transaction • *noun* **1** an instance of buying or selling. **2** the action of conducting business. **3** an exchange or interaction between people.

– From the Compact Oxford English Dictionary

Dear Reader,

There's been a lot of interest in the last few months in the transactional market. This is the one that blows a hole in all those stats that say the percentage of variable data print produced is trivial. If you take a broader view of what counts as print to include bills and statements, it's clear that the volume is far from trivial. Adding colour to transactional documents might get this type of print taken more seriously, and this is what is starting to happen.

Colour transactional print will grow rapidly and substantially in 2008, not least because people have finally twigged to the idea that putting ads on bills is great business. The Sumitomo Card Company in Japan, for example, prints its customers' credit card bills on a fleet of 24 Xerox iGen3s, including ads from its merchant customers.

This trend has grown steadily this year with more and more companies adding colour to documents. The market is estimated to be worth billions and industry pundits expect it to grow exponentially. This prediction is a bit of a no-brainer, given the fact that where colour leads, volumes tend to follow.

Emerging markets and print applications are great news for vendors, printers and customers alike, so there's much to feel jolly about next year. Rising confidence in the printing business, amazing new technologies and drupa the focal point for even more excitement. Dare we say it, it's all good cause for celebration.

A season of celebration is already upon us and we do have much to celebrate, not least getting through another year. So may all your transactions be fruitful and your festive season joyful. It's a little early, but have a happy New Year and we'll be back with the next issue in February.

Enjoy!

Laurel, Nessan, Paul and Todd

In This Issue

Upping the Ante

Paul Lindström looks at the issue of ink optimisation and how it fits in with the new breed of sophisticated colour management tools, and finds there's more to it than simply saving ink.

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Web-to-Print in action

In this follow-up to our web-to-print round-up a few months ago, Paul Lindström talks with a number of companies that have implemented a web-to-print solution and looks at the issues they have faced and the advantages of these solutions.

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IfraExpo Part 2

Laurel Brunner finishes off her tour of IfraExpo with a look at some of the new web-enabled technologies that are opening up multichannel publishing opportunities for newspapers.

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Alwan, the Printer's colour ace

Laurel Brunner looks at Alwan, a dedicated colour management solutions company, and its latest tool, the CMYK Optimizer Suite.

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Regular Columns

News Focus

HP is acquiring NUR Macroprinters for $117.5 million. Israeli company NUR manufactures superwide format UV-curable and solvent digital inkjet printers for display graphics and various commercial print sectors.

The acquisition further extends HP's growing portfolio of digital presses. The purchase price includes $14.5 million to be held in an indemnity escrow account. Following completion, NUR will become part of HP's large format printing business within its Imaging and Printing Group.

Ipagsa, the smallest of the printing plate manufacturers with 200 employees and a turnover of €56m, is opening a new factory in Vietnam in the province of Travinh in the Mekong delta. The new plant will produce exclusively digital plates, expanding Ipagsa's manufacturing capacity and providing it with a base from which to serve the Asian market. The company's plant at Rubí near Barcelona will continue to produce plates for the European market. The project is a joint venture with a Vietnamese national, a chemist who previously worked for Kodak in Canada.

The **ACAP** open standard for publishers and search engines is now live, and has gained the public support of Yahoo. The Automated Content Access Protocol is hoped to put an end to clashes between publishers and search engine companies (see Volume 5, issue 4) and this launch follows a 12 month pilot project. It is hoped that publishers, broadcasters and film companies will use ACAP to define access and usage policies, such that search engine robots will be able to understand and implement them.

Heidelberg has announced flat sales at €1.639bn and a falling order volume, down 6.5% on last year's numbers, for the first six months of its 2007/2008 financial year. Operating income has also dropped from €118m last year to €96m this year. Heidelberg put the drop down to the strength of the Euro and the effect of Ipex.

Océ has launched a new high speed digital printer, the JetStream, which it claims can process over 60 million pages per month. It's a full colour device available in both single and double-engined versions, and one can be upgraded to the other. The single-engined 1100 can deliver 1026 A4 pages per minute in two-up simplex format, although the device is capable of duplex printing. The 2200 can produce up to 2052 A4 pages per minute in two-up duplex format.

The **Ghent PDF Workgroup** has launched a Soft-Proofing Ticket, which uses Adobe XMP specifications to attach information to a PDF. It is designed to simplify approvals and contains a list of user names and log-ins, approval dates, approval software details and monitor characteristics. It can be downloaded from the GWG website.

The **British Printing Industries Federation** is developing a UK certification scheme for ISO 12647/2, which specifies the conditions for four-colour offset printing. Paul Sherfield of the Missing Horse Consultancy is chairing a group of printers, print buyers and colour experts. The idea is to have some means of certifying a printing company's compliance with ISO 12647/2. A similar project is underway in Sweden, with our very own Paul Lindström liaising with colleagues at Meditkonsult in Denmark and with the Swedish Printers' Federation.

Alwan Color Expertise has started shipping version 3 of CMYK Optimizer. New features include full integration and support of Adobe PDF Library v8.0, a new press calibration option for implementing TVI (Tonal Value Increase), NPDC (Neutral Print Density Curve) or ICC-based ▶

calibration of presses to ISO 12647 and GRACOL specifications. There is also new image enhancement technology for individual images embedded in PDFs, support of the latest Ghent Workgroup and ICC specifications, improved colour rendering and dot gain management for Pantone colours, and support for remote working via the internet using any browser.

Markzware has announced a new addition to its line-up of format conversion programs. Microsoft Publisher To Adobe InDesign (PUB2ID) is available for both Macintosh and Windows users. As the name suggests, this software converts Microsoft Publisher documents to Adobe InDesign files. It works with files created using Microsoft Publisher versions from 2002-2007, converting them to both CS2 and CS3 documents, so that they can be made ready for real publishing. PUB2ID costs €199.

Hamillroad Software's Firstproof version 5 is now available, complete with a new method for generating colour accurate soft-proofs. Instead of using ICC colour management to match the appearance of 1-bit digital plate data viewed on screen with what is printed, Firstproof generates colour accurate soft proofs by profiling the monitor, spectrally profiling the press and using two profiles to adjust the 1-bit digital data being viewed. Hamillroad claims that this process of spectrally profiling the press is simple and takes very little time. This is because it involves taking a previously printed job and measuring only a small number of colours from the colour bar around the outside of the job.

No special test chart is required, which saves time and money as the press can continue printing real jobs. More importantly though, since only a small number of colours need to be measured, this can be done by hand in less than one minute with an inexpensive spectrophotometer such as the X-Rite Eye-One.

Fujifilm is partnering with **PrintCity** at drupa next year. The company wants to present its XMF workflow as part of the PrintCity Workflow Integration & Networking Competence Centre in drupa Hall 6, in addition to presentations of the technology on Fujifilm's own stand. Written in JDF, XMF is designed to provide seamless integration across different suppliers' products, so this should be an interesting test.

Canon has upgraded the 44" and 60" printers in its Image-Prograf 12-colour range. These printers, the iPF8100 and iPF9100 feature new print heads and reformulated monochrome inks for fast and consistent high quality printing. Canon has already upgraded the smaller printers in the range, with the 17" iPF5100 and 24" iPF6100.

Epson has two new substrates for its recently launched 60" Epson Stylus Pro 11880 printer. The new materials are a water resistant matte canvas with a smooth matte finish, and the premier art water resistant canvas for high gloss finished results. These are already available in smaller formats.

Magicomm, a developer of marketing communications software, has announced Easy 1-2-1, a turnkey direct marketing cross media campaign for creating integrated VDP marketing. The software allows digital printers to offer three levels of marketing campaigns to include print and digital communications.

It's happening! Variable data software is getting into the hands of the masses with an offer from **Computer Bild,** Europe's largest computer magazine. It is giving readers the DirectSmile Designer layout software for personalised images on its magazine DVD. Computer Bild has nearly four million readers and expects the offer to stimulate demand for image-personalised print products and make hundreds of thousands of users and small businesses aware of variable data printing's possibilities.

EFI's BestColor-driven Colorproof XF proofing and production system has been upgraded to support remote proofing, additional printers and the Pantone's recently introduced Goe colour libraries. Colorproof XF Service Pack 4 is available immediately.

CIP4 has reorganised the CIPPI awards programme and the deadline for 2008 applications. In addition to the original three categories, there are four more to give CIP4 the scope to award the same categories in different regions.

Members of the UK's **BAPC,** an industry association for printers, have voted Océ as the 2007 Supplier of the Year. Congratulations Océ!

Acrobites

(Something to get your teeth into)

JTWI

Java Technology for the Wireless Industry is a specification for the next generation of Java technology-enabled mobile phones. It is defined by an expert group comprised of leading mobile phone manufacturers, software vendors and wireless carriers. The idea is to specify the minimum technology base to avoid fragmentation in how APIs work and to help develop a broader base of mobile phone-based applications.

OMF

The Open Media Format was developed by Avid, a leading light in the digital video hardware and applications business. This interchange format is used in video and audio production and, rather like Quicktime, deals with the temporal representation of media. Its features include such things as the representation of analogue video and film so that its origin is identifiable, special track types that store time codes for segments of data, and predefined transitions and effects for segment sequences. This format is important for any publisher who wants to get into multichannel publishing.

Say What?

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

Seeing as how the holiday season is almost upon us, we're giving you not one, but two items in this month's Say What.

The nice people at Microsoft sent this release, trumpeting its new tool for journalists. It's supposed to help "journalists reporting on holiday buying trends" because they "can use an interactive gift guide to learn more about gift ideas". It's such a blatantly self interested piece of puff that we simply had to share it with our readers. It states:

"With the holiday season now upon us, it's prime-time for technology buying and gift-giving. Journalists covering consumer trends for the coming holiday season can use the interactive gift guide to learn more about some of the many products available from Microsoft and industry partners.

"According to a study conducted by the Solutions Research Group, three out of four US consumers count at least one 'digital lifestyle' product on their holiday wish lists, and Windows Vista-based PCs rank among the most desirable items. Other sought-after technology toys include computer peripherals, cell phones, MP3 players, digital cameras, next-generation TVs, gaming consoles and video games.

"Microsoft and industry hardware partners have assembled one of the industry's broadest and most compelling product line-ups, comprising red-hot entries in every category. With great gift ideas for him, her and the whole family, there's something for everyone's wish list - from style-conscious teens to soccer moms, mid-career professionals to college students, 20-something gamers to doting grandparents, right down to the most discerning gadget-heads or device mavens."

There follows a lengthy list of Microsoft products, heavy on the hype and light on the competition's alternatives. But given that in 2008 Apple's share price could to rise to $200 and Gartner predicts the company will have an impressive 8.1% of the US PC market, perhaps that isn't surprising!

However, the dubious winner of this month's Say What award for poor writing in a press release is… EFI, for its fantastically long-winded 'EFI Advances Award-Winning, BestColor Technology-Driven Colorproof XF Proofing and Production Solution'.

We had to read this several times before realising that it was a service pack update for the Colorproof XF RIP.

Here's an example of the type of pompous verbosity that really ought to be a criminal offence:

"EFI now offers a new configuration for customers working across multiple locations who have the sole and specific need to process, print and verify RPF (remote printing

file) formats or "remote containers." Specifically designed for the task of remote proofing, with XF Satellite RPF are files that are sent to the remote proof job recipient to produce real remote proofs. XF Satellite packages installed in remote locations provide full flexibility in processing RPF files, and are dedicated to that function." *(80 words)*

We've translated the above into this:
It now does remote proofing. (5 words)

We challenge anyone from EFI to explain to us what extra information is in their version.

Expandocs

(In this section, we aim to cast some extra light on a particular recent news story.)

EskoArtwork talking the talk & walking the walk

Last August when Esko Graphics and Artwork Systems announced their merger, the stated goal was to position themselves as "the market leader within software solutions for the packaging industry." This was the largest purchase Esko Graphics had made since Axcel, one of Denmark's top private equity funds, first invested in the company, and it marked the beginnings of Esko's return to commercial print, since its withdrawal some years ago.

Over the last couple of months EskoArtwork has been assiduously reorganising itself and developing a plan to integrate its people and its technologies. According to CEO Carsten Knudsen, the strategy is to make EskoArtwork "the leading solutions integrator to the packaging and commercial printing value chain". EskoArtwork intends to achieve this by integrating its product lines and leveraging its peerless expertise in packaging workflows with a software-orientated product line that adds value to commercial print operations.

EskoArtwork's software line combines technologies derived from Esko Graphics and Artwork Systems to create a digital business environment for transparent data inter-

change and the free combination of workflow components. This might sound a little vague but the company has gone a long way towards doing as it says. It is creating a next generation software platform for technology integration so that customers can combine what they want from Artwork with what they want from Esko and vice versa.

Artwork Systems products include the Neo PDF editing software, the Odystar native PDF workflow and RIP, the Webway internet collaboration tool and the ageing Nexus legacy workflow and RIP. Esko technologies include the Backstage workflow, Fast Impose imposition technology, the Flex RIP and Webcenter web collaboration software. Between the two product lines there is substantial overlap, but there is also considerable scope for symbiosis.

Artwork's Odystar, the Nexus system's heir apparent, is now positioned to support medium-sized commercial print production environments. Esko's Backstage is for high volume applications, and adds MIS integration. The systems haven't yet got proper names, but the gutsy job-orientated Backstage version is known as the Enterprise Workflow. The less muscular, task-orientated system is the Pro Workflow. These two will in future share a common data environment to evolve in tandem so that over time EskoArtwork will have one technology foundation for all types of printing workflows and the flexibility to tackle all areas of commercial print.

But it won't be a walkover because, in the UK especially, EskoArtwork faces some formidable competitors. Agfa, Fujifilm, Heidelberg, Kodak, and Screen have some seriously gnarly sales and marketing troops at their disposal; they and their systems are extremely well entrenched. Nonetheless EskoArtwork believes it has more than a fighting chance, basing this optimism on a single and extremely significant fact: EskoArtwork dominates the packaging market, including very high-end production. It plans to apply this knowledge and production muscle to the commercial print market to leverage its experience with high-end luxury packaging. This includes all areas of colour management, imposition complexity, quality and production throughput.

EskoArtwork's systems are already used to produce nine of the top ten packaging brands and together these account for 15% of turnover in packaging production. The commercial print market is the only option for EskoArtwork to grow organically to increase revenues from the current figure of €172m for the 12 months to the end of September 2007. According to EskoArtwork's research, the worldwide commercial print market is worth four times as much as the packaging business.

EskoArtwork recognises that the two markets are very different: packaging is a relatively low volume, high quality market whereas commercial printing is high volume with a range of quality demands. Technology that can satisfy packaging workflows and production expectations can easily cope with the demands of commercial print and can even help printers add value to production processes. For example EskoArtwork's new Equinox for multicolour process printing uses CMYK + n additional colours to reproduce spot colours. The technique is widely used in packaging applications (FM6 and Hexachrome come to mind) to increase colour gamut on press. Well configured it can also help enhance quality and reduce costs.

With increasing numbers of commercial printers starting to print with multiple spot colours, Equinox can improve cost performance. Printers can reduce their spot colour ink inventories and the number of wash-ups on press between jobs, because they are using a common ink set. Equinox also makes it possible to gang multiple jobs and print them in a single run, and it can help simplify brand colour matching across printing systems, such as gravure and offset. EskoArtwork claims that Equinox is better than the likes of FM6 or Hexachrome because it works out the achievable Delta E prior to colour conversions, so colour is more predictable.

EskoArtwork also introduced Visualizer for dynamic print visualisation. Much as FFEI's RealVue does, Visualizer presents a realistic on-screen view of a print job. It allows you to try different lighting and finishing effects, including metallic and fluorescent inks, foils, varnish, glitter and 'flitter' (this last appears to be something that EskoArtwork has made up) and can mimic the lighting effects of an in-store environment on a package.

Partnerships are another key part of the EskoArtwork strategy. In addition to its relationship with HP Indigo the company is working with Exxon Mobile, one of its customers. The two have developed Pacadvantage which provides a colour guarantee for converters, off-press proofing and remote proofing. The technology is installed at five customer pilot sites in the US and is due for release in Q1 2008. It will guarantee colour accuracy and offers to replace the substrate if the colour isn't accurate. It will be available for HP Indigo digital presses as well as conventional offset.

Packaging expertise certainly brings benefits to commercial printing, most obviously for colour control, quality, speed and economics. This is the message EskoArtwork wants to bring to the commercial market, and it intends to continue building its packaging business in tandem. It wants to be the preferred platemaking supplier for the flexo market and of course to stay number one for packaging workflows and software. Matching technology to purpose and developing integrated product lines that printers can easily understand is why EskoArtwork is working to integrate the best of both its worlds into a cohesive whole.

The company is also taking a growing interest in the sign and display market. Kongsberg die-less cutting and creasing tables account for 31% of EskoArtwork's manufacturing business, growing at around 40% worldwide. Since its introduction last year, 125 units of the Kongsberg table for signs and displays have been sold this year. Two new lines have been introduced, the i-XL for heavy duty rigid and flexible materials, and the i-XE for high speed finishing of light duty rigid and flexible materials.

EskoArtwork is setting up a subsidiary manufacturing company in Brno in the Czech republic to double its manufacturing capacity for these machines. This city has a tradition of over 50 years manufacturing for the automotive, defence and aerospace industries and ten EskoArtwork

people are already employed there. Manufacturing is expected to start in Q1 2008 and this new company also provides EskoArtwork with a local supply base.

EskoArtwork's growth is based on organic development of packaging and of the wider commercial printing market. It is investing into technology, however it needs to do more than this if it is to grow rapidly, which suggests further acquisitions may be in the offing. According to CEO Carsten Knudsen "the coffers are not closed" for this.

Driftwood

(Useful stuff washin' up on our shores)

Document Security Innovations from Xerox

Security is fast becoming the bane of everyone's lives, whether it's the irritation of airport queues or anxiety about identity theft. There's no getting around it, and it's increasingly important for print, especially variable data markets. Xerox is working on a number of technologies for security and recently announced Intelligent Redaction. This technology will make it more difficult for people to glean confidential information from digital documents without authorisation.

Intelligent Redaction was developed by Xerox Inc and the Palo Alto Research Centre (PARC), a Xerox subsidiary. The software removes information from documents according to the viewing privileges of the reader and it is sufficiently clever to keep track of viewers' rights across documents. If a reader is only entitled to see the name and address details of a particular individual, all other information about the person will be hidden from the reader's view wherever the data appears, either within a single document or across multiple ones.

This document independence is one of Intelligent Redaction's great strengths, although Xerox claim it will also help improve document accuracy since it automatically redacts sensitive information as soon as

the document is opened. This means it is also fast, so will facilitate document processing as well as enhancing document security. There is a full audit trail to keep track of what information has been removed from documents, and when and where in the workflow.

Intelligent Redaction is special because removing or otherwise hiding information and tracking it has traditionally been done manually so it is very labour intensive, particularly when it involves several versions of the same information that must be viewed by numerous people. With Xerox and PARC's invention the document owner identifies what should be protected in the document and the software controls its visibility according to people's access rights.

How Does it Work?

The technology is based on the idea of controlling what data can been seen or not, in what context and by whom rather than putting blocks on individual documents. Redaction is often used in legal applications to protect sensitive information, but the method is essentially the same as censorship. Instead, Intelligent Redaction combines PARC expertise in user interface design, natural language processing and security to partially encrypt rather than entirely encrypt a document. With this approach the software can make the same document appear differently depending on who's looking at it.

The whole process is automated in three stages. Once the software has analysed the document content and identified the bits that might be sensitive such as names, keywords, addresses, numbers and their possible relationships, it prompts the originating author to review the document before it is published. The author can then highlight content of interest and specify the relationships between entities. Those elements are then selectively encrypted so that they can be removed from view when necessary.

What is it Good for?

Although most applications of redaction software seem to be in the legal market, this software is relevant in any

business, be that financial or otherwise, where sensitive information about people is stored and referenced. In the printing industry it obviously has importance for variable data print, and even for static on-demand work. Its strength is that it provides content analysis, which could be applied to present content according to peoples' interests, as well as their privacy demands.

Other security developments, but not involving PARC, are also underway within Xerox. The Xerox Innovation Group in Rochester, New York, has worked out a way to put padlocks onto variable data print. GlossMark technology creates different levels of gloss within a page image. It prints characters into page content such that they are only visible when the page is viewed at an angle, so it's a bit like a watermark except that it is printed rather than being integral to the substrate.

It works by manipulating the characteristics of pixels, their gloss properties, so that they display different glossiness, without needing special substrates or toners. The special characters are visible to the human eye, but they cannot be captured with conventional photocopiers or scanners. Because the marks are based on varying gloss properties the hidden information can be anything: text, logos, images or whatever.

For example a proof can have a seal of approval which includes an additional hidden element, or an invoice can include the contractual reference to which it refers, to prevent unauthorised copy invoices getting into a company's payments system. GlossMarks can be added to tickets or any other document that might otherwise be easily copied, to combat counterfeiting. Xerox is also working on using optical brighteners to add page elements that are only visible under ultraviolet light, and toners which only respond to infra red.

There is also a new screening technology that embeds characters into a text, which are invisible unless viewed through a plastic screen that brings the hidden characters into view. Microtext creates miniscule characters that appear as a pattern on the page but which are visible as text when viewed with a magnifying glass.

Xerox is making its security software available for its Freeflow Print Server.

Boomerangs
(Your feedback fed back)

This month's issue has a bumper crop of Boomerangs. Firstly, following last month's Ifra coverage, we received the following email from the folks at Adstream clarifying the difference between what OneVision does with its file delivery technology and what Adstream does. We're more than happy to publish this.

Dear Laurel,

Tom indicated you were the best person to send a right of reply note to.

I had your most recent newsletter forwarded to me and would like to draw your attention to OneVision's assertions about our solution at the top of Page 26. My concern is to correct some misrepresentations which were made in the article about our solution.

The following quote;

"OneVision claims it's technology is more secure than Quickcut's because it controls, corrects, and if necessary, converts incoming files into the required format, rather than providing settings which could be modified resulting in substandard files reaching the workflow"

What needs to be made clear is the settings provided by Adstream within QuickPrint are there to enhance the publisher-mandated settings which are stored in our online Specifications Database. Where there is any difference between the locally defined setting and the publishers' specifications, QuickPrint will ALWAYS prefer the publisher settings.

So, if the publisher chooses to insist on a PDF containing content of certain type - e.g. PPAv7 - or refusing PDF's

containing certain types of content, e.g. CID fonts, they will only receive files which adhere to their own 'standard' - even if a QuickPrint defined setting used in the Production or Validation appears to conflict with the publisher's requirements.

There is no chance of 'substandard' files reaching the publisher. Indeed, the Adstream Print Workflow (formerly Quickcut), is unique in that it allows the publisher to do this without having to send preflight profile files to all its senders AND does this in addition to providing the media specifications to the Agency or Repro.

Please let me know if you would like to clarify any of the above.

Best Regards,
Gavin

Gavin Costello
Print Product Manager
Adstream Ltd.

We've also had some correspondence wih Gimle, vendor of the Absolute Proof proofing system and participants in our Spot Colour Proofing Test. They have submitted a second proof for evaluation and since the results are significantly better, we're keen to present them.

Absolute Proof can do screen accurate proofs, and Gimle chose to use this option in the test. The new proof has been done using contone mode for output, and now the colour deviation is slightly below ΔE 3. This is a significant improvement from the halftone proof originally submitted, which had a colour deviation of exactly ΔE 5.

We asked Hugo Kristinsson, Managing Director at Gimle, what they had done differently. This is his explanation:

"There were several contributing factors. The most significant one was that we used contone files instead of halftone files. We then built a new profile for the Epson with slightly wider gamut, and fine-tuned the LAB colours of the individual inks further than we did before,

did edits on the curves of individual colours as well as some profile edits. But the most significant factor was the use of contone versus halftone files as it is much easier to control contone than it is with halftone."

Spindocs
(Where the spinner gets spun!)

This month's Spindocs is really more of a call to arms for those journalists, editors and publishers among you. We all rely on off-the-record briefings, anonymous tip-offs, embargoed releases and advance notices under NDA, and though these various conditions are frequently frustrating, they can be extremely useful for all parties.

However, when corporate lawyers get involved in drawing up the conditions they can sometimes be so onerous as to render the whole exercise rather pointless, so we thought it would be useful to lay out a framework for the sort of things we expect to see in an NDA, particularly since there are likely to be a number of such briefings in the run up to drupa. Hopefully readers, be they journalists, vendors or lawyers, will respond with their own points and so a set of guidelines that will be useful for everyone will emerge from this exercise. If so, we plan to put the guidelines up on www.igaef.org, the website Digital Dots has set up for journalists and editors.

NDA Dos and Don'ts

• **Firstly, if the purpose of the briefing is really for the vendor to extract market information from a journalist, then it's a consultation and not a briefing and that vendor should expect to pay a consulting fee. This is the honest way to go about it, rather than trying to disguise things as a briefing and tying the whole thing up with an NDA to rule out any chance of publishing any information while it might still be relevant. Don't use NDAs as a tool to flatter journalists into sharing their views and ideas, when what you really want is help with positioning a product or identifying a market for it.**

• **If you expect anyone to sign an NDA, then for goodness sake say so up front before they spend time and money travelling to the briefing.**

• Take the trouble to write a proper NDA stating the relevant conditions, rather than using one that was left over from a customer visit, and that has no specific dates.

• NDAs should state clearly when the restrictions will expire and for what. There is little point setting a date a year or two away for a pre-drupa briefing when we all know the information will be released by the end of May.

• If you decide to release the information ahead of the date specified in the NDA, at least have the courtesy to give some advance notice to those people who gave up their time to attend the original briefing. Nothing is more frustrating than keeping a secret only to find that it's become yesterday's news, and is no longer of any value.

• An NDA should be specific about which information is restricted, so that everyone can agree what can and cannot be written about.

• The NDA should not apply to information that is already in the public domain, nor should it apply to information which a journalist can demonstrate has come from another source not covered by the NDA.

• An NDA can only apply to the people who have actually signed them. NDAs signed by one person should not apply to other journalists working in the same organisation, if they can demonstrate that they came across the same, or similar, information independently.

It's worth remembering that the whole point of journalism is to publish information, so if you want something kept secret, don't invite a bunch of hacks to your briefing!

Upping the Ante

For many years the main way to control ink usage was via GCR (Grey Component Replacement) in the separation settings, first in special scanner software, later on when building ICC profiles for output. In the last few years, starting with Alwan, several solutions have come on the market to complement this technology. Not only do they promise to save ink and toner, but many also claim to be able to enhance image quality and printability.

Alwan Color Expertise was the first company to present a technology to extend ink management beyond GCR and similar techniques. Based on experience with image enhancing software and the fine tuning of proofing systems, as well as checking and optimising printing presses, Alwan launched its CMYK Optimizer software in 2004. Other companies have since followed suit, and today there are more than a handful of comparable systems on the market.

But there are some differences in the features offered by these various packages. For example, you may want the option to apply customised image sharpening depending on the paper type and printing technology you are using. This type of processing step could be applied earlier on in the workflow, but it's a step which might be very handy to apply late in the process. Even basic decisions, such as the total amount of ink used for a certain paper (TAC, or Total Area Coverage), and separation parameters, UCR (Under Color Removal) or GCR, may need to be tweaked with respect to the paper and print technology that is actually used for a job.

Today most of this data is defined in the ICC profile selected for the job, but what if this profile, when analysed, actually isn't optimal for the situation? Or if the dot gain of the paper and press combination used is slightly, or even very, different from that which the ICC profile assumes? In such circumstances corrections would need to be done late in the process and this is where an ink optimising software should kick in and prove it's worth.

So what does a well functioning ink optimising system promise? Let's turn the question around, and ask ourselves what the problems might be if we try and print with less than optimised separation settings. First of all, if we try and use more ink on paper than the paper can hold, in the best case we increase the drying time, but excess ink could cause the ink to smear inside the press. We also run the risk of ink rubbing off in the binding process, causing further smearing. Too much ink may also force the press operator to slow down the press in a desperate effort to reduce this problem.

So slower print speed and/or prolonged drying time, as well as risks of smearing are the obvious problems with too much ink on the paper. But ▶

Today most of this data is defined in the ICC profile selected for the job, but what if this profile, when analysed, actually isn't optimal for the situation?

the problems don't stop there. Contrary to what many believe, to put more ink on paper doesn't necessary mean that you achieve a larger colour gamut. Instead the actual density may go down, particularly in the very dark areas, if too much ink is applied. If the ICC profile doesn't have the settings for TAC and UCR/GCR absolutely correct, an ink optimis-

ing system can adjust this. We then not only save expensive ink or toner, we might also find that we can actually enhance the colour gamut. This, while simultaneously making it possible for the press operator to print at full speed!

The trick is to do this without changing the colours when processing the incoming documents. A rule of thumb says that any colour difference less than ΔE 1 is not visible to the human eye, so the ink optimisation systems need to make sure that the process doesn't change the overall colour appearance.

Sophisticated ink optimisation software might also be capable of differentiating between images (pixel data) and vector graphics, since those objects may need different handling. The integrity of the document also needs to be guaranteed – it would be a catastrophe if what has been

An ink optimisation system is quite discrete in nature. The changes to an image shouldn't be visible in print, at least not the colour appearance. It's only when you compare the separations, before and after the process, that you will see a slight difference. Here a screenshot from Speedflow Plus from OneVision, with the Ink Save plug-in in action.

approved in the final proofing cycles suddenly appears differently on press.

Another challenge is to smoothly integrate an ink optimisation system with the existing RIP system. The added process should be more or less invisible, and not add too much of an overhead in processing and production time. But just how much time can be considered reasonable depends on the situation. However, if the ink savings, reduced drying time, better printability and enhanced print quality are high enough, then surely additional processing time early on in prepress is a small price to pay?

There are several ways to perform ink optimisations, and some of the very simple solutions use just slightly modified settings for TAC and GCR. Other solutions analyse the existing ICC profile, and replace it with a similar, but less ink-hungry one. This can be done through the use of device-link profiles. Yet other solutions work with even more sophisticated techniques, where the ICC profile isn't simply swapped. Instead the new colour separation set-up is calculated based on the actual image content, and the device link is a temporary one, unique to the job. Alwan calls this Dynamic Device Links and some other developers have followed suit.

Testing the available systems

The vendors base their calculations on different algorithms, so it's quite difficult to judge beforehand what technology is the best. Extensive testing is the long but proper route to take when choosing among the systems on offer, so we are planning to run such a test of this interesting and obviously very useful technology. For vendors and present users, this is an invitation to participate in such a test! We are setting up the project in the spring. Meanwhile, we've covered here briefly the details of those systems that we've had some experience of.

Agfa offers the InkSave extension to the Apogee X RIP. Ink savings of up to 25% is the bait, as well as many of the benefits listed above like greater press stability and shorter drying time.

Alwan CMYK Optimizer, now in version 3.0, analyses incoming PDF files and builds dynamic device-link ICC profiles on-the-fly, to optimise ink usage depending on actual image content. CMYK Optimizer can also apply electronic sharpening depending on the paper and printing process being used. The system is modular and, when using the fully extended version, the user can both customise all the settings as well as get extensive reports on ink usage.

Binuscan offers a solution called PDF Server which includes many of the image enhancing features of previous software solutions from Binuscan, but also an ink optimising feature. Analysing the existing ICC profile in a kind of reverse engineering fashion (checking the colour data that was the basis when building the profile) and replacing this with a more opti-

Another challenge is to smoothly integrate an ink optimisation system with the existing RIP system. The added process should be more or less invisible, and not add too much of an overhead in processing and production time.

mised and better separation set-up, both saves on ink and achieves better printability.

GMG, vendors of proofing systems, have extended their product portfolio with Ink Optimizer, promising to reduce ink costs up to 25%. Used in conjunction with the GMG Color Server, different hot folders can be set up using customised colour profiles (either standard ICC profiles or proprietary GMG colour profiles), to adapt output data to different papers and printing processes.

OneVision started off with a simplified ink reduction function in its Asura preflighting system, basically modifying the GCR settings. This is still a standard component in the basic version of Asura, but more advanced functionality has been added through the Ink Save plug-in. Combined with other products, such as Solvero and Speedflow, features like additional electronic sharpening and adjustment of how to achieve rich blacks, can be applied in the processing of incoming files.

As can be seen, there is more to ink optimisation than merely saving expensive ink or toner. This is an important colour management technology that complements both what traditionally can be solved when creating and using certain ICC profiles, and how the prints can be adjusted using the press control system. Today many printers only like to use standardised and well known ICC profiles, such as SWOP profiles and/or profiles that follow ISO 12647. Ink optimising software could make this a working reality, bridging smaller differences between presses of different makes and types, as well as guaranteeing that the proofs actually match the print, and without costing more than they should!

– **Paul Lindström**

Web-to-Print in action

As Nessan Cleary described in our September issue, there is more to Web-to-Print (WtP) than simply being connected to the internet. As a follow-up to that article Paul Lindström looks at a few samples in the wide spectrum of WtP implementations to illustrate what its benefits might be.

Users of WtP technologies are seeing a number of benefits. First of all there's the customer-centric approach, offering a printer the means and opportunity to reach out to customers and help facilitate the customer's work in the publishing process. This reduces proofing cycles, saving time and money. Bundling orders improves production throughput, but also saves time in administration. The customer only has to check and approve one invoice which can include a large number of often very small, single orders, for the month.

Bundling print orders can also save a lot on postage costs, at least if the price is skilfully negotiated when offering distributors larger volume of well prepared batches. Finally WtP-solutions make low margin, consumer-driven volume production profitable. This is an area that isn't always well explored by very many conventional commercial printers or publishers.

The Dutch printer PrintPartners Ipskamp is a good example of a printer that has discovered the commercial possibilities of new digital markets. Originally only into sheet-fed offset production, Ipskamp noticed that it was very hard to achieve any profit in production of stationery type print. And yet its customers often wanted items such as business cards, printed as single, low volume orders.

In 2005 Ipskamp decided to search for and invest in a WtP solution, deciding on iWay from the Israeli company Press-sense. Martijn den Oden, Technical Manger at Ipskamp, was responsible for this project. He explains: "Originally we used a small offset press and a fairly small printer for the low volume stationery type of print production. We then started to use iWay as the order portal for a selection of customers. The main bulk of jobs at Ipskamp was, and still is, manuals and brochures printed sheet-fed offset.

"After a while the volume grew, and thanks to the efficient order handling, we saw the potential to grow these types of print services. We bought a proper digital press, an HP Indigo, and started a sister company called Netzodruk. Now we are about to start up the third office of Netzodruk, and will develop this side of our business, reaching out for even more consumer type of work, as well as pursuing personalised print. In addition to iWay we have developed a Flash-based user interface integrated with InDesign Server, which helps facilitate automated document production."

"We started off having digital print as a small side business, but since our WtP solution was so successful, we created a chain of digital printshops called Netzodruk." says Martijn den Ouden, Technical Manager at Ipskamp.

In France Reprotechnique, a digital printing house, has extended its services to include document management. With 20 production centres, the company used to keep a whole armada of couriers busy before deciding to switch to digital file delivery as the main option. At first Reprotechnique developed a solution of its own called ReproServer.

After one round of upgrading this home-grown system, it became obvious that it was too costly to maintain a proprietary solution, and that it should be possible to find a suitable commercial Web-to-Print system. Pierre Leborgne, deputy general manager explains: "We wanted customers to be able to deliver documents to one single address, and then we at Reprotechnique can route the production to any of our many production centres. We chose Digital Storefront from EFI because we found it to be user-friendly, and because it's capable of offering us and our customers a whole range of benefits, such as fast quotes, automatic PDF creation, stock- and document management, personalised print and print-on-demand. It was also well known to Canon, who gave us full support during the implementation." He added: "Since the introduction of Digital Storefront we have increased our turnover by almost 30%, and about half of this is thanks to the DSF system, I would say."

One of the things that puts many printers off with WtP is the perceived implementation difficulties. For Leborgne: "The implementation was smooth, although it's a challenge to do it at this scale, with so many people involved. We still have a lot of training to do, especially of the sales force, to fully take advantage of the system. Very soon we will add improved versioning as well as extended variable data production to our range of services."

Rather than implement a dedicated WtP technology, the German printer Köller + Nowak has preferred to use the e-business extension to the Hiflex MIS system coupled with Köller + Nowak's own web programming knowledge. Their WtP system lets customers make price inquiries over the Internet, track quotes and, of course, place orders. In the Hiflex e-business solution it's possible to create personalised print and handle proofing via the Internet, with the Kodak Prinergy prepress system as the PDF creation engine. Customers can track orders by the milestones set up in the planning and JDF has played an important part in the development of this system.

In 2006 Köller + Nowak was awarded first prize in the category 'Biggest improvement in efficiency and customer responsiveness' in the CIPPI awards, arranged by CIP4 (the people responsible for the JDF development). Ingo Nowak, CEO of K+N in Düsseldorf, elaborates: "We used to have several channels for file delivery – ISDN, FTP, email, CDs etc. It was very difficult to assign documents to the correct orders, and a lot of manual work went into handling this. Now we route documents much better, and also perform preflight at an early stage. With our Web-to-Print solution we can easily track corrections and changes to documents that are ordered by the customer, which helps when it comes to invoicing.

Pierre Leborgne, Deputy General Manager at Reprotechnique, wanted to cut down on the use of couriers, and set up a common user interface for file delivery. Using EFI Digital Storefront has also delivered automated PDF creation as one of several bonuses.

Ingo Nowak, CEO of Köller + Nowak in Düsseldorf, has seen a ROI of close to 800% in his WtP and JDF investment, and will develop the solution even further.

"The return on investment for our JDF-implementation, of which the WtP solution is an important part, was 798%! In actual money this is about €225,000. This convinced us to continue to develop our WtP concept further, and to implement even more JDF elements in more places in the workflow. But it is a challenge to keep up with all the individual needs from customers, especially when it comes to additions and alterations in the user interface and functionality of the e-commerce platform."

Strålfors is a Swedish printer that has gone through a huge transition. Some ten years ago the bulk of the company's production was pre-printed forms, but it was very obvious that this type of product would have to be replaced with new services. Managing director Per Samuelson coined the term 'infologistics', and decided that this would be the main focus for the company. So Information Logistics is now the core of Strålfors production, and the Web-to-Print solution is a natural component in the workflow.

Charlotta Tembert, Project Manager for the WtP development, described a customer case where Strålfors's WtP solutions helped reduce postal costs, simplify document creation, and speed up production and distribution. The customer, LRF, has about 170,000 members, mostly farmers, organised in 1200 local districts within 19 different regions. Over the year a lot of promotional material is sent out, as well as invitations to meetings and seminars. LRF tried to centralise production by handling it through its central office, with its own copier and one operator.

Anders Etander at LRF developed the WtP system together with Strålfors and explained that the previous system was very vulnerable, with little control over the data sent in. In the new system a central database is used, with a web interface for both document creation and address selections for distribution. Through Strålfors, LRF get good prices at the Swedish Post Office, and save a lot on distribution thanks to organising batches of deliveries into volumes that qualify for discounts. The local district also gets an immediate quote of what the price will be for that very shipment, including everything – printing, paper and distribution.

Some printers have decided to build their own WtP system. The Swedish company Done is a mix of a prepress company and a print broker. It needed to better manage prepress production and facilitate order management and quality assurance.

Done was founded in 2000 and has about 60 employees. Its two founders, Mats Lindgen and Henrik Kihlberg, both graduated from the Royal Institute of Technology in Stockholm, after studying graphic arts technology. They wanted to base their company on state of the art print procurement, using databases and Internet technology and they have invested about €2m in the platform. It is based on Java and the IBM DB2 database and Mats Lindgren has several customers that have saved time and money using his WtP system.

Charlotta Tembert, Project Manager for Strålfors' WtP solution, helps customers organise production and distribution in a way that save both time and money, not least on postal costs.

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One such is Studieförbundet/Vuxenskolan, a nationwide educational institution that offers adult education, often through evening classes. Studieförbundet's Claudio Briones manages centralised document production and cooperates with Done to further finetune the WtP solution. He says that Studieförbundet went with the WtP solution from Done because: "We used to print a stock of course material, based on estimates from the different regional offices. Repeatedly we found that we had to throw away about 30% of this pre-printed stock. It also pulled a lot of administrative time and resources to manage the distribution of those prints. Today the local offices order the quantities they need directly through the WtP portal managed by Done. Optimising print volumes, and also using print-on-demand, means we have cut overall prices by 10-25%, depending on what type of product we look at, brochures, envelopes et cetera."

And web-to-print has other attractions for Studieförbundet: "Another great benefit is the possibility to simplify document production, and yet increase the quality since we now have a template that follows a common graphic style. This includes ads, which can be produced and distributed through the Web-to-Print portal. Life has become much easier with this solution, and we save time and money each month on this" concludes Briones.

In the right environment WtP can be a win-win situation for the printer and print customer. It offers time savings and ease of use as well as quality assurance. These are perhaps the three main benefits, however there is a fourth that will become increasingly important in the DIY and on-demand ethos the internet fuels: convenience.

It's very clear that Web-to-Print is attracting a lot of attention at the moment. For further information we recommend a recent publication from Pia/Gatf Press, the Web-to-Print Primer, by Sarah McKibben and Julie Shaffer. It includes some case studies, and lists more than 50 vendors of WtP solutions. And still many more could be mentioned, since the WtP concept should be, and will be, part of more or less every workflow set-up.

– **Paul Lindström**

Henrik Kihlberg (to the left) and Mats Lindgren, cofounders of Done, have built a WtP solution from the ground-up, to make print ordering and production more efficient with better Q&A.

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IfraExpo Part 2

Until this year, going to IfraExpo had started to be a bit of a ritual and a little samey. However Ifra is doing a superb job of reinventing itself to practise what it preaches. In Vienna it created a lively event jam packed with tutorials, workshops, a daily Gazette, multiblogs and focus sessions, including one with a panel of 17 year olds from local schools discussing what they did and didn't like about newspaper websites!

Boundaries are blurring across applications with substantial collaborations and partnerships not just between suppliers, but also between newspapers and technology developers. Following is our concluding coverage of IfraExpo which looks at some of the technologies for producing newspapers across channels.

Multiple Channels

Mobile phones and broadcasting are just two of the additional channels newspapers can use for content delivery, including editorial and advertising content. Many already exploit them within a multichannel publishing system strategy, delivering radio and video via the internet which is obviously the commercial focus for new market development. Many newspapers have extended workflows to digital channels such as video and blogging to exploit the web delivery environment. New business opportunities such as auctions and social networking are gaining ground as well: the Kleine Zeitung in Austria even auctions products on behalf of advertisers in a printed ad supplement and splits the sales revenue with its ad customers!

Roxen was one of IfraExpo's highlights, but the company will need more space next year.

Web-based ad delivery is well developed, and this idea demonstrates how innovation on the web creates new ideas for print, and vice versa. This is the first IfraExpo where editorial systems exclusively based on internet technologies made those systems based on XML and databases start to look past their sell-by dates.

Roxen, for example, has an editorial workflow management system based on standard internet technologies including Ajax and XML for speed, and a MySQL database so it's completely OS and browser-independent (see panel: Roxen's web-based technology). It provides drag-and-drop functionality in a browser window and can work with any layout technology. Journalists get a real time presentation of the complete editorial and production scenario, including historical visual presentations linked to content lists so any component can be viewed independently. Because Roxen uses a database rather than a template-driven description, the content view can be highly unstructured.

Roxen chose this approach over a template based alternative, because the latter assumes well written templates. Not so well written templates tend

to present the user with complicated and often muddling lists of content components. Journalists waste time trying to cope with confusing content presentation and rarely have the patience to get to grips with it. Accessing content direct from the database gives the flexibility to show, for example, multiple version levels of a story such as the raw text, edited text and on-page appearance, both of the individual story and as it appears within the whole page.

Roxen is one of a number of new developers focused on developing applications for newspapers with internet technologies. Others include Pressmart a full service platform which delivers newspapers via the web to browsers and mobile devices. Tecnavia presented an electronic editions technology with additional modules for archiving, clippings and electronic tear sheets. Athens Technology Centre's News Asset system manages data flows in news agencies and has tools for the newsroom, plus event scheduling, archiving and subscriber services. Polopoly has developed an online content management platform for deployment on everything from single machines up to clustered SAN and database servers. Content management technologies abound!

Escenic, by far the most established player in this space and whose technology is used by DTI and CCI Europe, has not stood idle. It has signed an agreement with MobileTech for publishing content to mobile phones. Escenic already offers video integration within the Escenic Content Engine and through this new partnership now supports .mobi-compliant websites.

Escenic also introduced three new engines, extensions to editorial workflows to facilitate content delivery via additional channels. Escenic Tip is for receiving reader-originated content via SMS, MMS and email for storage and subsequent use.

The Escenic Event Engine is for registering events such as sports meets or performances so that information about them can appear in the newspaper and the website. The Event Engine contains a venue and artist database with all relevant information about a venue, including location information for use in combination with mapping solutions. The publisher can present event content together with all the other editorial content, thus enabling the publisher to create a much more complete solution than merely listing the events.

The Escenic Community Engine is basically the MySpace concept written for newspapers for creating standalone communities or communities integrated into the newspaper. This technology has been developed by the Dutch NDC Mediagroep, publishers of the regional newspapers Dagblad van het Noorden and Leeuwarder Courant. NDC Mediagroep is a division of NDC|VBK de Uitgevers which has a range of interests including newspapers and book publishing. The idea was to create community environments for readers and audiences, and started with a site for pet owners. The newspaper is now working with

Roxen's web-based technology

Roxen is a Swedish web technology developer of 30 people including 18 developers. It's some 70% VC funded with the balance of shares spread across 250 external shareholders, including current and former Roxen employees. Roxen developed a web server, now an Open Source product, which was later expanded into a content management system. This is today used by many companies in different market segments including media, telecommunications and higher education.

Roxen Editorial Portal content uses CSS technology to display content direct in the browser. The user interface can also include wire feeds, related reference texts and images with full versioning and usage detail. It all depends on how the journalists want to configure their interface and because it's browser-based the portal is just a window on their desktop. Roxen has its own applications launcher and so can handle any file or data format.

There's a live view of page planning with real time production stats and interfaces to ad booking. Like everything else this view is entirely user customisable and very flexible for managing both story elements and whole pages. The technology can manage all, some or groups of pages for example in magazines with multiple jumped pages. It uses XML and XSLT to support any output path and is fully integrated with layout software such as XPress or Indesign. Any change on the page in the Editorial Portal is reflected on the original story, with full version management.

Roxen's system has all the functionality one would expect of an editorial system, but with a tight internet twist. It

a large 220-outlet pet shop company to do special promotions and set up cooperative special interest groups and marketing efforts. The base technology is highly modular and scaleable so it's suitable for creating very small communities using selected modules or large ones, using all of them and operating standalone.

Escenic is also collaborating with Fast, Norwegian developers of enterprise search tools for retrieved content prioritisation. The Escenic strategy is to develop technologies that help newspapers gather related additional references, to save them as text files using the principles of tag clouding. A tag cloud is a prioritised graphical representation of tags, or references relating to a specific subject, that will allow journalists to have access to relevant research material without having to trawl through scads of search results many of which will be useless.

New delivery platforms

But there is more to the IfraExpo tale than just websites and browsers. Traditional newspaper vendors are supporting new delivery platforms and data format independence, so newspaper publishers can exploit the internet environment to develop multichannel strategies. Several caught our eye at IfraExpo including DTI, Eidos Media, Protec and Tera.

DTI's Media Pool technology combines internet and database technologies to bring web and print publishing together. Media Pool is a single database for content output to multiple channels, based on DTI's Liquid Media technology (see Volume 4 Issue 7). Media Pool has a unified database structure so it can manage stories and other content as single objects, with built-in version and relationship tracking regardless of the publishing channel, operating at high speed to build pages for both print and the web. This technology underpins the latest version of DTI's NewsSpeed editorial system, also launched at IfraExpo. Version 7 is a complete editorial suite integrated with Adobe software to support all newsroom functions. WebSpeed, also new for IfraExpo, uses Mediapool in combination with Adobe Dreamweaver to support automated web publishing.

Eidos Media, early proponents of XML for achieving this kind of flexibility, used IfraExpo to introduce the Méthode Portal Server. This adds interactive web publishing to Méthode so that news publishers can provide customised news and multimedia content to large audiences, based on individual profiles. It uses intelligent caching based on Méthode's notification infrastructure to update page elements selectively as they change. The server also has a variety of audience feedback and participation features such as polls, blog hosting and support for user generated content. There is also a configurable payments mechanism, so content or other material can be sold via the portal. This technology can be installed as an extension to an existing Méthode system or on its own.

supports RSS feeds, with filtering and access to any digital data with a rolling search window that can search for very specific information sets. Journalists can include short comments in their browser window to help categorise incoming feeds, without conflicting with the web browser shortcuts, so they can have, for example, PDFs and/or QuarkXPress and Adobe Indesign documents of past editions or selections thereof, as well as all story items in their respective native format. They can also access offline archives via an access layer, which is also a possible means of allowing the Roxen technology to work in other editorial systems such as a Tera or a DTI for easier migration.

Because it is based on standard technologies the Roxen Editorial Portal has a lower per seat cost than the norm at between €1500 and €2000. This cost can be financed over five years, as Roxen is keen to both sell systems and create a user and co-development family model.

A couple of years ago Roxen signed an agreement with Metro International for its content management system. After evaluating the editorial system market while looking for a solution for all its newspapers, Metro International signed another agreement for Roxen to build an editorial system for the printed newspaper on top of the Roxen CMS. In early October it went live at Metro sites in Denmark, The Netherlands, the US, Spain and Italy. Roxen has also signed up one of the larger magazine publishers in the Scandinavian market for the Roxen Editorial System with the first magazine in live production early next year. Roxen is working with partners in Asia and considering partnerships elsewhere, including the North American market.

Méthode version 3.5, also introduced at IfraExpo, adds refinements such as greatly improved news management with support for shared work-spaces for planning, and new tools for the Xsmile editorial and layout environment. This includes persistent spell checking and icons for page references that can be dragged into the text from a pagination tree.

Tera is a well established supplier of client server-based front end systems, and at IfraExpo introduced a new content management services architecture based on internet technologies. The new architecture is Tera's foundation for all future developments and takes Tera away from traditional client server models towards an architecture that exploits browser and internet technologies. Tera now has a uniform way of defining data structures using a single underlying access and rights management method for maximum flexibility and fluid system expansion.

Laurel Brunner discussing Quark's prospects with CEO Ray Schiavone.

Tera chose Windows .Net because it has powerful development tools including a workflow management engine that Tera has configured for newspaper workflow management. Tera can use its expertise for specific workflow processes, which can be defined and executed within .Net without scripting or specific programming. Tera's addition is the application specific functionality, for example, video conversion activities, taking native video and turning it into Flash. Tera is looking at being able to provide such conversions for any format, either by doing this itself or supporting plug-ins. The goal is to provide editors with technology to support multiple views and format independence.

Although it will continue development of its existing architecture in parallel, new applications, such as web-based upload and download for freelancers, will be on the new architecture. Tera expects it will take a year or so for full migration, and is working closely with customers.

Protec builds newspaper systems based entirely on standard off-the-shelf software, so they are very inexpensive yet highly effective. The company dominates the Spanish market and has a number of US installations, mainly Spanish language titles. At IfraExpo Protec launched version 6 of its Milenium (sic) Cross Media system which provides closer convergence of resources and processes. This means common tools for editorial and advertising, to help incorporate cross media access and editing, within a single interface. The software supports any sort of organisational model and includes automatic and manual cataloguing mechanisms for all content types. Version 6 also has updated planning tools for journalists and editors.

Chad Siegel of Adobe hinting at what to expect in CS4.

Standards & Standards

These systems work because they are based on standard technologies, particularly Windows, Java and XML. The internet is, of course, based on standards and the ubiquity of digital workflows and data management exploiting them blurs conventional boundaries between systems and between applications. No longer should we treat content management, archiving, advertising, editorial or circulation management systems as ▶

discrete technologies. The delimiters are fading because the data in these systems can often be shared or otherwise exploited. Advertising booking systems inform page planning to help editorial systems with story planning and news development. Circulation information, especially if it extends to user profiles, is highly relevant for ad booking, even though relatively few newspapers have yet the means to exploit the synergies. The evidence at IfraExpo suggests this is starting to change.

A common digital foundation enables multiple source contributions to content, from remote staff journalists and freelancers, and also from readers (we won't call it citizen journalism because although all journalists are citizens the converse isn't true). Multichannel publishing creates considerable workflow complexities, however it encourages interactions which is the ethic now driving the majority of interesting technology developments and new applications for newspapers. Content creators and producers can share the development of the newspaper, extending the participation to its readers and advertisers with print and the internet mutually supporting the model. This is the trick and it's one that both Quark and Adobe want to master. Both companies have huge vested interests, albeit for different reasons, in how newspapers will develop into multichannel media organisations.

Adobe had nothing very exciting to offer at IfraExpo apart from behind the scenes hints at what to expect in CS4. Adobe wants to make CS4's components easier to share, for improved horizontal integration. This sounds as if the suite is moving towards a sort of library of tools which can be more easily integrated vertically according to the demands of the workflow, so that data can be managed across media applications. If so it would be a means of making design reuse easier and for people to collaborate more effectively, particularly across the web divide. CS4 will also have improvements to make it more extensible by open source or commercial third party developers. This could include tools for configuring the user's environment, using features from CS4 component features.

Quark had an altogether more tangible message. Poor Quark has had to crawl over broken glass to move steadily back into its customers good graces, but it is definitely making progress. The release of QPS 7 at IfraExpo "marks our entry into the dynamic enterprise publishing space" according to CEO Ray Schiavone. QPS 7 is now more of an environment than a standalone technology, benefiting from a complete re-code. This virtual workplace is an online hub for content creation, production and management and is based on Java/J2EE, XML and JDF-based job jackets to support single to multiple channel publishing applications.

QPS 7 is effectively a connection allowing clients to bridge into applications, opening them automatically when the user clicks on a media file. The access is immediate regardless of the data format and includes a browser-based web editor for remote access. QPS is no longer a proprietary system, but one designed to help newspapers leverage

Metro International on the web

Metro International is present in 21 countries, printing 76 editions in over 100 cities and 18 languages. With a global readership of over 20m, 70% of which is under 45, the newspaper is setting new expectations for conventional publishing. Metro is 100 percent advertising-dependent and because of competition in many markets, most often from the indigenous press, the newspaper has revised its business model to remain editorially driven, but with greater streamlining in its technology and standardised processes. This is particularly true for workflows across operations, which are now designed so that there is no duplication of work. A key part of this system is Metro World News, where all news is gathered to a single central server and then fed out elsewhere to other Metro operations. Content is shared with local offices so the newspaper is always able to produce the newspaper, and there is no dependency on a central server system.

Technology has made this possible, however, Metro has blended its own IT expertise with established and groundbreaking technologies from Quark and Roxen. Metro has developed its own editorial system, the Metro Publishing System, to provide a toolset from a range of different applications for print and web publishing. MPS supports Metro's in-house CRM, ad booking and layout and is based on XML and open standards to create a single system suitable for simultaneous print and web production, and with the scope to support "future channels" according to Michael Mendoza, Metro's global IT director. Mr Mendoza chose Quark QPS 7 for editorial and production workflow management because, rather quixotically, it is the "only option that could support all our languages".

IT infrastructures to link people and technology, and give publishers considerable scope for managing multiple workflows within a single environment. QPS 7 is in use at various media companies including Metro International (see panel: Metro International on the web), Roularta, Der Spiegel and others. Among the developers supporting QPS 7 are Canto, Sinedita, IPA Systems and Picturesafe.

Expanded Channels

Relatively few newspapers have added audio and video channels to their websites. At IfraExpo a couple of companies caught our eye. Local Individual Video News or LIVN to its friends, has a tool for creating television products. Its team of 11 people has a TV content management and editorial suite for newspaper workflows, that links content with an advertising management engine. Users define profiles for stories and advertising, and journalists categorise stories for different target channels, which are categorised according to audience profiles. Highly customised television broadcasts are delivered to audiences via IPTV, and can include national and local advertising spots. Currently LIVN's system only supports fixed rate advertising but it ought to be possible to have ad pricing determined according to the number of clicks, or the user profile.

LIVN is based on Linux, Apache, PostgreSQL and PHP, an inexpensive open source platform with considerable development scope, such as exporting content to other channels, for example broadcast media. LIVN is already outputting to set top boxes and hand held devices such as the iPod. It costs around €100,000 and takes two months to implement and is already in use at the Westfälische Nachrichten.

The wonderfully named Blue Billywig, from Dutch developers TCN Mediapark, is front- and back-end software that presents and manages video content. The BB Player Suite manages content delivery to the website and instream advertising as well as integrating with existing web environments and content databases. A plug-in gets digital video from the database and onto a computer screen in Flash. The instream advertising module can be managed by editorial staff or sales people who want to book ad campaigns via an external interface. The technology can also be fully integrated into an existing advertising system, and is in use at Die Welt, De Volkskrant and DAG newspapers.

If you've reached this stage of the story you'll appreciate that IfraExpo is more than just a trade show. The event is a chance for the development community to strut its stuff, but it's also an event that provides a barometer of sorts for the newspaper business. Despite some heavy weather over the last few years, the industry's outlook is, if not quite blazing sunshine, at least fair. This is good news all round.

– **Laurel Brunner**

QPS 7 has the openness Metro requires for its systems architecture to provide improved workflow integration with XPress 7 and the XPress Server 7 technologies.

Roxen's editorial portal is the preferred journalists tool and Metro chose Roxen technology because it wanted an open web-based system, not just client server solutions which bind clients to a specific server instead of using the broader internet to provide the server foundation. This obviously is cheaper and more readily upgradeable, and makes it very easy to roll out a new system across multiple international sites. Metro expects in the future to leverage the respective strengths of Quark and Roxen. The web is the future environment for Metro and indeed all newspapers, but this is the first instance we have come across where a newspaper is specifically designing its own international system to exploit web technologies.

The combination of MPS, QPS 7 and Roxen technologies has meant that Metro can launch a new title in around six weeks at reduced cost. The system also provides it with considerable editorial leveraging through shared content and workflow consistency across the organisation. It is a single platform that can drive multiple channels which is an important part of Metro's future plans. It also provides semi automated page building and web-based page layout both of which reduce costs for the business while improving production speed. It adds up to a position of strength from which to pursue new business opportunities. Metro is introducing new titles with a roll-out plan of two countries per month.

Alwan, the Printer's Colour Ace

Few printers would argue that they can achieve top notch production quality without colour management. Colour management is now fundamental to digital prepress production and to commercial success for all print applications. It is intrinsic to workflow management and data quality assurance, but its very nature makes it extremely difficult to control purely on the basis of the numbers.

The human brain can instinctively manage colours dynamically but this is very hard to do in software. Alwan Color Expertise, an early pioneer in the field of colour management, has developed dynamic colour management tools that allow printers to improve margins without compromising quality.

Elie Khoury founded Alwan in 1997 to provide software, training and consulting services to some of the world's leading printers and publishers. Recognising the importance of standards for process automation and colour management, Alwan developed its original technology to make it easier for people to meet ISO 12647. This is the standard for process control for colour print production and it has been widely implemented throughout the graphic arts.

Alwan continues to contribute to colour management standards work and today Khoury's original vision for digital colour management continues to provide Alwan with a foundation for growth. Alwan has an unequalled position, uniquely blending two key strengths. The company has vast knowledge of digital colour management based on open standards and data processing. It also has extensive practical experience with real printing and the physical performance of the press, paper and inks.

Working closely with Luc Regnault, who is responsible for Alwan's research and development, Khoury has built a growing company that is at the forefront of digital colour management. Regnault has a background in industrial printing and has reinvented himself as a colour scientist. He pursues innovations to develop technologies that meet Khoury's vision of future market needs. Their blend of imagination and foresight keep Alwan at the forefront of advanced colour management development.

The Alwan Edge

Alwan's unique strength lies in its ability to apply colour science to industrial applications, combining colour science with the practical constraints of modern printing. The company's flagship product is CMYK Optimizer which was originally created to help users to standardise and

Elie Khoury, founder of Alwan.

optimise CMYK separations. The software enhances colour quality and reduces ink costs through file optimisation and customisation, requiring less ink to print a job. When it introduced CMYK Optimizer at drupa 2004, Alwan was the first company to offer standalone software that calculated separation data in order to simultaneously optimise ink usage and colour quality on press. CMYK Optimizer was the first technology of its kind for general market use and it defined a whole new direction for colour management software development.

Alwan's origins in training and hands-on colour management continue to give its engineers considerable insight into the vagaries of routine colour production and complex workflow management. CMYK Optimizer leads the market for colour management implementation and Alwan has recently expanded its scope. The CMYK Optimizer suite is a collection of tools that together emulate the skills of knowledgeable prepress and press operators. The suite helps printers apply practical print production expertise and knowledge to dynamic colour managed digital workflows and colour production process automation.

Dynamic Colour

Colour production process automation is vital for success in today's commercial environment. It helps printers meet customer demands for more colour, especially in digital printing and web-to-print applications. Automation allows printers to attend to customer needs without compromising margins, and being able to maintain quality colour assurance in complex workflows is what dynamic colour management is all about. This is what CMYK Optimizer is for and it is why it is widely used in academic applications testing and colour management research as well as commercial environments. The software makes sure that the output data fully reflects the output process and accurately characterises the content.

Luc Regnault is responsible for Alwan's R&D.

The CMYK Optimiser Suite

This software has evolved over a number of years so its strengths reflect Alwan's considerable field experience. CMYK Optimizer is as much a quality assurance tool as it is a tool for colour management. It does a comprehensive preflight analysis of the image and page components of a job, based on the output path, prior to doing colour conversions. This ensures that colour is managed according to all factors influencing colour appearance in the final print, including the output devices involved, the colour content and the actual colour components of each page.

CMYK Optimizer creates different device-link profiles based on the content of a job, which improves throughput in the workflow. It ensures optimised production speed and production readiness especially for incoming files that include lots of complexity in the source data, such as content created with numerous applications (Word, Illustrator, Photoshop etc) and involving diverse data sources, such as image databases. In fast changing environments, perhaps where the same file is destined for both offset and digital printing, processing parameters are simple to update ▶

because they are based on Adobe PDF and ICC profiles, standard tools in the printer's armoury.

Alwan's technologies for matching colour and improving printability produce dynamic device-link profiles rather than fixed device-link profiles. Dynamic device profiling provides workflow and application flexibility. Because they are dynamic they reflect the characteristics of the devices used in the workflow to produce the file, plus those of the content contained within them.

Dynamic Colour Management

So how does it work? Dynamic colour management in CMYK Optimizer applies the principles of highly sophisticated colour management and quality control to standard PDF-based workflows. The software analyses individual PDFs to evaluate each PDF's components, identifying all elements and their colour description and colour spaces. Each object within a PDF is then analysed for its CMYK surface and ink consumption. Page images with a large area of black obviously have a different colour management requirement than those with a large area of a pale colour. This Total Area Coverage (TAC) analysis is the basis for how the black channel is generated.

These three evaluation criteria plus the output destination colour space are the base data used to create the device link profile. With Alwan's technology the profile data is based on the actual content of the PDF and this adds a whole new dimension to colour management, creating amazing opportunities for quality and cost efficiency improvements. By analysing interactions of the four separations, CMYK Optimiser can process the data according to each colour's histogram and dynamic range, as well as its numeric descriptions. The technology works in all print environments including gravure, offset and digital printing.

Because this software works using page-based analysis, rather than being a single process, it is ideal for managing colour quality and costs for variable data applications. This is interesting for a range of new printing applications produced on demand and increasingly via websites. Web-to-print is a growing business area and one which allows printers to meet the needs of new generations of print buyers used to the do-it-yourself ethos of the internet.

As CMYK Optimizer has gained market acceptance, many other companies are following Alwan's lead. Most of these competing tools process files at the end of the workflow, at the point of making separations and outputting to plate or press. However, version 3.0 of ▶
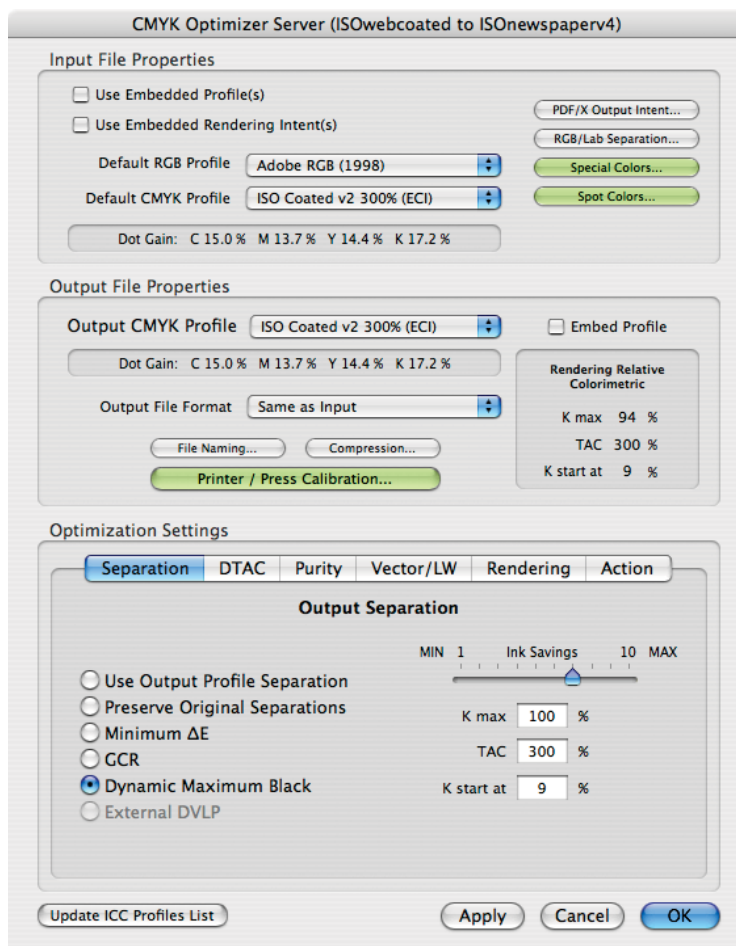
The CMYK Optimizer task panel.

CMYK Optimizer creates a more holistic processing environment, with a complete framework for supporting special colours and colour libraries. There are dedicated tools to specify how named colours should be defined for predefined CMYK values on output.

Future differentiation for Alwan

Alwan's strength as a developer lies in its profound appreciation of market needs and its vision of the future for print media in a highly fragmented and competitive industry. The company's two principals combine technical insight and imagination, with a vision for the printing industry's future and its technological needs. For example, the twin forces of web-to-print applications and media on demand require print process management and cohesion, especially where there is no control of source data and output options. Managing colour across disparate devices and in unpredictable production environments is not yet established practice. Technology is developing quickly but there are still too few proven technologies for colour management across distributed devices.

Yet successful print providers have to take ownership of the quality for whole sets of printed pages, and they need production management software that reflects their application demands and the expectations of their customers. They need tools capable of real live print production, with the scope to accurately handle very complex files in a distributed digital environment. The technology has to have the capacity to correct upstream colour management deficiencies and to provide colour quality assurance within and throughout the workflow.

Alwan is therefore working on an expansion of its base model from straight colour gamut mapping, to a model that takes into account the colour components and characterisation of individual images during processing. This dynamic colour treatment incorporates more parameters than is currently possible, but ever more powerful computers should provide the necessary processing power. This will simplify image gamut preservation with dynamic gamut transfers to a target colour space without data loss. Alwan also is looking at ways of encoding images with more information than the base tristimulus values. Multistimulus-based device profiles will further improve the printability of files especially in unknown environments.

Such advances will keep pushing forward the production of colour in digital environments. They will help print to maintain its cost effectiveness, and its quality and usability advantages in the digital world. This is what Alwan is about and it's why so many developers are taking the same direction.

– **Laurel Brunner**

> **Alwan's strength as a developer lies in its profound appreciation of market needs and its vision of the future for print media in a highly fragmented and competitive industry.**

Graphic Arts Crossword Puzzle   Number 6

If you get stuck, go to the **IGAEF** website for some hints. For those of you that really get lost, answers will be in the next issue of Spindrift. **The answers for last issue's puzzle are on the next page.**

Across

1. The world wide web is a collection of what anxiously connected universal resource locators? (11,4)

8. Slightly smaller than an em-dash. (2)

9. Separations work because each screen is positioned differently, or what? (6)

10. In a roundabout way, this kind of press was invented to replace the platen press. (6)

12. Another word for rinses, and also another word for gates, particularly for water. (7)

13. The opposite of aft. (4)

15. The area in California known for its computing prowess. (7, 6)

21. This type of intermittent light is sometimes used in synchronised flashes in digital cameras. (6)

22. The state of no return for your files. (7)

26. The graphic arts fanatic's favourite present. (3)

28. Binary integer. (3)

29. Because of this and greenness, the yellowness-blueness axis is not alone. (7)

31. That wonderful space full of thumping power and the sound of everlasting voices. (9)

32. A wanderer no man does stay. (5)

Down

1. The opposite of footer. (6)

2. Documents are collections of these. (5)

3. A shorter way to describe a diode that emits light. (3)

4. The opposite of out. (2)

5. A character does this when it cosies up to its neighbour. (5)

6. You need one of these if you're lonely or if you're deadline-driven. (4)

7. Quark XPress and Adobe Indesign use many a one for complex pages. Let always your extra remnants be added on one of these. (5)

11. A popular tool for making PDFs. (7)

14. Transparencies often undergo this in order to make it through to output. (10)

16. Another amazing Apple phenomenon that was never supposed to fly. (4)

17. Input output (2)

18. Will these be as successful as the Mac or share the same fate as the chocolate teapot? (6)

19. OCR technology is really good at reading this. (4)

20. Bad data is often described thus. (7)

23. To do this to raise up print, it's a relief. (6)

24. Comes into the room and gets the text input. (6)

25. The reality of those outrageous possibilities. (6)

30. Oh dear, a short poem. (3)

33. Modus Operandi. (2)

Answers for Graphic Arts Crossword Puzzle Number 5

P	R	O	C	E	S	S	L	E	S	S	■	R	I	P
U	■	N	■	■	M	■	■	B	■	T	■	■	■	A
B	■	L	I	N	E	S	■	I	■	I	D	E	A	S
L	P	I	■	O	■	■	I	T	■	T	■	D	■	S
I	■	N	■	■	I	■	M	■	■	C	■	I	■	E
S	T	E	P	■	C	I	P	4	■	H	A	T	E	D
H	■	■	■	■	C	■	O	■	■	■	■	O	■	■
I	■	C	H	E	M	I	S	T	R	Y	F	R	E	E
N	■	R	■	■	E	■	I	■	■	■	■	I	■	■
G	R	A	M	■	M	I	T	■	■	■	■	A	■	■
■	■	B	■	■	B	■	I	F	R	A	■	L	O	W
■	■	■	■	■	E	■	O	■	■	■	■	■	■	H
■	E	N	V	I	R	O	N	M	E	N	T	■	■	I
■	■	■	O	■	S	■	■	A	■	■	O	■	■	T
■	B	A	C	K	■	■	■	P	R	E	P	A	R	E

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