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Spindrift

...Scandalising The Graphic Arts Industry Since April 2003

News Focus • Opinion
Reviews • Techno-Babble
Attitude

Volume 4, Number 1
12th April, 2006

innovation • **noun** 1. the action or process of innovating. 2. a new method, idea, product, etc.

– From the Concise Oxford English Dictionary

Dear Reader,

Amazingly, this is the first issue of our fourth volume! Thank you, dear readers for your support. We have delayed publication of this issue in order to bring you some of the top news stories at Ipex. There was exciting news for all aspects of digital production, and Ipex was one of the best shows we've covered in years. It may not have had the numbers of bygone years, but this was a show where customers were buying, and buying in their droves. There was an atmosphere of energy and excitement that confirmed for us that this industry is no longer down on its knees. Reinvention has been slow, but it is coming.

Reinvention is also what Spindrift and Digital Dots are all about, and we have some important changes of our own to announce. The good news is that we are moving from a subscription based business model, so those readers who forward Spindrift to colleagues, or who print it out to share will be able to do so with a clear conscience. Our new model provides a license for sharing Spindrift with up to three readers. Of course we've no more chance of keeping track of circulation with this model than we had with a purely subscriber based one, but as we will charge more for this license, we perhaps won't lose quite so much revenue!

Existing subscribers can renew at the current rate for the next month. Renew your sub at the website, and we'll extend it by twelve months. We are considering making this offer a perpetual one, depending on how many people respond.

Our next issue takes a more in-depth look at workflow technologies introduced at Ipex. In the meantime, the news should give you something to chew on.

Enjoy the read!

The Spindrift crew:

Laurel, Cecilia, Paul and Todd

In This Issue

The Future for Postscript & PDF

The world is a-changing. Adobe has launched its PDF Print Engine. Could this mean that Postscript is on the way out? Writes Laurel Brunner: "The PDF Print Engine is a native PDF RIP, although Adobe prefer not to use the term. It is a common rendering engine for driving RIPs and soft proofing technologies, and in practical terms this doesn't appear to differ from processing PDFs created with a common profile. But there is no additional Postscript processing so the output is one hundred percent accurate. Instead of Postscript language commands, PDF library instructions render the data to the output device, be that print engine or screen, or another RIP." Read the full story....

see page 7

Practising what we Preach...

...is what we try to do. Not always easy, particularly when it comes to the use of JDF. "Like many other small publishers, we couldn't really see what a JDF compliant workflow could do for us, particularly at its bleeding edge", writes Laurel Brunner. "After all, JDF's more relevant for production than publishing isn't it? And although we had a theoretical idea of what JDF might do for us, it wasn't until preparation of this Technology Guide to JDF was well underway, that we got some ideas. We decided to use our own experience as a case study." Read what we learned...

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News Focus

Workflow & Utilities

Adobe's new Print Engine (see page 7 for feature article) was one of the hot stories at Ipex. It is designed to ensure that print hardware can image PDF 1.6 files, including transparency, accurately. It integrates PDF content with JDF job tickets for tight control over print output paths, while still allowing last minute corrections. The technology is gaining broad industry support. Agfa will support it with software upgrade programmes for ApogeeX. Fuji is basing its new Sentai workflow technology on it, and Screen, Kodak, Xerox, HP, Océ, Heidelberg and Efi have all endorsed the technology. Yet only Fuji was actually showing something real based on Print Engine at Ipex. The company has set up a strategic partnership with Adobe to implement the new PDF Print Engine. Fuji has tested the two technologies and the same job processed with CPSI took 30 minutes to process and 30 seconds on the Native Print Engine. Fuji's new workflow system is wholly built on JDF and combines automation with intelligence, so for example jobs are automatically reprocessed if a parameter changes. What this means for Fuji's existing 10,000 Ram-

page and Celebrant workflow customers is that they will be able to migrate their workflows to the new technology over a period of time. What this could mean for Rampage, we need to think about, so more in our next issue on this one.

Quickcut's new Quickprint 5 adds features for creating and validating print production files, with nearly 300 validation checks and automatic PDF creation including colour conversions.

Preflight software developers Callas' sister company, **Axaio Software**, introduced Madetocompare, a plug in for comparing texts and versions in Adobe's Incopy CS and CS2. The plug-in analyses different versions of open Incopy documents and presents all text-related differences in a dynamically generated HTML file, identifying missing or changed words, added or deleted spaces and changed paragraphs and line breaks.

Screen has entered into an OEM agreement with Artwork Systems to integrate Artwork's specialist packaging software, Artpro, into the Trueflownet prepress environment. Packstudio SE provides packaging production users with a consistent interface and access to a broader range of prepress production tools. Screen also announced a collaboration with Efi to help ensure smooth migration across workflows for customers working in hybrid offset and digital printing environments.

Kodak's latest release of its Prinergy workflow system, version 3.1, extends integration, collaboration and automation capabilities with business, digital print and portal workflow subsystems. It also has enhanced functionality for PDF and colour workflows. Kodak has announced it will move in the future to Adobe's new PDF Print Engine platform.

Goss's new Omni Makeready workflow provides new workflow and control tools for reducing waste and providing faster make-ready on its web offset presses, bringing down the entry point for web offset competitiveness. These new technologies make web offset competitive, even "at extremely short run lengths".

Spindrift

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Digital Dots Ltd

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Publisher – Laurel Brunner – lb@digitaldots.org
Editor-In-Chief – Cecilia Campbell – cc@digitaldots.org
Technical Editor – Paul Lindström – pl@digitaldots.org
Production/Webmaster – Todd Brunner – tb@digitaldots.org
Special Services – The Conch – conch@digitaldots.org
Subscriptions – Jackie Coverley – jackiec@digitaldots.org

Contributors:

▼ Over twenty **Global Graphics** OEM customers demonstrated applications based on version 7.1 of the Harlequin Genesis RIP, which has been processing native PDF for many years. Version 7.1 includes the company's JDF Enabler 2.0 technology for exchanging JDF data live with other systems.

Dalim and **Gretag Macbeth** have entered into a strategic agreement to integrate Gretag Macbeth's colour management engine into Dalim media production technologies.

ROI announced an order for over £300,000, one of 12 taken at IpeX, bringing their customer base to over 300 in the UK for XRalle. This web to print and variable data output technology is now available as an OEM product. Companies can use the XRalle engine to power variable data print ordering sites so that customers can upload their own databases and create their own direct mail campaigns.

Xinet has announced some new features in Webnative 8. Uploader is a wizard based upload manager, for file delivery to a Webnative server, via a URL. Access to Uploader is controlled by the user's individual profile, which also determines access rights to projects and jobs. Interactive PDF is now supported for OPI like rendering and subsequent access to images for remote users and enhanced file linking for automatic gathering of images used in a file, and for showing all the places where an image has been used in a collection of published documents. This is very useful for providing a visual audit of content integrity, for example for logos, and for image usage in general. Also included is support for raw camera formats.

Esko announced Scope 3, based on Adobe's PDF 1.6 and JDF 1.3, so processing 1.6 and ICS support. However it isn't based on the new PDF Print Engine, although it offers "links" to Creative Suite 2 and is based on Adobe PDF libraries, which is the foundation of the Adobe PDF Print Engine. It's due for release in April. Adobe's new PDF Print Engine is Adobe's latest RIP foundation and a significant move away from Postscript and towards a totally PDF 1.6 based workflow successor to CPSI. In essence it means using PDF libraries to do the final rendering of a page instead of Postscript. It provides a common production data processing environment from the designer's desktop to output, so such things as transparency, a key feature of PDF 1.6, can be accurately rendered.

Colour & Proofing

Agfa Delano Streamproof for web based soft proofing has achieved SWOP certification by matching a certified press sheet. The company's first soft proofing SWOP certification.

Enfocus has a new technology partnership with ICS, developers of remote virtual proofing technology. Remote Director will be integrated into Pitstop Automate to provide tools for creating colour controlled digital proofs, for distributed collaborative soft proofing. A similar partnership has been announced with Alwan, developers of CMYK Optimiser. Alwan is developing a plug-in to Pitstop Automate for creating colour files that comply with specific print standards.

Perfect Proof's new version of its Proof Master proofing, printing and cutting software package now drives all major printing applications. The company is positioning it as the printing world's first package to provide all features for all output applications.

X-Rite has a new dot meter, Platescope, suitable for measuring the new generation of chemistry-free and process-less plates. Platescope can also measure the latest hybrid screens as well as second order FM screens.

Following its bid to acquire Gretag Macbeth for \$280 million, X-Rite's board has received a letter from Eichhof Holding AG indicating an intent to make a competing public tender offer for all of Gretag Macbeth's owners Amazys Holdings AG's shares. X-Rite has stated that it is fully committed to the completion of the transaction, as outlined in the tender offer, which is supported by the Boards of Directors of both X-Rite and Amazys.

Gretag Macbeth presented an upcoming scanning spectrophotometer, Eye One Isis, for reading whole sheets at a time, up to A3. A test form with 1500 patches is read automatically in just under four minutes.

CGS has extended its Oris workflow to include a web based Oris Color Server. This will support both remote and soft proofing through an SQL database driven system. CGS is also making a push into the packaging market with its Oris Package Pro.

Digital Presses

Canon finally revealed the final product names for its new colour printers, the 70 ppm Imagepress C7000VP and the 14 ppm Imagepress C1. Image quality looked extremely good at 1200 x 1200 dpi. Canon also launched the 60" wide Image Prograf 9000 wide format inkjet printer, equipped with a twin 12 colour print head, uses in all 30,000 nozzles. Using additional red, green and blue inks, as well as two varieties of grey, it offers a very wide colour gamut.

Xerox was not to be outdone by Canon's explosive entry into the professional digital print market. It introduced a 90 page per minute model of the iGen3 digital press with a lower price, and a new finishing option for the Xerox Nuvera printing systems. The 90 ppm and 110 ppm 4590 and 4110 Enterprise Printing Systems are for light production printing and Xerox also demonstrated a workflow based on Creo PODS technology for managing jobs between digital and offset printing workflows.

In addition to its new 52Di press, **Presstek** introduced the 34DI press. The 34DI is two page version of the 52DI.

The latest **HP Indigo** Press w3250 is the fastest in the Indigo line up, and HP has enhanced the Indigo Press 5000 to double its monochrome print speed. There is also a new UV curable ink that dramatically expands the number of applications suitable for inkjet printing on coated glossy paper, PVC, plastic media and any other substrates that can't accept standard aqueous inks.

Punch Graphix introduced version 1.6 of its X-800 front-end system for the Xeikon digital presses. The new front end has a new native IPDS (the IBM developed standard for transactional data processing) controller for transactional print. The new version includes a new metadata tool which enables the late addition of information to a job without having to re-RIP it. From within the front-end, comments or images can be added, and the result will appear immediately on the output. Besides the capability to add production information to the job prior to printing, there is almost no limit to the type of content added to the object, according to Punch Graphix. The metadata tool can be used to solve simple personalisation issues, like adding a variable number, or adding variable names and addresses to a document. This relies on the possibility to drive the content via a database. Without the new utility, an operator would have to create a layout in an authoring tool, export the resulting job from within

this programme and the RIP the complete job. With the new X-800 the data will be added to the job without going through the complete prepress process.

Konica Minolta continues its focus on the digital production market. At Ipex the company launched its new Bizhub PRO C6500, a 65 ppm colour press able to print on stocks up to 300 gsm. The Bizhub PRO C6500 has a duty cycle of 200,000 A4 sheets per month (we assume this means duplex print) and is available with Creo print on-demand front-end solutions as well as Fiery professional controllers. The system comes with Konica Minolta's new generation polymerised toner Simitri-HD (high definition), which, according to the supplier, provides better image quality with excellent colour reproduction and black density. According to Konica Minolta, consumption of Simitri-HD is significantly lower than it would be with conventional toner.

Océ is introducing the new Varioprint 6250 duplex engine for high volume cut sheet markets. The machine uses Océ Gemini duplex technology and can print 250 A4 duplex images per minute. Océ estimates that there are some 30,000 high volume cut sheet machines in use and see this as a healthy replacement market for the company. Resource Print Solutions has bought the first machine but although Océ is taking orders now, deliveries won't be until Q4. The 6250 costs €250,000 for a basic configuration.

Platesetters

Lüscher is introducing a new line of platesetters, the XPose UV Conventional, using stacked violet diodes to image standard offset plates. Lüscher claims the 130 model with a 32 diode head for B2 output breaks even within the first year for companies imaging 20,000 square metres of plates. This is based on a platesetter cost of €190,000.

Screen is entering the flexo market with the introduction of the Platerite FX870 digital flexo platesetter.

Krause has two new internal drum violet engines for the commercial market, the LS Precision V8 and V16 for 8-up and VLF. The V8 images 30 pph at 1200 dpi and 20 at 2400 dpi, with output formats from 300 x 400 mm to 850 x 1050 mm. The V16 images 25 pph at 1200 dpi and 15 at 2400 for formats from 300 x 400 to 1050 x 1420 mm.

Punch Graphix launched the Basysprint UV-setter 646 for imaging conventional plates. This is a fully automated

▼ engine with two imaging heads for 6-up output. It boasts automatic slip sheet removal and operator independent plate imaging.

Plates

Agfa demonstrated a chemistry-free violet imaging photopolymer digital plate. Once exposed to violet light, the plate is preheated and gummed, ready for press. Availability is expected to be early next year.

Punch Graphix has successfully imaged processless UV-sensitive plates with its Basysprint platesetters for imaging conventional plates. Commercial availability is foreseen for early 2007.

Presstek's Anthem Pro chemistry-free digital plates are based on Anthem wash off technology and rated for run lengths of 100,000.

Kodak is boasting over 150 accounts in Europe, Africa and the Middle East for its Thermal Direct processless plate since its commercial availability earlier this year.

Business news from Ipex

Following the untimely death of Dick Tilanus, **Punch Graphix** has a new CEO in the shape of Ben C. Van Asche. Punch Graphix puts 10% of its revenues into R&D and is increasingly looking to develop technology partnerships so that it can provide bespoke and niche solutions for customers.

Human Eyes Technologies, developer of advanced 3D lenticular solutions is increasing its European presence. The company has announced a distribution agreement with Reprograf, the leading prepress technology supplier in Poland.

Agfa Graphics announced its biggest order ever. The company has signed a ten year contract worth €100 million with News International in the UK to supply CTP equipment, plates and workflow systems for NI's three print sites. But not only that, Agfa is also going to be manning and operating the plate lines and plate handling.

In essence, News International is not just buying plates from Agfa, they are buying imaged plates, along with all the handling before and after imaging, such as removal of the eight to nine million plates used in a year. Agfa

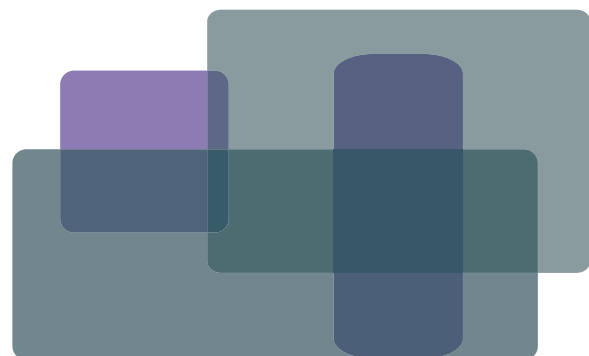
describes the new business model for the deal as a "full facilities management" service, and it is the first time the company is providing such a far-reaching service.

The order covers plate production for News International's four main titles; The Sun, The Times, The Sunday Times and News of the World. Implementation will start in September this year at the company's new Eurocentral printing plant in Glasgow, Scotland, then rolled out to Knowsley and next to the greenfield Broxbourne site outside London. Agfa Graphics will install 20 Polaris XCV-S violet CTP systems for N91v violet photopolymer plates, Arkitex newspaper enterprise software interfacing with MAN Roland Pecom press control systems, plate processors and punch benders. Twenty-five Agfa engineers and technicians will provide 24/7 staffing and support.

The €110 million CTP order is part of News International's €950 million programme to upgrade their printing facilities, a programme which includes the order, signed in 2004, of 19 MAN Roland ColorMAN XXL 6/2 presses for the three print sites.

KBA announced that the company has signed a contract with Trinity Mirror for a big upgrade at its print site in Cardonald Park, Glasgow. The order includes two new KBA Commander press lines comprising five reelstands, five printing towers and a high-speed jaw folder each. Simultaneously, two of the four existing KBA Commander presses, installed in 1995, will be refurbished and up-graded with shaftless nine-cylinder satellites in place of mono printing units.

The **Paxchat** was a debate about the future of the printing and graphics communications industry hosted by Jeremy Paxman. There's a far more thorough blog on what went on when Jeremy met Anne (Mulcahey CEO of Xerox), Bernard (Schreir, CEO of Heidelberg), Barry (Hibbert, CEO of Polestar) and Edward (Carr, business affairs editor of the Economist). See www.inthebalanceblog.com



Spindocs

(Where the spinner gets spun!)

HP made a marvellous choice with its IPEX theatre presentation.

"Digital Dots & Profits featured in the HP theatre

In the HP stand, HP will demonstrate the business case for digital printing through daily showings of the HP theatre presentation "Digital Dots & Profits." The presentation will showcase HP solutions with a digital difference, one of which is digital halftone dots that make up an HP Indigo digital print, as well as complete end-to-end solutions and tips on how to capture new business opportunities. Several customer success stories will be showcased and some customers will appear live during the show to share their experiences with the audience."

Following several e-mails HP issued this statement:

HP would like to emphasise that Digital Dots, publisher of Spindrift is not connected in anyway with the HP IPEX theatre presentation, "Digital Halftone Dots & Profits". Please disregard the previous version of the attached press release.

Not quite so snappy but rather more accurate!

Say What?

(Iffy Writing Award Presented in the Ether for Obfuscation, Confusion, Misinformation or All Out Pretentiousness)

From an article by Laurel Brunner that appeared in Printing World in October 2001:

"Latest releases include products for all manner of applications including metal and polyester plate imagers. The Prosetter is an all-Heidelberg development, not based on any sort of licence or OEM deal.

It uses a Primesetter chassis with 'completely new' internal electronics. There are three models of this entry-level metal platesetter for small and medium sized businesses. All have a MetaDimensions' front end RIP system and their prices range from £45,000 to £100,000, depending on format. They fill the gap between Heidelberg's Prime-setters and Topsetters."

From an article by Laurel Brunner that appeared in Spindrift in March 2006:

"The new Prosetter is a 60mW violet imaging engine OEM'd from Screen for formats from QM46 to XL105."

Cecilia writes:

Oh do pay attention Brunner. Of course the first is correct and the bit about Screen is total rubbish. Get with it!

Laurel replies:

Huge apologies to Heidelberg. I don't know what came over me ... Prosetter, Topsetter, Upsetter, Sorrysetter.

Boomerangs

(Your feedback fed back)

From: Mike Hilton <graphicpro@qhome.ru>

Date: 10, March 2006 1:11 pm

Hi,

I love the latest issue of Spindrift which came a short time ago - even after just a quick glance. As for IpeX, I have seriously been thinking about diving under the duvet until its all over!

Speak to you soon,

Mike



The Future for Postscript and PDF

Early preflighting technologies were introduced to solve problems in Postscript language processing, but preproduction data management is no longer just about sorting out bad Postscript. Postscript is still the heart and soul of graphic arts production and over the years, it's had a long and fertile life; its effect on the information industry remains unmatched. Postscript isn't over yet, but times are changing. The reins are passing from the hands of Postscript to those of PDF, changing the nature of print production workflows and of course reshaping the dynamics of preproduction data management and preflighting.

Postscript and its clones changed the face of printing and publishing. When we think of the original Adobe Postscript page description language, we tend to think desktop publishing and the greedy decade that was the eighties. But Postscript's origins go back to 1976, when what was to become Postscript started life as the result of a research project. Postscript has been synonymous with Adobe's success for many years, but when PDF came along it seemed that Adobe started to lose interest in it. That wasn't so and the language continued to evolve in line with modern production developments.

In 2005 Postscript got a major facelift with the introduction of Postscript 3, version 3017. This was the first version of Postscript CPSI to be available either as a Host Edition for high end applications, or as an Embedded Edition for generic office applications. Adobe's strategy appeared to be not dissimilar to that of Global Graphics, developers of the market's dominant Postscript language clones. For several years Global Graphics has offered the Harlequin and Jaws Postscript language technologies for graphic arts and office applications. With the introduction of two versions in 3017 Adobe seemed to be following the same strategy. 3017 has improved colour and PDF processing, particularly for users of Adobe Creative Suite 2 (CS2), including Photoshop and Indesign, but especially for CS2's PDF enhancements.

This introduction was much more than a repositioning of the language for different markets however. It marked the point of transition away from Postscript language based raster image processing, towards the processing of native PDF in the RIP. With native PDF processing in the RIP, no longer would output device constraints drive workflow and no longer would files be locked early in the workflow, preventing last minute corrections or edits. PDF, a closed vehicle for content, has been the basis of graphic arts production workflows for years but although PDF has

This article is part of the Digital Dots Technology Guides, which were published at IPEX last week. It is produced as part of an international graphic arts industry collaboration between Digital Dots, its publishing partners and its clients.

The Technology Guide series:

- *The Guide to JDF*
- *The Guide to Colour Management & Proofing*
- *The Guide to Digital Printing & Direct Imaging Presses*
- *The Guide to CTP*
- *The Guide to Preproduction Data Management & Quality Control*

The Guides address business and technology issues crucial to digital print media production. They explain print media technologies, business issues and market drivers for print media production, in both existing and new markets.

To order The Technology Guides, pop on over to: www.digitaldots.org

This project is supported by several organisations, including the following:

Agfa, BPIF, CIP4, Enfocus, Esko, Screen, Fujifilm, IPEX, Canon and Komori



long been the foundation of workflow management, Postscript has until lately been the processing language used to drive the imaging engine.

PDF Print Engine

PDF was not designed to replace Postscript, but as a universal rendering engine, something that could render an electronic page file anywhere, irrespective of applications and operating systems. Postscript was designed to integrate text and graphics into a common data stream for device independent output, and PDF was about electronic document interchange. It has taken many years, but finally these two share a common purpose. Adobe has introduced a native PDF RIP and for preproduction data management its ramifications are far reaching indeed.

Native PDF processing provides a single platform for PDF inputs and outputs. Adobe PDF Print Engine is designed for Adobe's high end market, where documents are graphically complex and workflows convoluted. The technology provides a unified production platform and removes a significant processing variable: Postscript language processing at the RIP. This means that such things as transparency in a file will be rendered directly, without having to be flattened first, for greater accuracy and device independence.

The PDF Print Engine is a native PDF RIP, although Adobe prefer not to use the term. It is a common rendering engine for driving RIPs and soft proofing technologies, and in practical terms this doesn't appear to differ from processing PDFs created with a common profile. But there is no additional Postscript processing, so the output is one hundred percent accurate. Instead of Postscript language commands, PDF library instructions render the data to the output device, be that print engine or screen, or another RIP. There is no conversion to Postscript, so there are no rounding or floating point calculation errors in data calculations. Calculations are therefore not limited to integer (whole number) calculations, which is what Postscript understands. This means that mathematically complex output, such as colour data converted from RGB to CMYK will be more accurate when rendered in native PDF as a bit map. Colour conversions with ICC profiles are supported internally, and JDF in-RIP trapping and in-RIP imposition are supported, along with a range of JDF ICSs (Interoperability Conformance Specifications). There is also support for PDF/X-4, which is due to be ratified by early 2007 and supports transparency and layers.

This technology is more suited to distributed processing which is the reality for more digital production. Because of this, it will be especially important for variable data production, processing multiple source data at the rated speed of a high speed variable data output device. According to Adobe, its market focus dictates that the first version of this technology will be Windows only, with Unix and Mac OS supported in the next version due out in 2007.



When John Warnock (pictured) together with Charles "Chuck" Geschke presented PostScript in the early eighties, it wasn't at all certain that this page description language would have any profound effect within high end graphic arts production. As of today Adobe dominates page processing to an extent that must astound even John and Chuck.

Does all this mean Postscript is going away? According to an Adobe spokesman, the company will maintain Postscript “for as long as the market requires”. Adoption of native PDF processing has already started within the developer community, with Agfa, Fuji, Heidelberg and Screen planning new workflow systems. The migration of all leading workflow solutions to PDF Print Engine is expected to be complete by Drupa 2008, but we don’t expect to see signs of any implementation for at least a year.

Once adoption at the high end is underway, Adobe intends to migrate this technology downmarket. This is where life for preproduction data managers will start to get rather more interesting. Inevitably the technology will come up against Microsoft’s new printing platform, XPS (XML Paper Specification).

Although XPS is no match for PDF at the moment, the specification for it was written by Global Graphics, one of the most successful vendors of Postscript clone RIPs. More importantly, Global Graphics is an industry veteran, responsible for some of the leading developments in Postscript and PDF processing over the years. The Jaws Postscript and PDF interpreter technologies, as well as the Harlequin RIP system have been used in many desktop printers, proofers, digital printing systems, platesetters and filmsetters around the world.

For Microsoft, XPS is fundamental to its new version of Windows, due out at the end of 2006. XPS will provide the means for both document exchange and print path control, providing the same utilities as Adobe PDF and Postscript. Windows has some woeful inadequacies such as no support for spot colours, poor handling of smooth shades, no support for transparency, and pathetic support for CMYK output. XPS is designed to resolve these output handicaps in Windows, which is why Adobe is currently concentrating its efforts on the Windows version of PDF Print Engine.

A particularly interesting aspect of XPS is the fact that it is based on XML, and this opens up for it all sorts of interesting opportunities. XPS also works tightly with Windows’ new imaging model, Win FX, so there is no conversion needed when sending documents for output. The page description language is the print path format, which is also the document exchange format. Clever.

Although XPS’s preliminary specification lacks many of the advanced features of PDF, it is based on XML so it has latent capacity for efficient print-on-demand and variable data output management. XPS supports dynamic calls of objects on the page, which is precisely what dynamic print streams require. Postscript and PDF have never been strong on variable data printing, which is one of the reasons why the new PDF Print Engine is designed to support distributed processing.

Why PDF?

- ✓ File and device independent
- ✓ Platform and OS agnostic
- ✓ Massive development support
- ✓ Migration to nongraphic arts workflows
- ✓ Cheap
- ✓ Open
- ✓ Easy to use

Why Not PDF?

- ✗ Font problems persisting
- ✗ Hard for users to create accurate output files
- ✗ Hard to edit
- ✗ Inconsistent colour output
- ✗ Resolution variables
- ✗ Trapping tricky



XPS isn't yet a worry for high end graphic arts production, but it will eventually be encountered in print production workflows. Designed for users of Microsoft Office, XPS files will unavoidably end up in digital media workflows, simply because it's there and notwithstanding the fact that it makes proof and interim printing faster and easier, and provides better image quality.

For printers and publishers life will of course get more complicated, particularly for those who still struggle to correctly handle PDF, or who are still reluctant to bother learning what PDF/X is and how to create PDF/X files. For Windows users the XPS document file format will be the first choice, so of course such files will meander their way into copy shops, printers and publishers. What mayhem they will cause amongst printers and production houses who are not up to speed with format management is anybody's guess. This perhaps more than anything else is why people buying and creating print media documents need to keep current with preproduction data management and preflighting.

In 1985 John Warnock said of Postscript: "I can say without hesitation that the quality of the language, both in its design and in its implementation, has improved and matured greatly during the several stages of its evolution." And he's still just as right, twenty years on!

– **Laurel Brunner**



Bleeding JDF?

We have always tried to practise what we preach, but with JDF we weren't quite sure how to live up to that ideal. Like many other small publishers, we couldn't really see what a JDF compliant workflow could do for us, particularly at its bleeding edge. After all, JDF's more relevant for production than publishing isn't it? And although we had a theoretical idea of what JDF might do for us, it wasn't until preparation of this Technology Guide to JDF was well underway, that we got some ideas. We decided to use our own experience as a case study.

The first step was to find a printer who would be happy for us to document our experiences, so we made a few preliminary enquiries around the industry, and chose commercial printers Lynx dpm in the UK, as our partner for the printing. We do our own production using Word and In-design, with a colour managed PDF workflow set up to produce print ready PDFs that meet the printer's set up requirements. We are working with Lynx dpm for the first time and used their ICC profile and PDF settings for preflight checking.

This company is the first in the country to integrate its Tharstern MIS with Screen's Trueflow 3 PDF/Postscript workflow system, and Komori's K-Station press control system. Lynx dpm has Komori K1028P and K528P litho presses, plus a Heidelberg SM52. It also has a Xerox iGen3 for digital colour and a Docuprint 4635 for monochrome output. We opted to have our Technology Guides printed on the Komori K1028P.

But apart from our bias as technology writers, why should Lynx dpm's JDF set-up matter to us, a casual customer with a project that we print every two years? It's a big deal to us, but what relevance could a JDF workflow have for a publishing project such as the five part Technology Guides? Lynx dpm specialises in scientific and educational print and its system is in beta testing. Not all parts are automated, but still we thought it might in many ways be more representative of the market: we are all, publishers and printers alike, searching for a route forward. So we took the plunge.

Nigel Clark, Lynx dpm's technical director, wanted to get into JDF because. "I have devoted a lot of my time in prepress finding ways to link disparate systems to reduce manual intervention and improve information flow".

The first stage of Lynx dpm's integration was between the Tharstern MIS and the Screen Trueflow PDF workflow. An estimate is produced in Tharstern, although there has been some vague discussion to start even further up the line using a request for quote to initiate the process. This ►

This article is part of the Digital Dots Technology Guides, which were published at IPEX last week. It is produced as part of an international graphic arts industry collaboration between Digital Dots, its publishing partners and its clients.

The Technology Guide series:

- *The Guide to JDF*
- *The Guide to Colour Management & Proofing*
- *The Guide to Digital Printing & Direct Imaging Presses*
- *The Guide to CTP*
- *The Guide to Preproduction Data Management & Quality Control*

The Guides address business and technology issues crucial to digital print media production. They explain print media technologies, business issues and market drivers for print media production, in both existing and new markets.

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This project is supported by several organisations, including the following:

Agfa, BPIF, CIP4, Enfocus, Esko, Screen, Fujifilm, IPEX, Canon and Komori



hasn't materialised yet, but we think it's a great idea. Publishers and other prospective customers should be able to download a generic JDF based job request form, for use in any MIS and production system, and even layout software, capable of reading JDF or XMP. Something to consider?

This is the first point at which we the publisher could improve our internal processes using JDF. An industry standard job request form would allow us to create and share internally our own job specification and email it to several printers to request an estimate. If the job request form included prompts for all the things we wouldn't have thought of, such as internal workflow planning or finishing, so much the better. This sort of thing isn't special for companies that buy a lot of print, but for us and many like us, it could help us better manage preproduction, save a lot of time and hopefully cost. It could also help printers cut time and costs for estimating, and maybe even be a way out of the print auction nightmare that plagues so many commercial printers.

When a request for an estimate comes in, Lynx dpm's MIS estimates the job cost based on the quantities, materials and machine rates required to produce the job. The estimate has all the initial process information required including client details, the number of pages and size, layout and colour information. When estimates are approved, they are converted into jobs and submitted via JDF to the Tharstern JDF server. This server sends the JDF set-up instructions to both the Screen Ritecontrol server and the Komori K-Station press control system. Any job components already available, such as artwork, can be included in this transfer for automatic processing. Lynx dpm has tested this, but it doesn't suit the ad hoc nature of the majority of the company's work, so it isn't used very often. The Screen Trueflow server then creates a job, populating the job data according to the information coming from the Tharstern MIS. When a prepress operator starts processing the job in Trueflow, Ritecontrol sends an automatic "In Progress" status change notification to the MIS as a JMF message. Other JMF status change messages can be manually sent from Ritecontrol, which also sends a "Complete" status notification once plates are output.

This is an area Lynx dpm is still working on, because the time a job is in progress within Trueflow is not necessarily chargeable for job costing purposes. The job could, for example, be awaiting proof approval for a significant period of time. Operators manually record some of the status changes, but according to Nigel Clark a "big part of the point of using JDF ... is that you remove the need for operators to be consistent and accurate. The upshot is that Tharstern and Ritecontrol exchange JMF status- and clocking-information, but the timings are not currently automatically posted against the job cost. I want accurate job costing feedback from JDF as much as anybody. It is impossible to manage effectively without accurate information. While the information from the shop floor data collection is pretty good, JDF holds out the promise of information free from the foibles of human intervention."

Case Study

Company:

Lynx dpm

Claim to JDF Fame:

This company is the first in the country to integrate its Tharstern MIS with Screen's Trueflow 3 PDF/Postscript workflow system, and Komori's K-station press control system.

Headquarters:

Oxford, UK

Employees:

40

System:

See above

Output:

Screen platesetters and a Xerox iGen3 digital press

Technical director Nigel Clark says:

"I have devoted a lot of my time in prepress finding ways to link disparate systems to reduce manual intervention and improve information flow".

▼ Another problem is that the Tharstern MIS creates section names, but Trueflow cannot always automatically create consistent file names. Nigel has, “written a little script that tidies up the CIP4 file names before they are passed to the PCC server.”

Before Ritecontrol there was an insurmountable naming issue with CIP4 files: there was no way to break jobs down into logical sections. If a job consisted of a cover, three text sections and an order form section, then the JDF would just identify them as sections one to five. Operators would naturally treat the different sections as separate Trueflow jobs and there would be no way of identifying which section a CIP4 file came from. By breaking the job into logical sections, Ritecontrol provides the solution to the ambiguous section names problem.

Output is direct to two Screen PTR-4100 platesetters imaging KPG Electra Excel plates. The MIS is integrated with the two Komori presses for simultaneous transmission of JDF data to the Komori K-Station press control systems. The K-Station creates a Komori job for each run on the selected press, and without JDF, machine minders have to enter at the press, for example, quantity, paper description, and so on. Instead job run data is automatically generated from the JDF file coming from the MIS. When the job is loaded at the press, this automatic set-up reduces makeready times. Delivering ink duct information saves around 15 to 20 minutes. The additional JDF information may only save at most a couple of minutes for a given job. However reducing the press minder’s time spent looking for the necessary job information, or the time taken to recover from errant information being entered at the press console, is considerable, although it varies job by job.

All Komori job tickets in Trueflow include the data required to create a CIP3 (the precursor to CIP4) PPF (Print Production Form) file for each press pass of the job, including a thumbnail image and ink profile information for setting ink ducts automatically. Lynx dpm uses a Screen software extension to automatically create a duplex PPF file when required, which is particularly useful on the ten colour perfector press.

The PPF files are then converted on a separate server to Komori’s proprietary PQ4 file format so that the K-Station software can read them. Creating a new PQ4 file used to require manual entry of basic job data, identifying and loading the correct CIP4 file, but this is now automated, using hot folders.

Prior to JDF, Lynx dpm’s prepress operators had to create each job at the K-Station, enter the basic parameters and then load the correct PQ4 file. Now the K-Station job already exists, so the PQ4 file needs just to be loaded and even this can be automated with JDF.

This can be a little bit tricky, according to Nigel: “Tharstern, K-Station and Trueflow all share the same unique identifier for each press pass via JDF. However, the current Komori CIP4 to PQ4 file conversion system is

Clearly there is a difference between what printers want from JDF and what their customers want, because each has different priorities. Until this gap is bridged our vision of a fully integrated JDF driven digital production supply chain remains a blurry promise.

hot folder file based, not JDF enabled. The forthcoming version apparently is JDF enabled. For the assignment to work correctly, the CIP4 file and subsequent PQ4 file must be named such that the K-Station software can derive the human readable name of the individual press pass. For example, K-Station job name „12345 Section 1 front% could be derived from the file name “12345_S1_Fr.PQ4”. If the K-Station finds a PQ4 file in the input folder that matches an existing job section, then it will automatically assign it and release the job to the press.”

The K-Station relays status and timing details back to the MIS using JMF. Although the MIS collects the base data, this is why accurate running costs cannot yet be assigned to jobs. At Lynx dpm operators aren't as consistent and accurate as they might be when identifying themselves and their jobs at the press console. The company hopes this will be resolved in the next version of the Komori software. According to Nigel: “The interface for users ‘clocking on’ to the press console has been improved. When last I heard though, there was still a discussion going on about whether gathering data that could distinguish between individual press operators would contravene the European law on human rights.”

The system does however automatically account for prepress material usage, with the costs allocated to individual jobs. The Ritecontrol server automatically posts plate usage to the MIS and for proof material usage, Nigel has written scripts on all Lynx dpm proofing platforms that read JDF information in Trueflow. This identifies the correct job for each output file as soon as it is printed. A script automatically posts the proofing material to the identified job in the MIS and there is a similar set-up for plate output. Jobs not initiated by the Tharstern MIS still have plate usage accurately recorded in this way.

For proofing, Lynx dpm uses an old Highwater Q2 workflow along with Acrobat Server, Enfocus Pitstop Server and a few custom scripts for soft proofing design work. Prepress soft proofing relies on PDF files created with Adobe Distiller, with some jobs soft proofed using Trueflow RIPPed PDFs, which are more reliable. These generally have fairly large file sizes, however the Trueflow RIPPed PDFs are completely reliable since everything is rasterised. There are no subsequent font substitution issues and text is guaranteed not to re-flow or change fonts, at the expense of making the proofs resolution dependent. But some customers are not used to viewing rasterised fonts in PDF files, and others worry that the rasterisation is a symptom of the printer font being missing.

For hard proofing Lynx dpm has two Epson 7000 plotters with a Matchprint RIP. The Trueflow workflow system drives and load balances these plotters via a custom script. The Matchprint RIP is only used to assign custom colour profiles to colour match the pre-RIPPed TIFF output from the Trueflow to litho print from the Komori presses. This ensures that there is no difference in interpretation between the Trueflow RIP and the proofing RIP.



Nigel Clark, technical director at Lynx dpm says that: “Besides the obvious benefits of automation, time saving and job visibility we have also been able to take advantage of the openness of the JDF structure to receive automatic feedback of proof and plate-setter output.”

▼ An HP2000CP plotter with a Highwater Torrent RIP prints non-critical colour proofs, set up just as the Epson proofers using the Matchprint RIPs. The HP proofs are run on cheap stock and are not colour corrected, because Nigel “didn’t find the level of colour consistency and accuracy of colour match to the final printed item of the HP2000 plots acceptable. I deliberately disabled colour profiling on this device to speed up output and so that customers could be told not to expect any level of colour fidelity from it.” The HP proofs are most often used for second round proofing to confirm text corrections, or for simple content proofing.

Lynx dpm does a lot of spot colour work and has had the usual problems with standard PDF files displaying differently to the printed matter. For this reason the company tries to insist on a signed-off hard proof for most work. Nigel comments: “Besides the obvious benefits of automation, time saving and job visibility we have also been able to take advantage of the openness of the JDF structure to receive automatic feedback of proofer and platesetter output. Whilst this is not directly using JDF, it is something we could not have achieved without this implementation.”

JDF data reports are available at the K-Station and in Tharstern MIS, however the comprehensive reporting status JDF promises is not quite there yet. This is due to the few small anomalies in Lynx dpm’s workflow, so while the current status reports are useful for trend analysis, they do not provide accurate enough cost data yet. But that will change as aberrations are ironed out and in the meantime the company gets accurate cost data from the Tharstern shop floor data collection terminals. Screen is also enhancing Trueflow so that it will be able to integrate and manage additional press and postpress technologies and this will provide Lynx dpm with more data to incorporate.

So where in the workflow is JDF data is most relevant for us as small publishers and for Lynx dpm as service providers? There is no doubt that for us, JDF will only be useful when complete job estimating guidelines are available, and can be made relevant for planning subsequent printed publication projects. It would also be wonderful to have a standard JDF form for requesting print quotes. We could also use this to assist our own internal workflow planning and production scheduling.

Nigel Clark says that: “At the front end, I would like nothing better than for the customer to initiate the JDF workflow with an electronic request for quote populated with pertinent production parameters. However, having experimented with electronic RFQs I found unfortunately that many of our customers are nowhere near as enlightened as you are likely to be. Some find filling out even the simplest form an encumbrance. They prefer to explain the gist of what they want to a salesperson or account manager and have them worry about the production details.”

He also believes that “JDF compliant systems will enable larger contract printers to upload some of the responsibility for accurate job specification to their customers in the same way that they had the commercial ▶

Prior to JDF, Lynx dpm’s prepress operators had to create each job at the K-Station, enter the basic parameters and then load the correct PQ4 file. Now the K-Station job already exists, so the PQ4 file needs just to be loaded and even this can be automated with JDF.

▼
clout to pressure customers into supplying print ready PDF files.” It comes back to education and the steady spread of JDF so that customers have an incentive to change.

Clearly there is a difference between what printers want from JDF and what their customers want, because each has different priorities. Until this gap is bridged our vision of a fully integrated JDF driven digital production supply chain remains a blurry promise. However what starts as a shapeless blur often comes into sharp focus as we work out how to turn promise into reality.

– **Laurel Brunner**



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