likelihood that environmental efforts will have an impact for the industry as a whole. More interesting for print company owners is the impact a green effort will have on their businesses. The impact is directly related to the commitment of the company to the policy and to communicating it effectively to customers. If this is well done, there will definitely be an impact!

Misconception 9 - Reducing greenhouse gas emissions is not print's problem.

The worldwide rise in greenhouse gas emissions is every business owner's problem, since it is of concern to consumers and governments. The printing industry accepts this, which is why so many companies have developed green business strategies. Hiding behind the press is no way to face the environmental threats all industry must face. Managing environmental impact is every business's responsibility, and ultimately consumers expect responsibility from their service providers. This reaches to all links in media supply chains, from prepress to distribution.

In part two of this story we look at some of the myths surrounding environmental initiatives in the printing industry.

- Laurel Brunner



Misconceptions and Myths of Green - Part 2

This is the second part of Verdigris' look at some of the misconceptions and myths of going green.

Developing an environmental strategy for a printing business is really no different to developing one for any other kind of business. However the printing industry has been particularly villified by some lobbyists, with the result that many misconceptions and myths abound in the industry. We have addressed the misconceptions in part one of this article (see page 14) and here we take a look at some of the myths. It is hoped that this two-part article will help printers to better understand their options, so that they can have more meaningful and constructive conversations with their customers.

Myth 1 - Recycling is good

Recycling media, silver and aluminium is generally recognised as a good thing. But there are some studies that have shown that the environmental impact of paper recycling processes may not be altogether positive.

Consider, for instance, the collection of polluted waste which must then be discarded. We believe that recycling is definitely a good thing, but it must be managed effectively.

Myth 2 - Recycling is bad

This is, of course, a nonsense for materials that can be reused such as the aluminium in plates. The reuse of aluminium means a reduction in the amount of bauxite that must be mined and processed into aluminium. Recycling old aluminium requires only 5% of the energy required to produce new aluminium. Aluminium is one of the few infinitely recyclable materials because its quality doesn't degrade with reuse.

When it comes to papers however, it may not be such nonsense, depending on the processes involved. Paper and its production are part of the planet's carbon

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sequestration processes, so there are some who would argue that recycled papers sequester no new carbon, which makes virgin fibre a preferable choice. This is one myth that is not easy to understand or dispel, but it is certainly worth considering particularly in regions where methane is captured from landfill and reused as a fuel. In Malmö, Sweden, for example, the city's buses run on natural gas processed from methane captured from landfill waste sites.

Myth 3 - Print on paper is more harmful to the environment than digital media

This is the myth most commonly touted as a reason not to use print. The argument that digital media have less impact than print is not easy to disprove, however there are a number of isolated studies that have compared the impacts of electronic and print media. There are difficulties with proving the question either way. For instance, how are emissions allocated in a media supply chain, or how long is the media kept. Books stay on the shelves for decades, quietly but effectively storing carbon and having no negative environmental impact unless they are read using artificial light. An e-book on the other hand requires a digital infrastructure to support and access it, plus upgrades to the technology required to deliver and use it.

But how do we compare production scenarios for the two alternatives? This is one of the goals for ISO 16759 (Calculating the carbon footprint of print media products)

which is currently under development. Conducting a carbon footprinting study is complex and requires a standard framework, in order to produce studies that can be reasonably compared. This framework is what ISO 16759 seeks to provide. However with comparable frameworks it should be possible to use carbon calculators compliant with ISO 16769 to compare the carbon footprint of different media across geographies and market sectors. This includes electronic and paper-based media.

Myth 4 - Paper and print destroys trees

For every tree harvested for paper in Europe, three are planted. Paper is made from a sustainable and commercially viable crop. Forests and plantations capture carbon and provide amenities that benefit wildlife and local citizens.

When it comes to environmental impact reductions in manufacturing, the pulp and paper industries have lead the rest of industry because their raw material is a harvested crop that can also be recycled. They have made tremendous improvements over the last couple of decades. Waste has been considerably reduced and recycling is commonplace. The industry has consolidated to become far more energy efficient. This has mainly been in response to market pressure however, the gains are tangible. UPM-Kymmene, for instance, has published an annual environmental report, plus individual environmental reports for each of its mills, since 2007. Details are verified by EMAS auditors. EMAS is the voluntary Environmental Management and Audit Scheme developed by the European Commission in 1995.

Myth 5 - Print is not as effective as digital media

This is the kind of generalisation that is often used to criticise print and justify low marketing and advertising spends. It is a myth because it is both true and untrue. For short or trivial messages electronic media can be far more efficient than print, because distribution and receipt of such messages are close to immediate. However for information that perhaps is more complex or difficult to absorb, print may be more efficient: the subtleties

and sophistications of high resolution typography, composition, colour, special effects and beautiful finishing are not yet available to digital media. All of these characteristics contribute to efficient understanding



Paper is made from a sustainable and commercially viable crop, and it is unquestionably green.

and absorption of ideas and complex concepts. Media effectiveness depends on the medium, the message and the nature of the expected response, so effectiveness is highly subjective.

Myth 6 - It's impossible to deink digital prints

There has been a lot of market confusion relating to the deinking of digital prints. Papers are deinked in the recycling process using a combination of detergents and water. Conventional offset inks are literally washed from the papers, and floated to the surface of a deinking tank using air, where they are skimmed off. Dry toners commonly used in xerographic digital printing are similarly easy to remove. However, not all digital inks



This tree has been capturing carbon dioxide in central London for hundreds of years. According to legend it grew from the ashes of a bonfire of books during the English civil war and has thrived ever since.

are so simple to get rid of. Water-based inks as used in inkjet digital printing simply melt into the washing water. Much as one red sock can stain an entire load of laundry, inkjet inks can effectively pollute an entire load of pulp. Chemists from major manufacturers have formed the Digital Printing Deinking Alliance to develop a common solution to the problem. They have found answers for pigmented inks using precipitation techniques. It is still early days, but the impossible may not be so impossible after all.

Myth 7 - Paper production wastes energy

The days are long since gone when any manufacturing process was allowed to waste energy. Since the oil shocks

of the 1970s to current awareness of anthropogenic carbon's impact on world climates, energy efficiency has been at the heart of all manufacturing processes. The paper industry, as a traditionally high energy user, has made huge progress to reduce its energy usage and so its power bills. Paper companies have also come up with highly imaginative ways to reuse heat generated through energy use. M-real in Husum, Sweden for instance heats the village school and football field with the heat generated from its pulp production processes. Initiatives such as this have extremely positive and non-wasteful social, environmental and economic benefits.

Myth 8 - Carbon dioxide is evil

Carbon dioxide is a bi-product of metabolism in humans and a raw material for plant metabolic processes. There is nothing evil about it, unless it occurs in excess when it can make you drowsy, dizzy or even render you unconscious. If it is unavailable plants cannot grow or release oxygen into the atmosphere. Carbon dioxide is a necessary compound for life on this planet so carbon management at least should be at the heart of any printing company's business plan.

Myth 9 - Print is bad for the environment

Print has made huge progress to reduce its environmental impact and continues to do so. The printed word has driven human progress since the first characters were scratched onto a surface. The mechanisation of print production in the fifteenth century led to a massive and unstoppable flowering of knowledge, economic growth, creative expression and social development. The process continues to this very day, alongside other media including broadcast and electronic forms.

Despots and tyrants have long since recognised the power of print to drive change. Napoleon's observation that "Four hostile newspapers are more to be feared than a thousand bayonets" still rings true, albeit that print now sits alongside other media. It is not print but waste that is bad for the environment. It is everyone's responsibility across industry to reduce waste materials including printed matter. We have a responsibility to care for the environment so that future generations may also enjoy it.



Misconceptions about print media's environmental impact can discourage printers from investing in a greener future for their business, and this is extremely damaging for the industry. Perhaps even more seriously misconceptions and myths about print's environmental impact also influence print buyers and end users' perceptions of print, reinforcing false opinions with ersatz facts. The printing industry must collectively counter accusations of print's negative impact on the environment. Buyers and consumers need reassurance and to understand that of all media types print is the only truly sustainable one.

- Laurel Brunner





Quiz

This end of year quiz should get you thinking about what has been going on in our little patch of the graphic arts, some of it positive and some not. We hope you enjoy both doing the quiz and reminiscing over events of the last twelve months.

1. What makes Rotolitho Lombardi so very special?

- a) They installed the first HP T300 colour inkjet web press in Europe
- b) They installed the first Kodak Prosper colour inkjet web press in Europe
- c) They installed the first HP T350 colour inkjet web press in Europe
- d) They installed the first Kodak Stream colour inkjet web press in Europe

2. Which large format printing system supplier is Mutoh's main OEM?

- a) Fujifilm
- b) EFI
- c) Océ
- d) Polytype

3. What is Activa FPP

- a) The latest financial restructuring plan for Kodak.
- b) Ipagsa's latest positive, presensitised plate
- c) Fujifilm's newest reduced chemistry processor
- d) A code name for Agfa's deposition printhead development

4. Which company chairs the CIP4's workgroup to develop JDF for wide format printing?

- a) EFI
- b) HP
- c) Xeikon
- d) Mutoh

5. By volume, which is the world's leading digital newsprint production site?

- a) Tetrapak, Lund
- b) Thompson Press, New Delhi

- c) O'Neil's, Los Angeles
- d) Stroma, London

6. When and where did Océ introduce its ColorStream 3500 printer?

- a) Tokyo in November 2010
- b) Chicago in June 2010
- c) Tokyo in March 2011
- d) Chicago in February 2011

7. Roughly how big is the colour gamut of an offset press?

- a) 547,000
- b) 1,300,000
- c) 402,000
- d) 42

8. What is the expected future for Adobe's Flash?

- a) Abandonment
- b) Get folded into HTML5
- c) Be sold to Apple
- d) Bespoke development for niche applications

9. In April a leading press manufacturer announced a 15 percent increase in incoming orders. Who was it?

- a) Manroland
- b) Heidelberg
- c) Komori
- d) KBA

10. Which industry association has developed a benchmark for evaluating the quality of print?

- a) BPIF in the UK
- b) VIGC in Belgium
- c) PIA in America
- d) Unic in France

11. Who makes a digital proof printer that has an inbuilt spectrophotometer and can print 875,000 colours with an eleven colour inkset?

- a) HP
- b) Canon
- c) Océ
- d) Epson





12. Who acquired Quark in September?

- a) Platinum Equity
- b) Fred Ebrahimi & Tim Gill
- c) Goldman Sachs
- d) Adobe

13. Which ISO standard provides a framework methodology for calculating the carbon footprint of print media?

- a) 14067.3
- b) 15398
- c) 12647-6
- d) 16759

14. Which digital language is the best candidate for content repurposing?

- a) AFP
- b) XML
- c) PDF
- d) C++

15. 2011 has been a great year for cloud computing. But what is it?

- a) A private network running alongside the Internet
- b) A slice of the Internet running on privately owned servers
- c) A collection of servers that only run certain applications
- d) The basis of the Internet

16. What do the initials of INGEDE, the European association for the deinking industry stand for?

- a) International Growth for Engineering & Digital Excellence
- b) Industry Group Exploring Device Entrails
- c) Internationale Forschungsgemeinschaft Deinking-technik
- d) Ink Neutralising Group Engineers Delivered Experiments

17. Which digital press manufacturer offers a matte ink for selected engines?

- a) Canon
- b) Xerox

- c) HP
- d) Ricoh

18. What is the alternative to PDF/VT for open, reliable, high speed variable data printing?

- a) PPML
- b) VPS
- c) AFP-IPDS
- d) VIPP

19. When did Heidelberg and Ricoh announce their partnership?

- a) December 2010
- b) October 2010
- c) July 2011
- d) March 2011

20. A much loved legend in his own lunchtime will retire after drupa. Who is it?

- a) Frank Romano
- b) Paul Lindström
- c) Andy Tribute
- d) Des O'Connor

Answers

- 1. a
- 2. c
- 3. b
- 4. b
- 5. d
- 6. a
- 7. c
- 8. a
- 9. a
- 10. b
- 11. d
- 12. a
- 13. d
- 14. b
- 15. d
- 16. c
- 17. b
- 18. c





19. d

20. c

Scoring

You get four points for each correct answer for a top score of 80. A score of 80 of course means either that you have cheated, or that you are intensely clever and deeply committed to keeping completely up to date with industry trivia as well as major events. Of course it might also mean you spend your entire time reading Spindrift again and again, which is probably not good for your health. Do try to get out a little more.

Anything between 60 and 80 is also pretty impressive and we would hate to think that it is down to anything less than your superior intelligence and depth of industry knowledge. However it is still high enough to suggest that you may be spending rather more hours at your desk or reclining somewhere comfy with your laptop too close to hand. You might want to take a break now and then.

Forty to 60 is about what we would expect from most readers, particularly if you are too lazy to bother looking up any of the answers. Your mental health is probably assured and if you ever need to have sensible conversations about topics other than prepress, digital printing and the graphic arts, you will probably just about manage.

Anything under 40 really is pretty disappointing, but you can feel uplifted because it suggests an extremely well rounded personality. This score suggests you are totally lacking anything even vaguely resembling OCGAD (Obsessive Compulsive Graphic Arts Disorder) which is probably a good thing.




X-word Puzzle

Number 33 - Answers

I		I		F	I	N	D	C	A	P	I	T	A	L		A				
P		R			N				U		H			L		P	C			
	T	R	A	N	S	A	C	T	I	O	N	A	L	W	O	R	K			
T		E			E				T		T			F		P	N			
R	A	G			P	R	O	L	E		O	N	I	O	N		O			
A		U			T				R	A	M			R			W			
P	O	L	A	R	I	T	Y			E			A	M	E	T	A	L		
		A			N			E	B	I	T			A		R		E		
T	I	R	I	N	G			L			R			S	T	R	A	N	D	
H				T		L		L	A	Z	Y			I	S		I		G	
E				A	P	I		O						N		K	N	E	E	
R	E	E	L			N		W	E	A	L			F			I		M	
A				I		E		P		L	U	M	I	N	A	N	C	E		
P	L	A	C	E	S			L		I	T		N			G			N	
I		V	S					B	A	N	G			L	I	N	T		I	T
E		A				E		T		N				T		A		O		
S	C	R	E	E	N	D	E	N	S	I	T	Y			B	A	S	E		