www.digitaldots.org

Spindrift

...Stalking The Graphic Arts Industry Since April 2003

News Focus • Opinion
Reviews • Techno-Babble
Attitude

Volume 6, Number 3
11th June, 2008

exhibit • *verb* **1** publicly display (an item) in an art gallery or museum. **2** show (a quality) **3** show a sign or symptom.

– Oxford Concise English Dictionary

Dear Reader,

As shows and exhibitions go, drupa 2008 has been one of the best. As you will see from this issue, there is masses of technology and creativity driving this industry forward. Before it reached the halfway point, drupa had had 176,000 visitors, 64% of whom were from overseas, and of those 17% came from Asia. The show is undoubtedly a selling show and drupa's organisers believe that 50% of visitors are from top management. The big surprise is the high number of people coming to drupa from the US, despite getting hammered by the exchange rate and having to deal with an increasingly hostile economic climate.

Digital press sales were booming, with HP selling 36 Indigo presses, seven of them being Indigo 7000s, to Consolidated Graphics, for locations in Europe and the US, specifically for photobook applications. Before it had reached the midpoint Xeikon had sold 11 of its new 8000 engines.

For us, this has been the best drupa ever, with plenty of evidence that the graphic arts, printing and publishing industries are thriving. We have come through the traumas that began with the introduction of the World Wide Web in 1995, turning what was once a threat into an opportunity to reinvent our industry.

We've taken a different approach with this issue in order to give you a quick and dirty first take on our views of the major themes and trends in this issue. More indepth coverage will come after the summer.

Enjoy!

Laurel, Nessan, Paul and Todd

Special drupa 2008 Issue

Regular Columns

News Focus

There has been so much news over the last few days, so here are our highlights, the must-see technologies that we hadn't heard of before the show and those that deserve a second look.

Adobe PDF Print Engine 2.0 is a next generation platform RIP which many suppliers will use. Its biggest benefit is support for PDF/VT a new variable data format. Agfa, Fujifilm, Screen, Heidelberg, EFI, Océ and Xerox have all declared their support. Adobe has also launched Acrobat 9, with extended support for Flash and other rich media.

Harlequin Plus Server RIP 8.0 has native support for XPS, PDF 1.7, PDF X-4, Vista, Leopard and Pantone GOE, so it's ready for the next generation of workflows. **Global Graphics** has done its best to future proof workflows. Instead of getting converted first into PostScript, Harlequin 8 provides direct translation of PDF and XPS files to a display list ready for rastering via the same rendering pipeline as does the trapping, imposition etc.

Fujifilm's Jet Press 720 B2 inkjet sheet fed simplex press, based on the Dimatix Samba print head which can be configured for larger formats as well. This is the first product Fujifilm has introduced based on the Dimatix technology, but it won't be the last.

Spindrift ISSN 1741-9859

A very special newsletter for Graphic Arts, Prepress, Printing & Publishing Professionals, published monthly (sort of) by:

Digital Dots Ltd
The Clock Tower • Southover • Spring Lane
Burwash • East Sussex • TN19 7JB • UK
Tel: (44) (0)1435 883565

Subscriptions:
Spindrift is a digital only publication, distributed in Adobe .pdf format. A ten issue subscription (our version of a year) costs €190 and can be obtained by going to **www.digitaldots.org** and subscribing. We strongly suggest doing this as it is the only way to legally obtain this publication and we know you all want to be legal, especially at this sort of price. Discount multiple subs are available. If you're undecided and require some high-powered sales encouragement, ring Laurel at the number above.

Publisher – Laurel Brunner – lb@digitaldots.org
Editor-In-Chief – Nessan Cleary – nc@digitaldots.org
Technical Editor – Paul Lindström – pl@digitaldots.org
Production/Webmaster – Todd Brunner – tb@digitaldots.org
Subscriptions – Ariel Muthos – subs@digitaldots.org

Xerox's iGen4, due in September, adds technologies to make it more productive, ie to be more stable and have less downtime, but it runs at the same 110 pages per minute speed as the iGen3. The Concept 220 perfecting press is a twin engine iGen configuration due next year based on iGen4.

EFI previewed the new Fiery RIP, or rather, the "modular PDF-based Production Workflow solution – Fiery central". This is in turn part of the "Workstream" suite of production tools from EFI.

Xerox has previewed a new gel inkjet technology based on Tektronix technology which Xerox acquired some ten years ago. This includes an innovative 3ins wide and scalable inkjet head that Xerox claim is extremely robust. It uses a new solid ink that at room temperature has the consistency of toothpaste, but which melts at high temperatures to be suitable for jetting through an inkjet nozzle.

HP's Designjet L65500 is the company's first printer to use Latex Inks. This large format engine will cost around €100,000 but there is no need for additional investment into the extraction systems needed for solvent printers. The L65500 is a six-colour 104ins printer due to be available early next year. It prints 35 square metres per hour at 1200 dpi for indoor quality prints and 70 square metres per hour for outdoor quality.

Perfect Proof demonstrated Pakready, a software tool which aims to make it easy to create carton-based prototypes of packaging materials.

FFEI has developed a new UV curable spot varnisher called Emblaze, which will also be sold by Fujifilm. It's based on Xaar 1001 greyscale heads and can print matte, silk or gloss varnishes in a single pass. This B2 coater works at 360 dpi and will be available by the end of the year for €200,000 which sounds a little steep, compared to the cost of adding a coater to a conventional press.

Fujifilm's Taskero (Japanese for help) Universe monitors hardware and software performance across multiple sites, in order to anticipate possible blocks or holds in the workflow. In use at 27 commercial print sites in the US, Taskero Universe is the first technology of its kind

to provide both quality assurance across locations and business intelligence about the operations.

Helios UB+ offers full 16-bit processing of images to avoid the normal conversion to 8-bit data in InDesign and QuarkXPress. With the Helios OPI technology Quark Xpress and InDesign thinks that it has an 8bit per channel image, but the 16-bit original image will be used in final output to avoid banding and posterisation.

Alwan Color Expertise demonstrated the Alwan Color Processor, a Hot Folder based server solution for colour management and DeviceLink creation.

QuarkXPress 8.0 has a new user interface with context-based tools, tight integration with Flash and tools for designing across media. Typography has been tightened up with support for hung characters and a single format to support over 30 languages.

Theta System offers the SpectraCon System, a spectral camera mounted at the delivery end of the press, which feeds data to the control system in order to make adjustments to ink flow.

Caddon demonstrated a spectral camera which operates like a spectral scanner. This allows software to calculate colour appearance under different light sources.

Manroland has introduced automated inline colour measurement in its ColorPilot press control system.

Kodak Insite Campaign Manager, a module within the Insite suite, adds database analysis for optimising responses to web-driven print media campaigns.

Fujifilm has introduced an entry-level wide format solvent device based on Dimatix Spectra heads. It has an onboard spectrophotometer and will be available next year.

Enfocus (now a business unit within EskoArtworks) Pitstop Server 8.0 and Switch 8.0 now support PDF X-4. Switch 8 has an XPS toolkit, and Certfied PDF is being opened up for royalty-free use.

NiXPS launched an XPS preflight, viewing and editing tools for Mac and PC. It can also convert to PDF.

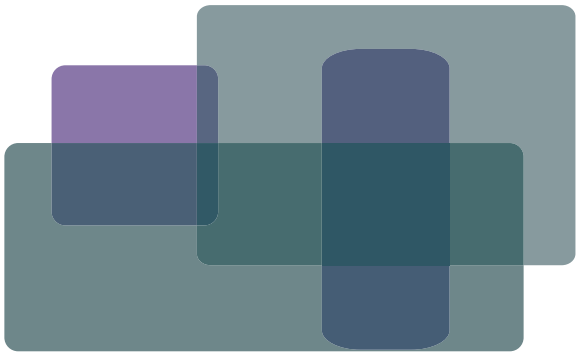
Callas gave a preview of pdfToolbox 4, with more automation and support for PDF X-4.

IP Labs is now a Fujifilm company. Its online and web services technology uses Windows wizards to create photobooks in five steps, with an easy to follow user interface and considerable power to either use templates or custom tools for photobook creation. A PDF Layout file along with the buyer's images is uploaded to the IP Labs service where Fujifilm's image enhancement technology is applied. Books can be proofed, but there is no means of prototyping different versions and so no means of up selling. Fujifilm may choose to fix this by including either FFEI's RealVue or its own prototyping tools from XMF, into the IP Labs technology.

Screen's Equiosnet is not yet a product, more a concept. However it is Screen's next generation DFE for its variable data digital presses. It doesn't replace Trueflownet, but provides a complimentary technology. Trueflownet will continue to be sold for CTP engines.

Fujifilm has also introduced a flexo CTP plate based on polymer rather than rubber, so it is clamed to offer higher quality. It will be available next year and uses Direct Laser engraving technology rather than laser ablation mask technology used in Cyrel imagers, and uses more steps. The new plate is very sensitive.

Heidelberg Prinect's Print Ready component has been renamed Press Manager, with a revamped user interface, using filters to manage interfaces for different operators. Preflight is much improved and a rules based planner helps plan future throughput and load.



Outstanding Stands

At trade shows we're always on the lookout for the outlandish, gauche or downright tacky. If nothing else, it provides an admittedly puerile distraction from all the bits and bytes. We're happy to report there are relatively few design disasters at drupa, in fact far from it.

The stand that is the furthest of all from being a disaster is the Agfa Graphics one in Hall 8a. A gorgeous concoction of violet back lighting and elegant curves throughout the stand, it manages to convey business and luxury. It's elegant yet functional and whomever designed it deserved every penny they were paid for it.

But although the stand works well, someone should reconsider the choice of uniforms for the dolly birds who do the hostessing. Tight white trousers leave the wearer with limited scope in their choice of underwear, and not a lot to the imagination of the onlookers. Perhaps that was the point?

Indeed, the worst stand offender that we could find was HP, which opted to put its reception in the middle of the stand. Unfortunately the stand was so large that the reception ended up being some distance from the large arch over the entrance, resulting in a gaggle of HP staff hanging around the archway, scanning people's badges in an effort to find the people they were supposed to meet with before their visitors disappeared into the maze.

Say What?

(Iffy Writing Award Presented in the Ether for Obfuscation, Confusion, Misinformation or All Out Pretentiousness – or not)

Sometimes a press conference can be a complete waste of time, and mostly journalists just go with it and hope for better luck next time. But at drupa there is too much to do, too little time available, and too far to walk for journalists to take a sympathetic view of time wasters.

There were a couple of particularly naughty violators of the time rule. Fujifilm for example had two press conferences, the first of which was great, because it previewed the new B2 inkjet sheet fed press. The second however, required journalists to schlep across the fairgrounds, for a single press conference and listen for an hour or so in an effort to discern what gems they could. None, as far as we know, were forthcoming.

Another culprit was Press-Sense, which had lots to say, but which never actually explained what people do with its software, proceeding apace to baffle much of its audience. Even those of us relatively familiar with the company and its impressive technologies, had a hard time sorting through the pronouncements.

But our favourite faux pas comes from Xerox's Ursula Burns in conversation on the drupa Daily's red sofa. For the most part these interviews, conducted in public on the show floor, are just excuses for self-aggrandisement. The questions people get asked are banal in the extreme, such as inquiring how many drupas Bernard Schreier, Heidelberg's CEO has attended.

Burns got the same treatment – which was your best drupa, what makes it special etc until she was asked: "Do you think inkjet has the potential to revolutionise print?" Her response was: "I think inkjet has big potential, but I do not believe that it will cause a fundamental change to the printing industry." Maybe Xerox needs to take a wider view, if the company really wants to keep some sort of edge.

The impression that Xerox has ostrich tendencies was compounded during the iGen4 demonstration. The attendant video had an amiable man standing in a theatre and explaining to the audience that in 1946 in Italy Ducati transformed the transportation industry with the invention of the motorcycle. He went on to say that Xerox's invention of the iGen3 had an equivalent affect on the printing industry, with both changing life as we know it forever.

If anyone from Xerox is reading this, and we know you are, the motorcycle was invented in the 1880s by one Gottlieb Daimler who thought it would be clever to add an internal combustion engine to a pedal bike. Herr Daimler's invention was more bone-shaker than world-shaker but in 1907 messrs Harley and Davidson in the US started something that has yet to run its course. Way before 1946 great names such as Triumph and Brough were doing their thing, creating motorcycle technologies and redefining the transportation industry.

And in 1993, Indigo and Xeikon introduced the world's first digital presses, several years and many, many pages before the iGen3.

Xerox has some truly fantastic technologies and a laudable history. Why not remind us that the invention of xerography provided the antecedent of so many digital presses on the market today? Why not remind us of how effectively Xerox is eroding the barriers between office, enterprise and commercial print? Better still, why don't the people at Xerox get some top-level education on the printing industry and how it operates? Xerox's history is worth celebrating and it has no need to claim ownership of other peoples' in such a heavy-handed and misguided fashion.

Inkjet

There's little doubt that the highlight of drupa 2008 is the new class of high speed inkjet printers that has started to emerge over the last six months. All of these printers feature a page-wide array of inkjet heads and for the most part the array can be made wider. And the icing on the cake is that not only do these represent a brand new technology, but they also come with a brand new application - transpromo.

Some people will argue that there's nothing new about transpromo, which is essentially mixing marketing messages with bills. But the kind of printers that have been used for transactional work were never really capable of achieving the kind of image quality that marketeers want to see for their campaigns. But these commercial inkjet presses offer image quality that is starting to come close to that which an offset press can achieve, at the kind of speeds that offset can reach, with full variable data, and at an acceptable price per copy. And make no mistake, as the quality and speed of these printers improve over the next few years they are going to transform the face of the printing industry.

The catch, of course, is that most of these are shown at drupa as technology demonstrations, and are unlikely to be commercially available until 2010, which at least guarantees us an interesting Ipex show.

Fujifilm showed off its Jet Press 720, a sheetfed printer with a maximum width of 720mm. It has a resolution of 1200 dpi and four levels of greyscale and will run at 180 A4 sheets per minute. Fujifilm claims 'offset-comparable' quality, with both coated and uncoated paper, though for the most part the press wasn't printing at drupa. It uses water-based inks with a rapid coagulation agent to prevent bleed. The 720 uses the Samba printhead array, as developed by Fujifilm Dimatix. The chassis is built by a Japanese press partner, who we believe to be Ryobi.

Fujfilm surprised many people with the Jet Press 720, a B2 sheetfed printer capable of 1200dpi resolution.

Screen, which was positioned across the way from the Fujifilm stand, also has announced several new inkjet printers. Perhaps the star of the Screen stand was the Truepress Jet SX, which Screen claims is the world's first B2 sheetfed inkjet printer. Screen claims that it will be capable of printing to both inkjet coated and standard printing stocks. To demonstrate this Screen has shown it printing on stocks that have been pre-printed via a litho press.

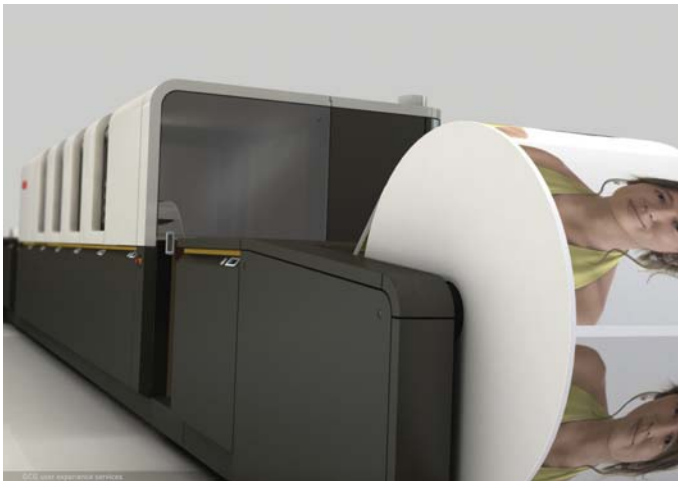
In addition Screen has also demonstrated a web-fed inkjet printer, using UV-curable inks. This offers 600dpi resolution. Screen has said that the technology could fit various configurations, including as a hybrid add-on for a conventional litho press.

Screen has added an entry-level and a high speed version to its Jet 520 range.

Screen has also announced two new editions of its original inkjet printer, the 64 metres per minute Truepress Jet 520. As well as the standard version, there's now an entry-level

version of this which runs at 32 metres per minute. There's also a high speed version, which has been achieved by halving the resolution to 360 x 360dpi. The original ran at 360x720dpi, and existing machines can be adapted to this faster configuration.

HP also showed off its gigantic new inkjet, the grandly-named Inkjet Web Press, which is effectively a scaled-up version of HP's Edgeline technology as used in its office printers. It's a four-colour machine with a resolution of 600x600dpi. The speed is 122 metres per minute, which with a 762mm width equates roughly to 2600 letter sized impressions per minute. It uses a simplex print engine, with two joined together for full duplexing, with no loss of speed. It has a duty cycle of around 10m sheets per month, though HP has indicated this could go up to 70m pages per month.



Kodak has high hopes for its Stream Concept press which it claims will produce offset-like quality at a low cost per copy.

Kodak brought its Concept Stream press to Dusseldorf. We've covered this earlier this year, but in essence its a continuous inkjet printer, using Kodak's next generation Versamark heads. At drupa Kodak demonstrated a version with 520mm heads but it can go wider, at least up to 762mm. For the moment it runs at 600x900dpi, and at a speed of 122 metres per minute, which equates to 2000ppm in two-up duplex mode. Kodak believes that it can produce an image equivalent to 150lpi and that in future this might go to 175lpi. Kodak also demonstrated these same printheads running with a Muller Martini press for a hybrid solution.

The Concept press isn't due to appear until 2010, but Kodak did launch a new inkjet printer, the VL2000, which is on sale now. This is a drop on demand inkjet with a resolution of 600 x 600dpi. It can either run in simplex mode across the full 480mm print width, or in duplex mode on a single 240mm width. Currently the speed is 75 metres per minute, regardless of whether it's run in simplex or duplex mode. Interestingly, there is enough room inside the printer for a second pair of heads, which would presumably allow Kodak to produce a much faster version.

Océ also has a fast inkjet printer, the JetStream. This was originally announced at the end of last year as the 1100 and which can do duplex printing at a speed of 1026 A4 pages. There's also a 2200, which is just two of the 1100s ganged together and which produces 2052 A4 duplex pages per minute. Océ claims that it will handle 60m impressions per month. These have a web width of 515mm, and a speed of 150 metres per minute.

At drupa, Océ introduced three new models, including an entry-level JetStream 750 which runs at 100 metres per minute, equating to 675 A4 pages, and a 1500, which is two of the 750s ganged together. there's also a twin-engined JetStream 3000 which can produce 200 mpm or 2700 A4 pages per minute at 480x600dpi, but which will also run at 150mpm at 600x600dpi. The chassis for these printers has been developed by Miyakoshi, though Océ refuses to say who has developed the heads and ink. We believe that Océ's secret Japanese partner is in fact Panasonic and that the JetStream is using the same printheads as the Kodak VL2000.

Digital Production Printers

We're awash with new inkjet technologies for industrial applications, but here are some of the highlights for commercial printers. HP Indigo has released its HP Indigo 7000 and Xeikon its 8000. Both of these were announced earlier this year, debuting at the show. Xerox has introduced a couple of machines, that weren't expected: the iGen4 and the Concept Color 220 press. The iGen4 is capable of producing 6600 4/0 A4 pages per hour and will print on 50 to 350 gsm, running at rated speed (110 pages per hour) on all stocks. Xerox is claiming a 25-35% performance improvement, although the machine runs at the same speed as the iGen3.

The iGen4 has an inline spectrophotometer that feeds colour data back to the front end for improved colour

accuracy throughout the run. Xerox cites other features to make iGen4 more productive: the toner and carrier can be replenished without stopping the press, the machine can have up to six feeders, and there is inline finishing for saddle stitched, punched, folded and coated jobs. There are improvements to colour consistency and automation through the FreeFlow process manager that aid productivity and lead to better and more consistent colours and flat tints from one machine to another.

It boasts a patented Auto Density Control System in the shape of a real time full width sensor array designed to eliminate streaking on the iGen4 before it can occur. A sensor for each channel measures the image density in a closed loop system to control how toner is laid down in order to compensate for process instability. An Auto Carrier Dispense system improves dry ink control for smooth flat tints and vignettes, and High Definition Linearisation obviates the need for greyscale calibration because it measures the size and shape of the halftone dots to ensure that Delta E values are linear and to compensate for unstable imaging.

The Concept Color 220 press is only a technology demonstration but it has been very well received. Essentially this printer is two iGen3s in a single machine to provide a perfecting press. Both engines can run in duplex if one of the iGens goes down or is taken down for maintenance. Although this press has been shown at drupa using iGen3s with a FreeFlow DFE, according to Xerox CEO Ursula Burns, the end product will be iGen4-based with a range of DFE options. It is expected to be available in a year's time, but pricing has not been disclosed.

Xerox also previewed a new inkjet technology, based on heads developed by Tektronix, which Xerox acquired some ten years ago. At that time Tektronix's piezo-electric drop-on-demand head had been configured for imaging in a production press and Xerox's announcement is a development of this prototype. It uses a solid ink that has the consistency of toothpaste at room temperature, but which when subjected to intense heat becomes fluid enough to jet the ink onto a substrate, where it gels and hardens immediately so there is no dot spread or seepage into the substrate. This means the individual dots are sharp and clean-edged. UV curing hardens the ink layer so it is extremely robust and suitable for pretty much any application. This is a 3ins (or 76mm) modular head that can be stacked, for example across a 30ins (762mm) width. Xerox has configured this technology into such a press running at 400 feet per minute at 300 dpi, however a higher resolution will be necessary for commercial applications.

Punch Graphix, whose Xeikon 8000 presses were selling like hot cakes, will likely be interested in a new press from Jadason Enterprises which appears to use a similar technology. This Chinese manufacturer introduced the QPress which has been 8 years in development and is being released at drupa. Jadason Enterprises hopes to extend its distribution network to Europe and the Americas. Jadason has 18 offices throughout Asia and employs 2000 people. The machine was originally developed by a Japanese company which Jadason Enterprises has now acquired. The graphic arts is only a small part of this company's business, which is primarily in printed circuits and nonprint media technologies.

QPress is the world's first B2 sheet fed press and is probably also one of the world's smallest: its total footprint is less than six square metres. It is available for sale now for

drupa Accolades

Heroes:

Andy Walker and Phil Sylvester of Fujifilm, who between them resuscitated Nessan's stricken MacBook Pro, and thereby inadvertently contributed in getting this issue of Spindrift together. Thanks chaps - I owe you a beer.

Zero:

Anne Mulcahy, CEO of Xerox who declared that Xerox invented digital printing at drupa 2000, with the launch of the iGen3.

Birthday honours:

Benny Landa, who celebrated the launch of the Indigo press 15 years ago at Ipex 1993.

Best cake award:

Global Graphics, who celebrated 20 years of the Harlequin RIP.

Farewells:

David Watson, the founder of Ultimate Technographics and inventor of digital imposition, who tragically passed away at drupa following a heart attack.

approximately €200,000. This toner-based machine prints on coated and uncoated stocks 64 to 350 gsm at 1200 dpi resolution. It has a speed of 20 sheets per minute which is about 100 A4 pages per minute. The QPress is a five-colour machine, with the additional station used for either a fifth colour or varnish. An LED array imaging head creates the latent image which is transferred to the page in a single pass in the printing unit. A horizontal paper transport carries the sheets through the fuser unit to the output stacker. Toners are manufactured in Japan to Jadason's specification and the front end system is the Compose Express RIP.

One of the biggest Chinese high technology companies is Founder Electronics, which is introducing the EagleJet L1000 digital UV colour roll-to-roll label printer, for the European market. This label press is widely used throughout China. It is based on drop-on-demand piezo inkjet technology using UV curable inks and prints onto paper and plastics at 300 dpi with eight greyscale levels. Depending on how the heads are configured this printer prints up to 210mm across a 250mm web width at up to 25 metres per minute. It uses the Founder RIP which processes PostScript, PDF 1.6 and 1.7, EPS, VDX and PPML. The print controller also has a simple page pairing function.

Quark and Adobe

Quark signaled its interest in the printing world by using drupa to announce version 8 of QuarkXPress, although it will be a couple of months before this ships. However, anyone buying QuarkXPress 7 will get a free upgrade to version 8 when it comes out, sometime in the next two months.

The major new feature of version 8 is that it is much easier to use, with many tools becoming multi-functional so that there are less of them to clutter up the screen, and with many features accessible from a single click. There is also much better drag and drop support so that users can now drag content direct to and from programs such as Adobe Bridge, Illustrator or Word. The new version also includes Flash authoring, which was formerly only available through an additional Interactive Designers plug-in.

Quark has also used the opportunity to ensure that all international versions are at the same level supporting

Quark used the first day of drupa to launch QuarkXPress 8, which features a much tidier interface, making it a much more intuitive and easy to use program.

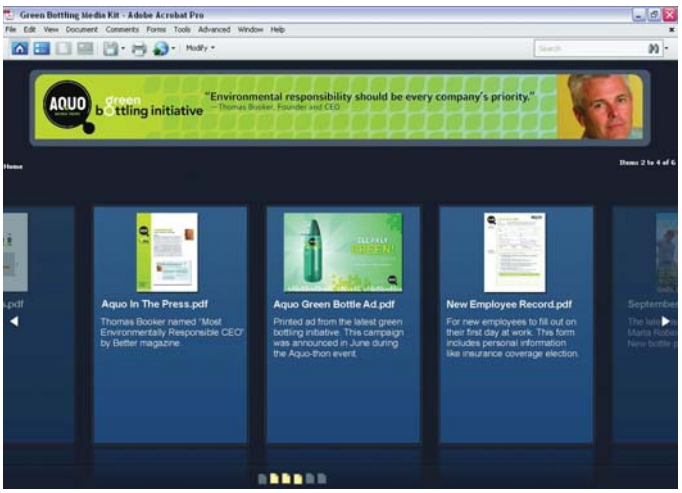
all languages and dictionaries. This means that there's no longer any need for a Passport version, welcome news for anyone who's ever experienced a clash between file formats. It also means that all the myriad other versions such as Chinese finally catch up with the decadent pleasures that we in the West have enjoyed over several versions of XPress.

We know that Quark has tried to work with workflow vendors to incorporate QuarkXPress projects with printer's workflows using its Job jackets technology. So far the only real interest in this has come from Dalim which has a lot of users in the magazine world. However, we have detected a worrying tendency amongst workflow vendors to back away from Quark, saying that they also want to work with Adobe.

For its part Adobe has announced version 2 of the Adobe PDF Print Engine. APPE 2 fixes a number of small performance issues. It also offers support for the new PDF format called PDF/VT, where VT stands for Variable and Transactional. This is a milestone for Adobe – they now offer a PDL (Page Description Language) with full support for variable data printing! Postscript and PDF

don't, and this means that all other variable data solutions and formats will be affected. We definitely need to come back to this one again! Creo, Océ and XMPie were some of the suppliers demonstrating implementations of PDF/VT. The complete version of APPE 2.0 should be ready for OEMs in October.

A day or so after announcing APPE 2, Adobe went on to release Acrobat 9. This now gains native support for Flash so that PDFs can now include Flash Player-compatible video and animations which can be viewed by anyone with the free Acrobat 9 Reader. There's also a new concept of PDF Portfolios, which essentially is a wrapper allowing different media types, such as video and audio files to be saved into a single PDF.



Acrobat 9 will make use of the PDF/VT variable data format, and also introduces the concept of PDF Portfolios, with several different types of media embedded into a PDF.

Adobe has also announced a public beta of a new hosted service, Acrobat.com. This is for storing files, web conferencing, desktop sharing and collaborative reviewing of files.

The new version of Acrobat has also led to an update to the Creative Suite, now at version 3.3. The Design Premium edition gains both Acrobat 9 and Fireworks CS3, and a lower price.

Perhaps the most notable abscences at this drupa were Apple and Microsoft.

Apple has been at previous drupas, and it was noticeable just how many people were sporting Macs, particularly in the press centre. Yet a quick survey of other journalists working in the graphic arts reveals that few of us have had any dealings with Apple (other than the Apple Store) in the last few years. Perhaps Apple is less interested in the printing industry, now that all its friends work in music and film?

One could argue that Microsoft has an even more compelling reason to be at drupa, given that it's trying to push the XPS file format.

More importantly, IT is becoming a major part of the print industry, and we were surprised to see two of the biggest IT suppliers missing.

Web-to-Print

The Internet has long since gone from being a novelty to being an integral part of almost all types of publishing. At drupa 2008 the term 'Web-to-Print' could be seen as frequently as the acronym 'JDF' was visible at the previous drupa in 2004. Another word often used as a synonym was 'Web-portal', which might suggest that more or less any Web-solutions qualify to be a WtP application.

A nice feature in iWay from Press Sense is the simple but useful preview of the binding method chosen for a Print On Demand project. An interactive and easy to use interface are among the signs of modern WtP solutions.

But there should be more to proper WtP solutions than just having a Web-interface. Web-to-Print at its best is far more than just static information presented through a Web interface, with some occasional check box to tag, or some order form to fill in. WtP solutions should have a dynamic user interface, customisable to the various users. It should facilitate team-based work and make the most of advanced databases.

Sometimes really advanced and impressive Web programming is referred to as being Web 2.0 adoption.

The concept of 'Web 2.0' is very vague, and we hesitate to put even more spin on it in any article in Spindrift – there are simply too many opinions on what 'Web 2.0' actually means. The father of the modern Internet as we know it, Sir Tim Berners Lee, has critically said: "Many of the technology components described as Web 2.0 have actually existed since the early days of the Web".

Adobe wrote yet another of their milestones into history at Drupa 2008. With the introduction of APPE 2.0 and Acrobat 9 they now (at last) have true variable data support in PDF! Dov Isaacs, Principal Scientist at Adobe, was very happy and enthusiastic about this event.

But terms like 'usability', 'simplicity', 'joy of use', 'user centric', 'data driven', 'collaboration' are all words that are said to indicate Web 2.0 design, and these words can also be used to describe the ambition and clear trend for WtP solutions.

All of the vendors of high speed digital presses have been pushed to couple the machines with supporting workflow tools. But it's not unfair to say that there has been a gap between what was technically possible, but in practice very cumbersome to do. At drupa 2008 all of the major players had either brought new solutions to market, sometimes second or third generation enhanced software, or new solutions brought through OEM partnership or strategic alliances.

An example is HP using a system based on the Press-Sense WtP Solutions iWay and Omnius. iWay is the entry solution, yet feature-rich and full of tools for both printing of stationery, books on-demand, and various types of variable data printing. The HP adaptation is snappily called SmartStream Director Web-to-fulfilment Solution, but the long name accurately describes what it does. Among the things that make iWay so easy to work with is the built-in support for 18 languages from the start. An immediate preview of the end product, including for example Wire-O spirals, gives the user/print buyer a pretty good idea of what he or she is about to order. Calculating final price including postage and other additional costs is a given 'must have' for this type of WtP-solution.

Kodak demonstrated how a WtP solution can help users enhance existing databases as well as choose receivers of market materials in a more intelligent way. The InSite Campaign Manager asks for a series of criteria that can be used for data mining, and thus custom tailor which addresses in the database should be selected. The effect of a shorter campaign on small pilot groups is measured and analysed in real-time, while the campaign is running, and when the optimum effect is reached, the larger target group is contacted. Direct and personalised mail is coupled with personalised web forms, PURLs (Personalised URLs), where the respondent is invited to give positive or negative feedback on the campaign. The response rate could typically be increased from a quite normal but very modest 1.5 per cent to around 6.5 per cent. This may not sound a lot, but can very well lead to increased ROI of 250 per cent or more.

A new and interesting product in the Apogee family is Apogee Media – combining DAM functionality, Publishing tools (planning, editing, online proofing, production) – everything through a web interface!

Screen has entered the high volume digital press market and so has a pressing need to support its customers with a WtP and variable data printing solution. Trueflow VaryStudio is the software suite to do just this, using a specialized data format called TOP (TruePress Optimised Postscript). This is needed, since Postscript on its own doesn't support variable data production.

Xerox use XMPie among other solutions for WtP, as well as modules from Press-Sense. XMPie has tools for database optimisations and data mining, similar but still different, from the Kodak Campaign Manager. XMPie stress that all their modules uDirect, uProduce and uStore are teamwork-based, so ideal for fast and collaborative processes. The XMPie software suite also contains image processing modules which can create Direct Smile-type personalised images.

Another company that has made its entry in high volume digital print is Fujifilm, and through partnership (and part ownership) of IP Labs it offers customer WtP solutions for creating Photo albums online.

Many, many interesting WtP solutions were demonstrated in the DIP (Drupa Innovations Parc), a gold mine for those who could spend enough time to visit more than 200 exibitors in this hall alone. The DIP was one of the most popular areas at this year's drupa.

Other vendors that presented new or extended WtP solutions at drupa were Agfa and Heidelberg. Agfa has a brand new web-based publishing solution called Apogee Media which has its own editorial engine based on XML, a built-in DAM solution, and cross media capacity. We need to come back and present Apogee Media in a later issue of Spindrift in more detail.

A cool WtP addition in regard to user interface was the iPhone UI for the Hiflex MIS. Estimates and job monitoring (powered by JDF) can be done using the Apple iPhone.

Heidelberg has further enhanced and extended the Prinect suite of workflow solutions, where 'Direct Access' can be said to be the 'Web Portal' to the Prinance MIS. It offers web-based request for estimates as well as on-line softproofing and approval.

Many more WtP solutions were shown at Drupa, not least in the DIP-section (Drupa Innovation Parc). But with more than 200 exhibiting companies in the DIP it's impossible to describe them all here.

JDF

Drupa 2004 was overwhelmingly the JDF drupa with everyone and their brother shouting about a JDF technology. This year the JDF Parc was extremely busy with 22 companies showing JDF products, and JDF was a feature of pretty much all of the major workflow systems suppliers' messages. But the message was much more muted than at drupa 2004, despite the range of seminars and workshops presented during the show.

The biggest leap forward for JDF comes with Adobe's announcement of the Adobe PDF Print Engine (APPE) 2.0 for which several suppliers have implementations on show. APPE 2.0 is built on JDF with code optimised to take advantage of hardware resources such as RAM and multiple core CPUs. It also means that integration with other JDF-compliant technologies, such as workflow modules, is greatly simplified. APPE 2.0 supports Adobe's new format for variable data, PDF/VT. This format is designed for a simpler variable data workflow and is supported in Acrobat 9, also announced at drupa.

Workflow developers are ramping up their systems with increased JDF capabilities. Agfa, Dalim and Kodak have all stated their intentions to integrate APPE 2.0 within their products. Fujifilm's XMF workflow was the first workflow system on the market to be wholly JDF based and version 2.0 extends the workflow's scope with variable data capabilities.

XMF 2.0 has moved on substantially. JDF stripping data from MIS now includes the production PDF as well, and uses JDF as a connection principle to print-on-demand systems. XMF exports the set up parameters for a digital press, such as the number of copies and the output dimensions, together with the PDF which is sent to a DFE which handles the output. Currently this is limited to static output, but when XMF 2.0 is released it will have full support for PDF/VT. Adobe is not yet ready with APPE 2.0 so Fujifilm's timing can't be set.

XMF Remote is an evolution of Fujifilm's 3D proofing tool developed in Japan and the UK. This apparently is not the

same technology as the RealVue proofing developed by FFEI, which wrote the code for XMF. Fujifilm's proofer provides a virtual view built from the RIP'ed data and finishing data as communicated by JDF. To the proof used as a production guide, Fujifilm has added XMF Remote to provide clients with a prototyping tool. The same file functions for content and production proofing, using JDF to communicate and document changes to the file as it evolves.

Version 1.4 of JDF will be available in October and will include automated layout and stripping for adding variable data to pages where layout is determined by content. There will be some new security and authentication features, including the use of secure URLs and certification processes so that JDF-driven production can happen on the Internet as well as intranets. There will also be additions to support packaging such as the ability to accept CAD files, Braille embossing and support for flexo output. JMF has also been made more robust so that when a device sends out a JMF message, the message is repeatedly sent until the receiving device acknowledges it. The idea is that if anything fails in the workflow, JDF/JMF helps the system pick up the pieces. 1.4 also includes the means to model device modules, so that components of integrated digital printing devices can be controlled via JDF.

One of JDF's big supporters is Kodak, which is previewing a new module for its InSite suite of workflow management tools. Insite Campaign Manager works with Insite Storefront, a web-to-print system that includes tools for every aspect of online print purchasing, including variable data work, plus a pricing engine and business admin tools. The suite includes JDF connectivity and works for both digital and conventional press output via Prinergy.

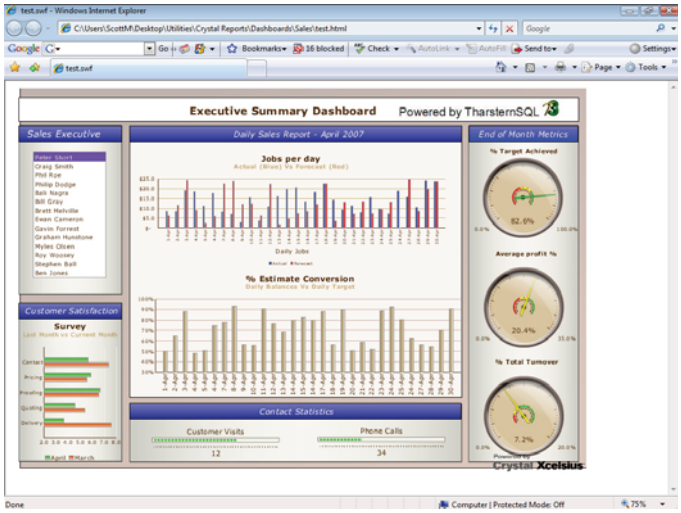
Insite Campaign Manager manages the match of customer prospects to products they are likely, or even not likely, to buy. It's a sales tool in that it manages prospect data files, however it is also a means of keeping a print manager's data accurate and current. This cross channel media marketing system uses mathematical analysis, presumably probability and statistics, to work out which printed piece, and to which people in a database, should be sent, based on those people's previous buying behaviours and their response to online surveys, via personalised URLs (PURLs) on brand owners' web pages. It monitors all activity and builds a constantly evolving profile of buyer behaviours. This allows brand owners to develop highly targeted messages for higher response rates.

ICM is written in .Net and is an entirely Kodak effort. It's an Insite module so it needs the Insite environment to run, providing a database health check as well as print production control. The software checks data files for such things as empty fields, duplications or incomplete data. A campaign board provides the operator with an overview of all campaigns in process and the relevant production schedules. There is no limit to the database size or its complexity. Kodak is working with list providers to use their APIs to improve database integration.

JDF implementation is happening by stealth with some major steps forward in technology, but with few people appreciating that it is JDF/JMF that gets their jobs through the workflow more efficiently. Heidelberg, for example, reckons it has hundreds of people actively using JDF, because it is central to Prinect. So now the question isn't so much about JDF, but about the efficiency of workflows. JDF itself is hidden in the background as customers of these technologies get on with building their businesses.

MIS

At the last drupa we saw a lot of feverish activity from all of the MIS companies as they struggled to update their systems to take account of the Job Definition Format and to start the testing and integration process with other

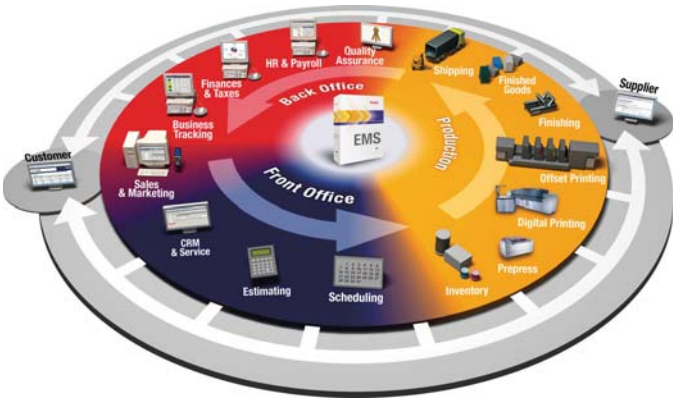


Several MIS use the dashboard concept to summarise particular information, such as this executive summary dashboard from Tharstern 4.

parts of the production workflow. Strangely enough a great many MIS still rely on collecting information

through direct machine interfaces with JMF being not as widespread as one might think.

Not surprisingly, after all this activity, few MIS have anything new to offer. Perhaps the most obvious exception is Kodak, which after years of talking about developing its EMS system, has finally released a finished version. Rather than building an MIS from scratch, Kodak has chosen to take an existing system, Epicor Vantage, widely used in larger enterprises. Kodak has built several modules that are specific to printing, including a JDF connector, estimating and quotation, as well as imposition. It's still early



Kodak has finally launched its EMS MISm, though for now it only has JDF/ JMF links with other Kodak systems.

days for this MIS, and Kodak is still testing it with its own products, so the only workflow that it will work with is Prinergy. So far it only works in English-speaking countries, and all the support appears to be US-based, although Kodak is just beginning to put together a support team for the UK.

Dims announced a new version, Dims.Net which combines MIS with ERP. It's said to be a much more user-friendly system, and has much of the look and feel of Windows Vista. Dims customers tend to be the larger print companies, so the Dims system is sold as a complete solution, unlike most MIS which are modular, with users buying only the modules that they need. Dims main claim is that customers can realise their return on investment within a year, because Dims will discuss their requirements and tailor-make a system for their needs.

Tharstern has launched version 4 of its system. This essentially brings greater automation and integration with other systems. Sales manager Scott Marienthal says: "We've done a lot of work with the likes of Xerox, Kodak, Agfa, Fuji, all the prepress and digital guys so that when using their web front ends customers could come and get prices automatically straight from Tharstern without an estimator getting involved."

Shuttleworth launched a new browser-based system at drupa called Data Flow. This is designed to work with touch screens, and gives operators details of the job in hand, as well as allowing them to enter production data which can be fed back to the MIS.

Optimus has been working with the UK's Vision in Print initiative which aims to help printers improve their productivity. The upshot is a redesigned user interface that is meant to highlight all the key performance indicators, while also simplifying the estimating and quoting process. The data can also be analysed further and presented in various charts to help make it more accessible

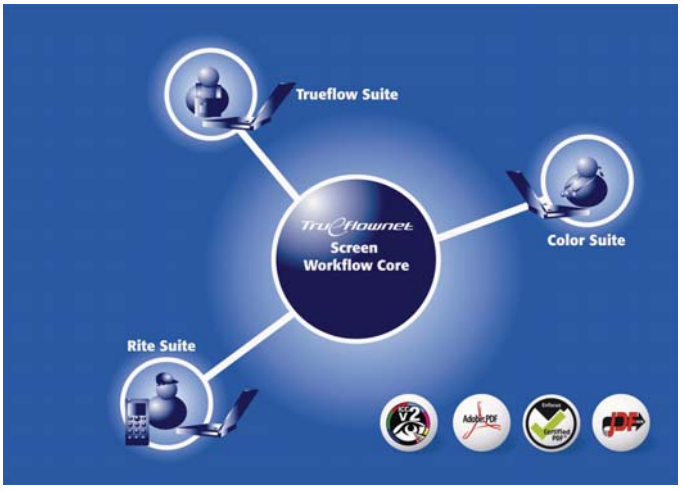
Vision in Print's Best Practice Study of MIS is available as a free download from **www.visioninprint.co.uk**.

Workflow

Getting jobs from orgination to fulfilment is all about managing the workflow. At drupa, the biggest workflow trend is the move towards greater integration of all aspects of the business, followed by the need for tools that support internet-driven business. Steve Nigro, senior vice president of HP's graphics and imaging business summed it up on the opening day of the show when he said: "If you talk about this industry going digital, in the end it's an IT challenge". Every aspect of workflow technologies at the show echoed this sentiment. From XPS support in Global Graphics' Harlequin 8 RIP, to Fujifilm's Taskero Universe monitoring system, the message is clear: our concept of workflow is expanding and workflow is not just about digital front ends.

Workflow technologies now provide the infrastructure for all aspects of print services and production management, within and beyond the printing industry. This is why Global Graphics has included native support for Microsoft's XPS (XML Paper Specification) format, as well as PDF 1.7, PDF X-4, Vista, Leopard and Pantone GOE. All of these technologies provide the nuts and bolts of workflows for many years ahead. Dismissing XPS as irrelevant to the graphic arts is not smart because with 150 million copies of Vista now shipped XPS is a reality, even though it's users don't know any better. Sooner or later XPS files will find their way into print workflows.

Workflow technologies, such as RIPs and automation tools, facilitate task execution and management. Workflow is a collection of interrelated tasks that drive a project from inception to conclusion, but these technologies are also being used more broadly to support printing businesses. They are being developed to provide improved business information, their complexities increasingly hidden behind powerful user interfaces that don't assume application expertise. This is due to the sophisticated implementation of IT, borrowing much from generic applications that everyone is familiar with. For example, Heidelberg's latest version of Prinect Prepress Manager, previously Print Ready, provides on-screen job management using ideas common to mail client interfaces. Individual operators can search, reorder columns and use filtering to present only the information that they need. Using familiar interface structures reduces the training overhead and knowledge burden.



The Trueflownet suite of workflow products will continue to be developed for CTP applications. Screen is introducing Equiosnet workflow for its next generation digital presses.

Borrowing from generic IT isn't limited to user interfaces and the behaviours of widely used software. Developers are increasing the power of their workflow engines. Powerful IT support means no more RIP bottlenecks: if you need more throughput, simply ramp up your RIP capacity. No one has understood this better than HP, whose Indigo SmartStream Ultra has 168 Harlequin RIPs in the rack at drupa. This battalion of CPUs is processing 2,200 A3 spreads per minute for photobook production! This is not just about expanding RIP capacity with additional processors. It's not the power that matters so much as the data management across devices. In one application HP Indigo demonstrated a 16-RIP system that processed a 300-page A3 photo book in under two minutes!

Developers are looking to increase their workflow systems' capacity in order to support new applications such as photo books, and to provide the foundation to support additional management requirements. Screen's new Equiosnet includes an Adobe APPE 2.0 RIP, plus extensive tools to support variable data output and short run printing. Details were sparse to say the least but the idea seems to be to provide a next generation Trueflow, with the capacity to support a broader range of business activities. Trueflow will continue to evolve for CTP workflows, with Equiosnet positioned for print-on-demand markets.

In addition to large suppliers there are a host of smaller developers whose technologies can be incorporated into larger systems. For the most part this generally requires some sort of partnering between organisations; only HP has declared its SmartStream workflow to be completely open to incorporate whatever technology a customer wants to use. This includes technologies such as Press-Sense iWay, a web-based back end data management and business flow automation system. Version 5 of iWay is based on a new infrastructure that makes it more scaleable, with the scope to support highly automated production of large numbers of jobs. This version also supports billing processes for invoicing and receipts and has new navigation tools for variable information forms, and sophisticated pricing schemes. Press-Sense Manager is a version of this technology for small to medium-sized print shops and Omnium, is a high end planning tool for publishers who want full automation of all processes.

Another interesting technology is an online tool from IP Labs, recently acquired by Fujifilm. It uses wizards for photobook creation in five steps handling most of the work, with tools to fine tune the look of the books. There are also impressive image editing tools, as well as automatic set up of finishing and cover size, based on the content and basic proofing tools. The RealVue prototyping tool used in Fujifilm's XMF may also be included with IP Labs technology as an upselling tool for photobook printers.

These technologies can monitor processes as well as manage them. Fujifilm Taskero Universe is a monitoring system that was initially developed to monitor Fujifilm's 600 or so CTP engines in the US. The system was developed to help Fujifilm anticipate problems before they occurred, so that servicing was more proactive than reactive. Taskero Universe was developed to include other devices, measuring performance to provide a constant

live audit of how the system was behaving, whether it is within prescribed tolerances, and so on. There are now 27 users of this technology in the US, most of them commercial printers. This new end user version is allowing printers to check their performance and, via JDF, to pass data to other parts of the workflow to aid process management. Taskero Universe is based on the idea that everything that can be measured should be measured, right down to the temperature and humidity!

Colour management & Proofing

At drupa we were on the lookout for advances within colour management, and it is very apparent that there is still room for improvements in the area. A clear trend is towards centralised storage of calibration status and settings, including information on which measurement targets should be used and for what device in a certain process.

X-Rite introduced a low priced spectrophotometer called Color Munki (pronounced "monkey"). It can be used to both calibrate monitors and printers, as well as measuring colours from "real life".

Fujifilm presented Taskero Universe, which synchronises all of the colour critical devices in a workflow. Fujifilm will offer this database solution as an ASP service, at a monthly fee. If for example a CTP device needs recalibration at a higher frequency this may indicate that the laser is soon due to be replaced. The Taskero system will notify the operators to take actions accordingly. Taskero also supervises computer and network performance, which may involve third party IT-support.

Kodak finally released the long awaited Color Flow, which like Taskero, supervises all colour critical devices including monitors. If, for example, a job which was planned for printing on a sheetfed offset press is moved to a web press, Color Flow contains all the data needed to adjust the plate output so that we are within tolerances in the new press. Included in Color Flow is also an ink optimisation tool.

Heidelberg has a similar function in what it calls the Prinect Quality Monitor, which used to only be available together with the automated Image Control spectrophotometer, but can now be used with single handheld measuring devices as well.

Fujifilm usually brings some R&D projects regarding imaging and colour management to drupa to "test" the interest of the European market. Here Nobuyki Soda from Fujifilm Japan demonstrates a multicolour softproofing station, working name "Pure Proof M".

Chromix has launched a Quality Assurance system called Maxwell with similar functionality, at least in as far as being able to store measurement data in a database for analysis and comparisons.

Another stand alone Quality Assurance System is Print Spec from Mellow Colour in the UK. Print Spec contains a range of analysis and correction tools for a printer who wants to print within the ISO 12647 standard.

X-Rite has introduced a low priced measuring device called Color Munki (which is supposed to be pronounced 'monkey'). Its simplified user interface and lower price should attract a wider group of designers and photographers to take better control of their colour critical devices. For the more professional users and printers, X-Rite offers a new version of the automated IntelliTrax. The i1-iSis automatic chart reader is now capable of better eliminating the effects of OBA (Optical Brightener Agents) in papers. In order to better communicate colour data, the CxF file format (Color Exchange Format) has been extended and is now at version 2.0 which supports several ink standards as well as Pantone (acquired by X-Rite), including NCS, Toyo and HKS.

EskoArtworks has cooperated with Sun Chemical to build a large colour database for ink behaviour on different stocks and substrates.

Talking about printing ink, Toyo ink has launched an offset ink called Kaleido Ink. It can be used like 'normal' CMYK-colours, but will result in about 20 per cent larger colour gamut.

Epson has launched two new high quality inkjet printers with 11 print heads, the Epson Stylus 7900 and 9900. Orange and green have been added to the ink set for larger colour gamuts. This means that proofing systems have yet more printers to choose among for high gamut work, like for example spot colour proofing.

Print Science offers customised ink sets to install in existing colour printers, such as, the Epson Stylus Pro 9800 which uses CMYK plus additional light cyan, light magenta and light grey. The latter can, for example, be replaced with orange, green and purple. After linearisation the seven colour profile makes it possible to proof practically all Pantone spot colours.

Efi has released an inexpensive entry level, 'easy-to-use' software RIP called Colorproof express. It can be used on both Mac OSX and Windows platforms.

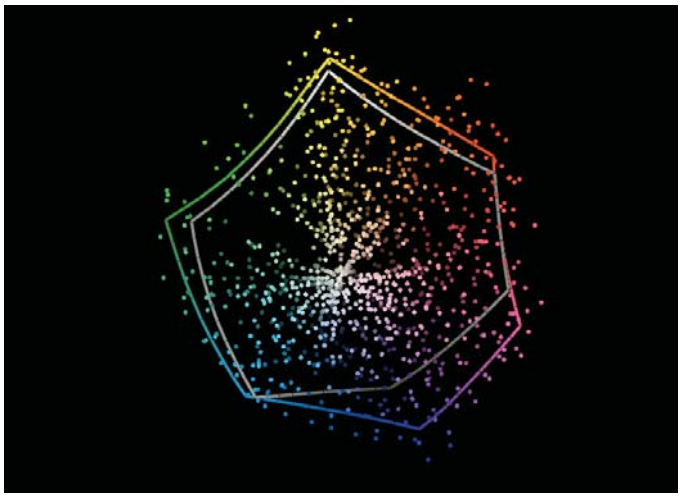
Mimaki offers a short run printing and proofing solution suitable for flexible packaging production. The printer is called Mimaki UJF-605, which can print on substrates like OPP/PET films and shrink films.

Several hardcopy proofing systems now include functionality for softproofing in the system.

CGS Oris announced that it has been certified according to the Idealliance Monitor Proofing System Certification. This closely follows the ISO 12646 standard regarding monitor quality for proofing of print production. Oris also announced that its proofing system Color Tuner now supports 'hybrid proofing', meaning both hardcopy proofing and soft (monitor based) proofing.

Elpical has a built in image enhancement module in its DAM system. Image optimisation can be applied to either single images, or images embedded in PDFs.

Fujifilm launched version 5.0 of its image enhancement software C-Fit, which automatically or semi automatically shows the user selectable variations of separate images or the images embedded in PDF-files. As a technology



Toyo ink has launched an offset printing ink called Kaleido Ink. It has about 20% larger colour gamut than normal ISO 12647-2 on coated paper. In the 2D model (created in Chromix ColorThink) the "cloud" of dots represents all the fulltone Pantone spot colours, and the outer coloured contour is the Kaleido inks, while the inner grey and smaller gamut is ISO coated.

preview Fujifilm also demonstrated a colour managed workstation where the viewing light in the viewing booth was simulated on the monitor. The preliminary name of the product is Dynamic Colour Management System.

This is similar to what Canon does with its Kyoanos colour management system, also said to be used by Microsoft in Windows Vista (although very little tangible result or information has been provided by Microsoft on this). Fujifilm also previewed another prototype called Pure Proof M, where the M stands for Multicolor profiles. The idea behind showing these products at drupa was to gauge the interest within the European market for these types of colour management solutions. We at Digital Dots vote for Fujifilm to bring these products to market – it should be

appreciated by, for example, a packaging printer viewing a multicolour/spot colour design previewed correctly on a monitor!

Prepress

Despite all the headlines about new inkjet printers, there were also a couple of new plates and platesetters on show. ECRM, for example, introduced new versions of its Mako range of platesetters. These now feature 120 milliwatt violet laser diodes making them suitable for use with violet chemistry free plates from Agfa, which showed off its Azura V plate, and Fuji, which demonstrated its Pro-V plate, together with a new range of more environmentally-friendly pressroom chemicals.

Kodak introduced this Electra XD for very long runs of up to 1.5m after baking.

Screen announced two new very large format platesetters, designed for coping with the new range of very large format offset presses announced by vendors such as Heidelberg. This includes the Ultima 40000, an 80-page platesetter, and the 48000, a 96-page device. For its part Heidelberg also showed a number of large format platesetters, with the Suprasetter 145, 162 and 190, which will take plates up to 1425 x 1905mm.

Presstek introduced a new family of Compass platesetters, with both 4-up and 8-up models. These can image plates at up to 38 plates per hour, and up to 250lpi. They are specifically designed for Presstek's Aurora Pro plates, but will also work with other vendors plates.

The Aurora Pro plates were also new at drupa. These are chemistry-free plates, needing only a water wash after exposure. Presstek says they are good for runs of up to 25,000 and a resolution of 1 per cent to 99 per cent dots at 200lpi.

Kodak announced the Electra XD thermal plate, designed for long run lengths of 500,000, or up to 1.5m after baking. This is a positive working plate that doesn't require a preheat and is said to have good prepress latitude. It is capable of printing 10 micron FM screening, with a resolution of 1 per cent to 99 per cent at 250 lpi. Kodak also unveiled a faster version of its Magnus platesetter.

VIM Technologies showcased this processless plate which can be imaged through an Epson inkjet printer, using the standard inks.

We have also seen a number of solutions involving printing an image direct to a metal plate through an inkjet printer, usually an Epson. JetPlate have long been involved in this area, adapting the printer with a feeder and take up tray for the metal plates. It works with conventional metal plates and can achieve a 175lpi screening. Once imaged, the plates have to go through a developing unit, which heats the plate to harden the image, and develops the plate. After development these plates should last for around 100,000 impressions.

The problem with the JetPlate system is that it relies on replacing the standard inks with its own fluid, which then invalidates the warranty on the printer.

However, we also came across Tech Nova who claim to be using standard Epson inks with its MetiJet metal plates and PoliJet polyester plates. The plates have to be put through a baking unit but are said to be good for around 20,000 impressions, but they only have a screen ruling of 133lpi. However, Tech Nova has another plate, the MetiJet PS, with a screen ruling of 150lpi. This needs UV presensitizing, and some form of processing and should be available shortly.

VIM Technologies also has a plate which can be imaged in an inkjet printer. The JT Direct inkjet plate is available as either a polyester or aluminium plate. At drupa it was shown working with Epson A2 printers using the K3 UltraChrome inkset, although only the cyan ink is used for printing to the plate. However Vim has said that it is also working on plates for use with Canon and HP inkjet printers.

Once the image has been printed, the plate has to be passed through a heating unit to harden the inkjet inks to withstand the inks, fount solution and cleaning agents used on the press. VIM says that the plate is good for runs of 10,000, and 150lpi screen rulings. VIM says that the plates should be ready to ship later this year.

Imaging plates through standard inkjet printers has a number of advantages for small print shops, in terms of saving of cost and space, as well as being able to run the proof from the plate imaging device via the same RIP.
VIM also showed off a processless metal plate for waterless litho printing, although it's fairer to describe this as chemistry-free, since it still requires washing in a mild soap solution after exposure.

Large Format Printers

When it comes to software and workflow solutions this drupa has been very much the 'Web-to-Print drupa'. But if we look at hardware it was definitely the 'Inkjet drupa'!

The Very Large Format inkjet printers drew crowds everywhere at drupa. Here the Efi Vutek QS 3200r, a roll fed inkjet printer.

In almost every one of the 19 giant halls, there were inkjet printers in every kind of size and fashion. Differentiating factors are of course speed, resolution and maximum format, but also if the printer is designed for use with roll-fed substrates or can print direct to rigid material.

Another differentiator is the kind of ink that is used in the printers, and at drupa the UV curable inks came in force. The UV-LED technology was particularly prominent, where multiple arrays of LED (Light Emitting Diodes – miniature lasers if you like) are used as the light/heat source to cure (ie, dry and stabilise) the ink. The new LED-based printers not only achieve higher speeds, they consume less power than those with UV lamps.

The sheer number of very large format inkjet printers is reminiscent of the days of the big gold rush. There are an incredible number of new brands and models. An example of a relative newcomer on the market is Gandinnovation, established in 2001, and exhibiting at Drupa for the first time. We got the chance to have an interview with one of the two founding brothers, James Gandy. It became clear that it's quite a logical development for the Gandy brothers – since their background is in conventional screen print production, with the company SignTech. After designing and developing many new substrates for the screen market, as a screen printer, they started to try out digital printing. They then sold the printing company and started Salsa Digital. This company was in turn sold in 2000 to Nur, and the Gandy brothers, James and Hary, started Gandinnovation. Today they manufacture about 70 very large format printers per month in the Jeti Series, both flatbed and roll-fed models, and for solvent-based inks, water-based inks, and UV-curable inks.

The Océ Arizona GT combines flatbed design with roll-to-roll capacity. It uses UV curable ink and variable ink drop size from 6 to 42 pictoliters.

When we asked: "How fast, and to what extent can digital printers replace analogue screen printing," James Gandy answered: "Probably 50 per cent of the production, but not at a rate faster than at the earliest within 5 years". The reason is, of course, that one single machine can't do all types of jobs, and it takes time and resources to test out

which ink, substrates and print heads work well together for different applications.

James Gandy worked as a salesman and application developer at the screen printer SignTech. He then was one of the founders of Salsa Digital, which was sold off in 2000 to Nur. In 2001James and Hary Gandy founded Gandinnovation.

Gandinnovation is a relative newcomer, but there were new models from many of the well-known brands on the market. And many brands have new owners since last drupa: Efi has acquired Vutek and Jetrion; Fuji has bought Sericol, and Dimatix including the Spectra brand; HP Scitex has picked up Idanit, Aprion, Matan, Scitex Vision, Colorspan, Nur (including Salsa); Océ has taken over Cymbolic Sciences, Rastergraphics and Gretag Imaging; and Screen has acquired Inca Digital.

Some of these printers claim very high speeds but speed is of course dependent on what resolution you aim for and need, and many of the very large format printers on the market are targeted to very different types of applications. Even if the UV-curable ink printers dominated drupa, there was room for other innovations.

Océ presented what it called Crystal Point Technology, which seems to be a kind of solid ink technology. Coloured toner 'pearls' change to gel in the printing system. The output is said to be waterproof so should be suitable for outdoor applications. However, the print quality is not really up to graphic arts quality, so the new Crystal Point ink is used in the Océ Color Wave 600 plotter, though it did produce some nice images, suitable for distance viewing.

Another company which has started to talk about 'gel' type ink is Xerox. This seems to be a development of a technology that started at Tektronix, before it was acquired by Xerox in 1999. A prototype of a solid ink-based very fast digital web printer was presented but never saw the light as a final, launched product. Nearly ten years on and Xerox is also only in the prototype stage with the 'gel ink', but seems very optimistic about it's potential.

While there are many, many different manufacturers of large format printers, there are considerably fewer manufacturers of quality print heads suitable for high-end colour production. Among the well known are Fujifilm Dimatix and Xaar, but also Domino, Konica Minolta, Panasonic, Seiko, and of course Canon, Epson and HP.

Among the numerous new very large format digital printer manufacturers at drupa (dominated by Chinese companies) we noticed the Russian manufacturer Sun from Novosibirsk. They promote the advantage of their UV-LED technology in very straightforward terms as being more eco-friendly, having a wide array of possible substrates, low energy consumption (curing at 36 °C) and a comparatively long life for the LED UV-unit.

The future looks bright for UV curable digital printers in the Very Large Format segment.

Environmental Trends

Springtime for drupa and all that's green! Everywhere at this year's show there is awareness of the need for print to sell its environmental credentials and for manufacturers to start helping them to do it. Numerous initiatives towards more environmentally friendly print production are being presented by most large suppliers. They range from the borderline gratuitous to the impressive. Many, such as HP's Latex Ink technology, we've already heard about. But several are worth a word.

Komori is introducing the Lithrone LSX 40 and has received Emissions Certificates for this new press, plus the Lithrone SX29 and Spica 29P presses. This certificate measures such things as inks, varnishes, cleaning solvents, dampening solutions additives, noise and ozone to see if they fall within the Berufsgenossenschaft Druck und Papierverarbeitung (BG)'s limits. Komori is also distributing a green guide for designers to help them get the most out of Komori presses, whilst minimising their carbon footprint.

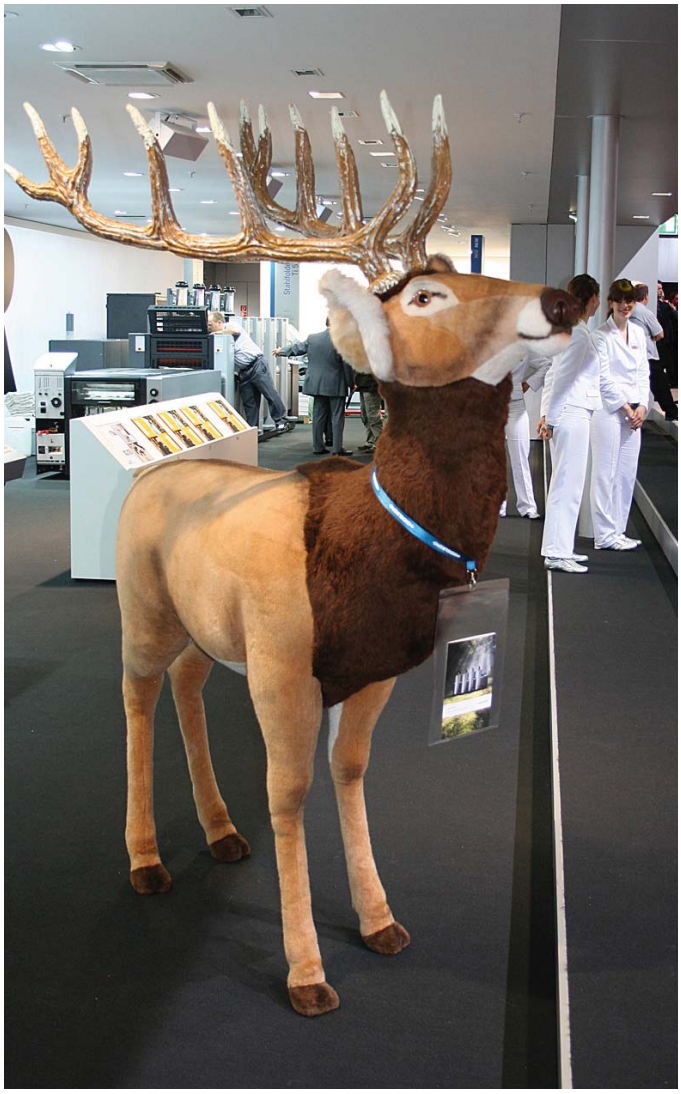
Heidelberg sponsored the World Print & Communication Forum (WPCF)'s special conference looking into work being done to improve the industry's environmental footprint. Heidelberg's entire stand is FSC-certified, and the

Dian O'Leary, Market Communications Manager at Dupont, convincingly showed that a quite typical type of package may be produced with as much as 50% less CO2 emission by flexo than gravure.

company has announced an International Environmental Print Award. The Hei Eco award is for printers with at least one printing press in recognition of sustainability in enterprises.

Manroland's EcoLogic is a series of training, software and educational materials supporting ecologically sustainable print. Within this initiative, the company has produced a series of booklets which Manroland has analysed for their environmental impact. A single 32-page A4 brochure has a carbon footprint of 0.143kg of CO2 per copy. According to Manroland's calculations the same information presented on a monitor via the web would have a carbon footprint of 0.655kg, assuming it would take the same length of time to read on screen as in print.

Dupont has also been looking at the impact of different print methods, particularly gravure versus flexo in which Dupont of course has a vested interest. The difference in emissions between the two for the same package can be as much as 50%.



Meet Raimar the reindeer – the Heidelberg mascot for their green drive at drupa! (Raimar is really a stag, but that didn't rhyme.)

Kodak has launched its Green Knight programme whereby individuals work at local level to help Kodak customers become greener. The company has produced sustainability guidelines for customers and is actively looking at new ways of working with other industry players to improve print's carbon footprint.

Xerox claims to have "green in our DNA" and has produced a sustainability guide for printers, with some rather self-evident tips for how companies can become greener. It all helps.

Paper suppliers are huge consumers of energy, so they are keen to shout their green credentials. M-Real is adding Paper Profile information to its products, so that printers and publishers can better decide which papers to choose for their projects. The profiles include factors such as the energy consumption required for a paper's production, whether or not the producing mill is ISO 14001 compliant and so on.

The Verdigris project had its official premiere at drupa. Here is a selection of the project members: (from left to right Carlyn Samuels, the Bespoke Agency; Ruth Clark, Splash!PR; Nessan Cleary, Spindrift; Laurel Brunner, Digital Dots; David Pressket, Canon Europe; Lyn Egli, HP; Rod Hayes, Graham Leeson, Fujifilm).

Even drupa's organisers are working to improve the environmental impact of print and its production. Messe Düsseldorf's waste management services provider, Remondis, is working with UPM to recycle all printed and unprinted paper waste generated during the show. Once Remondis has baled it, the waste will be transported back to UPM mills to provide raw materials for new products. And we are very pleased that drupa is one of the supporters of our Verdigris project. This is now well and truly launched, with an ambitious plan to produce a range of green case studies and news articles.

A Special Message

We hope you have enjoyed reading this issue of Spindrift.

Are you a subscriber?

If you have paid us money yourself, or authorised an invoice from Digital Dots to be paid then you are. Thank you!

If you have not done either of these things, then you are probably reading a pass on copy. In which case we would appreciate it if you could contact us to ensure that your company has a licence to do this.

Spindrift carries no advertising and we depend entirely on subscription income. We are trying our best to keep rates low and quality high, and we rely on you, the reader, to make this possible.

If you are a reader but not a subscriber, please go to www.digitaldots.org and put the matter to rights.

Why should you do this? Because you're worth it! And so are we.

As ever,

The Spindrift Pixies.