Dueness

N. *title deed;* patent, copyright; recovery of rights, restoration, compensation
Vb. *request;* enforce a claim, exercise a right; establish a right, patent, copyright

(from Roget's Thesaurus of English Words & Phrases)

Dear Reader,

And so the first leg of the trade show extravaganza is behind us. Laurel made it all the way to Japan and the IGAS show and shares some very interesting experiences from the Japanese and Chinese graphic arts markets. Did you know that there are over 1.6 million printing companies in China? Neither did we. If we were a vendor we'd definitely prick up our ears at that little titbit. We gave Chicago and GraphExpo a miss, but then traipsed off to Leipzig and the newspaper event of the year, Ifra.

As we understand it the main reason for choosing Leipzig for the show was to attract visitors from the eastern European newspaper industry. Unfortunately not all vendors were prepared for the onslaught of people with unpronounceable names and less than perfect English, and it seems these people did not always get the attention they deserved. It may not be as big as the Chinese market, but there is enormous potential in the east European print and publishing markets.

This was the Ifra-year when saying that InDesign will make it in the newspaper business became safe. Newspapers all over Europe are making the transition. During an Adobe seminar a few of them bore witness in front of a chuckling audience – they were all in the process of moving up from Quark 3.32. Although convinced of the advantages of InDesign they were also forced into action – one newspaper was still stuck on Mac OS 8.1 and bought computers on e-bay. A ketchup effect looks certain.

Our criss-crossing of the globe to trade shows means this issue is very vendor oriented. Next issue will be focused on users.

Enjoy the read!

Cheers from the Spindrift crew,

Laurel, Cecilia, Paul and Todd

In This Issue

Slimming and Trimming

This year's newspaper show was all about cost cutting, automation and control. But the desperation of the last couple of years was gone. Writes Laurel Brunner: "As always Ifra mirrored its industry. Supplier consolidation continues but nowadays although the community is still shrinking, there is a sense that it's a positive rather than negative." We saw some interesting developments, from digital printing to closed loop control systems to suckers...

see page 7

Red Sun Special

According to Japanese Printing Industries Federation chairman Hiromichi Fujita the goal of the Japanese printing industry is to move away from twentieth century values characterised by mass production, consumption and waste towards a mix that uses IT and print technologies to support mass customisation, rather than mass production. Laurel Brunner went to IGAS in Tokyo and tells us about the latest Japanese developments...

see page 13

Regular Columns

We hope you are reading Spindrift with interest. We have a special message for readers who are non-subscribers, so if you are not a subscriber please turn to the last page or visit our website (www.digitaldots.org)

News Focus

AdsML 1.0 Released

As part of its efforts to improve newspaper advertising delivery, the AdsML Consortium has released version 1.0 for public review. Based on XML this specification is an umbrella technology that brings together the diversity of ad delivery mechanisms. The consortium has set up a project to identify and monitor all existing and emerging ad management processing standards. Rosetta demonstrated the first live implementation of AdsML at Ifra. The developer, who is one of the founding members of the AdsML consortium, has added AdsML support to its Internet classifieds system.

Agfa Acquires Esko-Graphics' Newspaper Interests

As anticipated (see Issue 4) Agfa is taking on Esko-Graphics' newspaper interests. The arrangement includes all service and support for the DMX platesetter line as well as the Eskonet back end production technology and the company's distribution partners. Agfa is also taking on the 20 software development and field support people involved in Esko-Graphics' newspaper business as well as support for the USA Today's numerous Cresent News systems.

Agfa will for a while at least, supply DMX devices to customers who want to order more units, and will also complete the next version (2.1) of Eskonet for customers who want to upgrade. The company has committed to "a full migration path into both current and future workflow systems". Eskonet has little to add to the Intellinet/OMAN combo so presumably the new Arkitex system is what Agfa mean by this last phrase.

Agfa's Arkitex

The unfortunately named Arkitex blends the scope of Autologic's Plateroom Manager PDF and Postscript based technology with the user friendliness and flexibility of Agfa's Intellinet, a TIFF workflow management system. Intellinet is recognised for its ability to describe an edition in close detail by publication date, name, edition number, zone and section, plus its facilities for easy sharing of pages across editions, deadline prediction and warnings of approaching deadlines. Plateroom Manager's strength is in powerful output controls and its ability to readily scale up to handle many output units, plus timing of plate imaging and associated decisions, multilingual support and its browser based user access and interface. This technology is strong on PDF and Postscript processing, plate tracking and production to final rendering. There are over 500 sites running Intellinet and Plateroom Manager.

Creo Acquires IntelliNet workflow

Not a name familiar to many, Italian developers HIT are the original developers of Agfa's IntelliNet (which has now been absorbed into Arkitex - see separate news item). At Ifra it was announced that Creo now has acquired the IntelliNet NewsFlow production workflow product line and the integrated PressSite control interface for newspapers from the Italian firm. IntelliNet brings new production features to the Creo newspaper solution, including transmission and distribution, links to press control systems (via PressSite) and the ability to integrate third-party imaging systems into a Creo production environment. Creo will integrate the IntelliNet into the Prinergy and Prinergy Newsrun workflow systems.

Platesetters Keep on Coming

Both Agfa and Screen have recently added new platesetters to their line-ups. The baby Polaris XE (green laser) and Polaris XEV (violet) are for smaller newspapers. Agfa's new Advantage DL3850 is a hybrid platesetter for newspaper and commercial plate production, derived from Autologic's 3850 engine but with a violet diode imaging head. The Advantage supports Agfa's Sublima hybrid screening technology and can be set up to image multiple plate sizes. This all sounds a little bit of a mongrel machine but given the stability these days of CTP, the Advantage is a good option for newspaper printers wanting to handle commercial work as well, and vice versa. Agfa took a surprise first order for the Advantage DL from Pyäjokiseudun Kirjapaino, a contract

newspaper printer who also does commercial work. Agfa announced it has installed over 850 platesetters at newspaper sites, excluding the herd of DMXs it recently acquired.

The thermal PlateRite 8800 from Screen is most definitely a commercial engine, with an output speed of 30 plates per hour at 2400 dpi. This makes it the fastest in its class according to Screen. The 8800 has a twin headed GLV (Grating Light Valve) imaging system using all 512 channels to image a wide section of the plate with each rotation of the drum with "extremely minute" dots. Plates can be anywhere between 450 x 370 mm and 1,160 x 940 mm. The engine has already been shipped to eighteen sites in Japan, with European deliveries expected shortly.

Buyer's Guide Series

Digital Dots is publishing a series of five Buyer's Guides for graphic arts, printing and publishing professionals. The series covers JDF, CTP, Preflighting, Colour Management & Proofing, and Digital Printing. The series is designed for print buyers, designers and anyone who needs to understand technology used in print and electronic media production.

This independent series is sponsored by graphic arts publishers and manufacturers. The idea is to improve understanding of digital production, and to give users the objective information they need to invest with confidence in digital technologies. Each guide includes an introduction plus comprehensive explanations raising and addressing different aspects of the technology, depending on the title. JDF, CTP, Preflighting, Colour Management & Proofing, and Digital Printing technologies are covered in depth, including explanations and descriptions of relevant technologies, plus cost benefits and examples of how they fit into a cross media production workflow.

These guides are due for completion and distribution at DRUPA, however content will be published in the coming months as a series of essays in the trade press. Publishers participating in the project include Printing World in the UK, AGI in Scandinavia and Indian Printer & Publisher. CIP4, EnFocus and Screen have also confirmed their sponsorship and further sponsoring opportunities are available.

New Newspaper Plates

Both Fuji and Agfa have introduced new plates for newspapers. Fuji's thermal plate is the company's first foray into thermal newspaper plates. This negative plate requires no preheating and Fuji claims the Brillia LH-NN plate is more sensitive than competing materials.

Agfa's new violet photopolymer plate N91V is already in use at two newspaper sites; de Telegraaf in Holland and Axel Springer. Axel Springer is using the plate within the newly introduced Afirma Closed Loop control system.

Print City Launches Distance Learning MBA

Finally someone recognises that printing informatics isn't just about ink! The new Print Media MBA programme is sponsored by Print City, Manchester Business School, operating within Manchester University, and the Hochschule der Medien in Stuttgart. Study modules are being developed in cooperation with an advisory board representing academia and industry. The objective is to develop business management expertise for the media industry and the programme is due to be in place by June of next year. It will be spread over five semesters, leading to an MBA (Masters in Business Administration) with an estimated cost of €22,000 to 24,000. Print City will provide the interface to industry.

Email Newsletter Wins Big Copyright Lawsuit

Lowry's Reports Inc. has won damages of US$20 million after a court found that three of the company's subscribers were distributing their email newsletter to thousands of co-workers at financial services firm Legg Mason. Legg Mason were breaking copyright by redistributing the newsletter without a licensing arrangement in place.
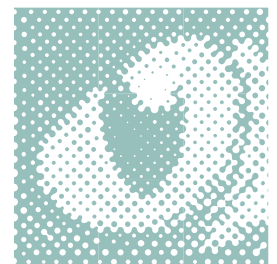
Spindocs

(Where the spinner gets spun!)

There was an e-mail from Agfa:

"Technology advances so rapidly, it's difficult to keep up. So from time to time we will alert you about the availability of a new white paper at the Agfa Press Centre under the "tech papers" category. It will give you an in-depth look at a specific technology or trend."

The most current one (www.agfapress.com/techpapers/ commercial) is on Sublima XM screening technology which was developed to raise printing resolutions significantly without raising the production effort at all. What you will see is that XM is not stochastic, not conventional and not a hybrid...it is an entirely new species of screening technology."

A new species? That is quite some claim. Of course we learned about Sublima for the first time two years ago, but clearly something revolutionary must have happened since then. We devour the white paper.

It is a brilliant paper, explaining the basic principles of AM, FM and hybrid screening; clear, comprehensive and easy to understand. Agfa deserve an accolade for producing stuff like this. The paper itself is refreshingly free of marketing jargon.

Which is why we were disappointed to find out that nothing revolutionary has happened. The Sublima has been given the tag XM*, which stands for cross modulated and is supposed to denote the new species of screening. However, it's the same technology that was introduced as a hybrid screen called Sublima and was first mentioned to us at Ifra in Geneva two years ago. While we certainly don't question the relevance and quality of the technology, we don't like to be mislead – putting a marketing spin on a perfectly valid and useful product creates mistrust. Even if only a fraction of recipients spot it.

* Agfa describes the XM screening technology thus:

"XM does... use FM screens in the highlight and shadow areas and AM in the midtones. But it uses a patented technology to smoothly transition from one screen to the other. It calculates the precise change point where the image can no longer benefit from AM screening. For example, the AM dots become smaller when rendering highlights until the minimum reproducible dot size on press is reached. From that point on, dots are withdrawn from the grid – providing the desired tone. ...Although the FM areas use smaller dots controlled in FM mode, they are aligned as a continuation of the AM screen angles established in the midtones. The result is an entirely new order of screening, aptly named XM or cross-modulated screening. Because the FM dots are placed at the established AM angles throughout the mid-tones, there are no technology intersections. Flat tints are reproduced using these same AM angles – whether they reside in the highlights, mid tones or shadows."

So Agfa states that Sublima uses FM screens in the highlights and shadows and AM screens in the midtones. What's not hybrid about that? (We understand the distinction they are trying to make, but frankly, who cares? Certainly not the printer who is going to implement Sublima.

* * * * * * * * * *

There is nothing quite so deliciously asinine as the "what-we-show-in-our-stand" information regularly published in industry magazines in advance of trade shows. Here's a little pre-Ifra gem from a vendor who shall remain nameless:

"Thanks to a permanent innovation philosophy, XXXX provides a complete family of solutions."

Well, good for them.

Acrobites

(Something to get your teeth into)

XrML

XML is fast becoming the digital world's central nervous system so the number of variations on the XML theme will probably go on forever. The XrML, the eXtensible rights Markup Language, is a means of specifying and managing digital rights and conditions. It can be used in a service model, thereby controlling who can access a piece of content, or in a content model assigning rights to content, or indeed anything that is digitally described. So if we wanted to use it in Spindrift we could not only control where and how the content was accessed, we could also use it to authenticate the individuals and groups entitled to read it.

XrML licenses are used within an application, either as a single tier or with many layers. It can also have controls within controls for managing extremely complex reader communities. Now in version 2.0, XrML was originally developed by Xerox at the Palo Alto Research Center (PARC), but XrML is currently under the wing of ContentGuard Inc. ContentGuard is in the process of turning the standard's governance and control over to the international standards community, so there won't be any more updates to the specification until this has happened.

ODRL

Open Digital Rights Language (ODRL) is also about rights management. Unlike XrML this language is more about digital resource management and control. It

is particularly relevant for readers and publishers of digitally created material such as publications, digital images, audio and films. ODRL is an open source software, so it could be implemented in highly proprietary ways.

The Open Digital Rights Language is also interesting because it doesn't care about how a publishing environment gets made secure. Instead it prefers to provide semantics for defining generic digital rights management expressions in an open but secure environment. This means it could support interoperability of rights management across different systems.

Because ODRL is basically a set of semantic expressions, additional semantics can be layered on top of it. It isn't quite the same as an extensible language, but it is similar in that developers can add services and functionality based on their own implementation of ODRL. They might for example want to control user access through electronic forms, or work with production image databases for archive management.

Letter From... Gdansk

Dear Spindriftóws,

I run very big newspaper drukarnia in Poland. We haves all moderny systemy graficznych, as CTP, to plan producyj, computer Macs for redakcji and for advertzie too. I rite to tell you of not god trip to Leipzig and Ifra. We want to by new druku press, a 9-cyindrowy satelita konfiguracja. We want to upgradach CTP too. We wented to Leipzig to talk to amerykanskiego and europansky producentas.

We maybe not talk best Engliszcz, but we do busniego and we are seriosny and go to producentas for informacje. In big firmy stand we asksz for prezentacjach of new CTP. The recepzeniom ask for card and lok funy. We wate 10 minutszwie but nobudy come. We ask agane and after 10 minutszwie we get prezentacjach. But just shorts.

Do you think serwis soo bad becawse we not talk god Engliszcz? Yes, I think. We want to tell firmysz amerykanskiego an europansky to prosze lissen to pepul from East Europa too – we haves monay and are not stupdiego. You may miss god deel!

Thank you for lissening,

Karol Szczepanski

Say What?

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

Given the ultimate conclusion to be drawn from this little piece of advice, taken from a well known newspaper journal, newspaper publishers are probably best advised to ignore it!

"In case of fading profits, depression is an important internal process that alleviates the entrepreneur's soul and helps him find new support – assuming that this process does not last long. Thus, coping with this down time is the first step to improvement. But only if the existential threat is seen as a challenge. During the past 15 months many of the regional publishing houses realised that the newspaper per se has not been struck by a crisis. On the contrary it has been a crisis of the individual newspaper."

So it's nothing to do with recessions or advertising slumps after all!

Driftwood

(Useful stuff washin' in on our shores)

E-paper (for full colour films?)

It was four if not five years ago that we first heard about e-paper, or e-ink if you prefer – the technologies are based on the same basic idea. For a couple of years every self-respecting techno title in the world wrote a story about the stuff, heralding the possible coming of the paperless society (yawn) thanks to these displays. Of course it all sounded so exciting, but Rome was not built in a day. The journalists lost interest and we haven't heard much in the last couple of years …

… until scientific journal Nature ran a story a few weeks ago. It appears that Philips, together with strategic partner E Ink – one of the pioneers in the area – has now created a new type of electronic paper which may in the future be able to show colour movies. The tiny dots are tightly packed in a grid on the paperlike surface and they can all change colours in one one-hundredth of a second – fast enough for proper moving images.

The problem is controlling the changes of the dots. Indeed, this has been the main stumbling block in commercialising applications for the more basic monochrome e-paper and e-ink technologies. The other obstacle has been to achieve anything close to high resolutions. As yet, the only practical use of the technology has been in changeable displays in shops in the States.

The two main players in e-paper are Philips/E Ink and Gyricon Media (born of Xerox PARC)/Plastic Logic. Both technologies are based on charging micro capsules, in effect pixels, thereby rotating them and changing the surface colour of the substrate in which the capsules sit. In its simplest form the e-paper pixels are either black or white. In more recent developments colour has been added through the use of colour filters and more complex micro capsules.

Back to the issue of controlling the little blighters. In May this year, at the swingingly named Society for Information Display International Symposium and Exposition in Baltimore, both camps stepped up the race to take control, not just of the micro capsules, but also of the potentially ginormous market (with the display industry growing at 30% a year there will of course be room for both, but we always enjoy a good fight).

The Gyricon camp introduced a new way to drive the rotation of the capsules, via an ink-jet printed active matrix backplane using Plastic Logic's inkjet-printed plastic electronics. Although the display prototype had a resolution of only 50 dpi and sat on a glass substrate (ie wasn't flexible, as you'd expect e-paper to be), the ink-jet printed electronics will potentially make this a much more viable and versatile technology.

The Big Guys (Philips/E Ink) showed a prototype display with the more impressive resolution of 160 ppi – a big advancement on anything before shown. This technology relies on Philips' thin-film-transistor (TFT) backplane and driver electronics to control the pixels. The partners are confident that they will be first with a true paperlike commercial display. If all goes to plan it will be mass produced for an unnamed OEM-customer in early 2004 and later next year it will be more widely available. We'll keep you posted.

As for watching movies in the newspaper – well, we'll have to wait a few years yet for that.

If you want to know more about how this stuff works visit
www.research.philips.com
www.eink.com
www.gyriconmedia.com

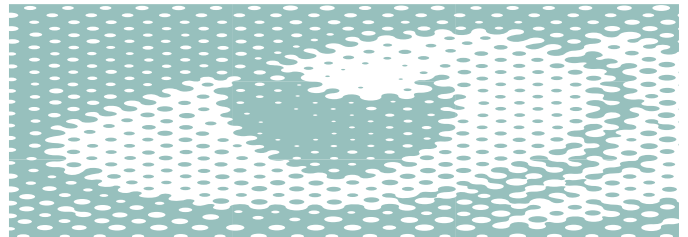# Boomerangs

(Your feedback fed back)

We had an e-mail:

Hi Laurel
Hope you are well
I've just read the new edition
Content is good, but its difficult to read becasue [sic] of the 2 columns, you have to keep scrolling up and down to read a complete article. Sorry to say I don't offer a solution

We replied...

Printing it out might help? The consensus is that scrolling up and down is easier than scrolling side to side. All that neck action can be so tiring.
–L

Control and automation in the Matrix

Ifra showed the way forward

Polite and helpful locals, efficient transportation along uncongested streets, absinthe bars selling eighty varieties of what might very well be nuclear waste and an exhibition centre straight out of the Matrix. This is Leipzig, yet Ifra defied all expectations and was well attended, with a lot of business getting done on the show floor.

As always Ifra mirrored its industry. Supplier consolidation continues but nowadays although the community is still shrinking, there is a sense that it's a positive rather than negative. Contraction isn't necessarily removing players, but tough times have encouraged suppliers and developers to work more closely. Agfa has acquired Esko-Graphics' newspaper business, Creo is acquiring the IntelliNet NewsFlow production workflow system product line and PressSite press control interface from Italian HIT (see news), Creo's NGP community is now an independent entity, as is Print City. Defensive marketing initiatives have metamorphosed into service organisations with cross industry reach and commitment. Ideally fatfree, they blend the benefits of industry associations with commercial accountability.

Besides changes in the supplier landscape perhaps the most common themes at Ifra were control and automation. Automation is everywhere with XML and databases underlying a diversity of technologies. This is hardly surprising. The integration of the web, recognised as integral rather than a discrete set of system requirements, continues unabated. XML is the language of the web and plays a substantial role in subsystems dear to the heart of every newspaper.

It was also clear that advances in press technologies seem to be speeding up. This may be in response to the rapid evolution of digital presses, but it may also be in response to customer demands. The suppliers of conventional newspaper presses are all staking out their pioneering territories. KBA announced the first sale of its waterless Cortina press, to Dutch publisher Rodi Rotatiedruck near Amsterdam. The Cortina was introduced at Drupa in 2000, and was heralded as the biggest leap in newspaper printing since the exit of hot metal. Market acceptance has hardly been overwhelming, but the press unquestionably represents an enormous potential; it is as close as you can get to an "off-the-shelf" newspaper press. It is compact, mainly due to the fact that it has no dampening units, and the start-up waste is supposedly as little as 20 copies, less than a tenth of the norm in a conventional press where the ink/dampening balance requires tweaking at start-up. Wifag and MAN Roland are both moseying down the path of direct imaging. MAN Roland is in the process of "building up the DICOweb concept for possible newspaper applications", according to Josef Aumiller, MAN Roland marketing manager for web presses (for more info on the DICOweb, see Spindrift issue 2). It's being marketed as the DICOkit, but don't get too excited – you can't buy one today. Wifag last year announced the Evolution concept which at some unspecified time will include imaging of plates on press, according to the supplier. Goss is focusing on digitally controlled inking but also promise some announcements within digital imaging/printing at Drupa (we'll have to wait for specifics). Océ's Digital Newspaper Network is growing. In addition to printing between 5,000 ▶

Buzzing in the bars. Some of the team behind the new Print Media MBA: Rainer Kuhn, John Dengelmaier, Uwe Schlegel and Bob Henry.

Market acceptance of the waterless KBA Cortina press has hardly been overwhelming, but the press unquestionably represents an enormous potential; it is as close as you can get to an "off-the-shelf" newspaper press. It is compact, mainly due to the fact that it has no dampening units, and the start-up waste is supposedly as little as 20 copies, less than a tenth of the norm in a conventional press where the ink/dampening balance requires tweaking at start-up.

and 7,000 newspapers daily in London, Johannesburg and Sydney, a new production site, printer Edimark in Valencia, Spain, has been added to the network. As of October 20 it prints a total of 700 copies of four Norwegian titles, both in tabloid and broadsheet formats. The sites are all existing digital printers using Océ presses.

Front-end Systems Developments

OSX adoption is rising with many suppliers such as Enfocus shifting wholesale to OSX. This may be because of XPress, but XPress is in danger of losing the plot in the newspaper business. AMC launched German and English versions of Prestige 5, positioning it as a QPS replacement. Supporting both XPress and InDesign and running under OSX, this is a clever technology based on reconfiguring a newspaper's existing tools to work AMC's interfaces to an underlying database, content output management and workflow using XML tagging routines. Apart from being a next generation QPS for editorial and pagination management Prestige has strong content management orientations. Browser based, Prestige 5 can be deployed as a front end to non-AMC systems emulating their copy flow. Thus a Hermes system might perhaps provide back end processing, with Prestige 5's interface providing user client support. AMC use this model with systems big enough to justify the investment, and is already working along these lines with a European title.

DTI introduced an interesting Editorial Budget Centre for editorial planning, with a simple drag and drop model to pull stories and subsidiary material from the database for use in planning. The database also builds pages automatically based on the editorial plan. Once the layout editor has built the page, numbers are assigned to the story holes. Links between the holes, the database and the budget centre pull stories with associated images and captions from the database for placement on the page. There are layout tools for selecting alternative styles using either predefined menu styles or manual controls.

DTI lead the pack when it came to InDesign adoption but front end systems companies have clearly embraced InDesign en masse. Even Tera has made the move with full integration of InDesign and InCopy to be available before the end of the year. Tera has also taken a new approach to multiple edition management. Layer filtering and management for different editions for improved edition planning, uses shared layers for zoned editions and ads. The underlying database manages all content files, presenting them within different layer geometries. There is also a page preview panel presenting all layers as pages, parts or elements in real time. This technology is complete and will be installed at customer sites by the end of the year.

Back-end Systems

Serious advances are being made in back system management, extending the reach into editorial. Agfa has now brought together the Plateroom Manager and Intellinet technologies installed at over 500 sites into a single system. Arkitex tracks page status combining Intellinet's ability to describe an edition in close detail with Plateroom Manager's strengths in output control. Intellinet manages publication date, name, edition number, zone and section and provides easy sharing of pages across editions, deadline prediction and warns of approaching deadlines within a TIFF workflow. Plateroom Manager is big on PDF and Postscript processing and readily scales up to support many output ▶

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Phil Lowe, AMC's President EMEA and Laurel Brunner discuss the latest scripting technologies for mobile applications.

units, timing of plate imaging and tracking with multilingual support, all with browser based access.

Newspapers & JDF

JDF is one means of controlling production and although it might be considered overkill for newspapers, such a view is myopic. Denex and PPI are making huge progress with JDF for newspapers. Swedish developer Denex has developed a closed loop JDF information management system. The latest version of InfoTrack has an improved user interface and Denex has developed a Job Data Production Planning Interface, written in JDF. JDPPI bridges business and production tracking systems, with bidirectional sharing of tracking and performance data. JDPPI provides an XML interface, currently linking SAP's Business Connection layer into Denex's tracking system. JDPPI data is written as a JDF job ticket and can be configured to support any type of production environment including cross media.

Infotrack is used in such an environment at Ringier which works with this technology rather than IfraTrack to publish commercial work and newspapers. A common IT infrastructure supports both production environments and Ringier is implementing an ambitious JDF conversion.

Denex is also developing JDF compliant hardware. The Denex Pro Sensor costs €4,000 and counts the number of copies passing through a distribution system. Advanced reporting controls with JDF data for feeding a production system cost an extra €500. The Denex Pro Lap system similarly monitors lap distribution. Nothing to do with poles or aircraft load balancing, Pro Lap measures overlap between inserts or newspaper sections in postpress, avoiding potential jams. It adds JDF compliance to any kind of analogue postpress machinery no matter how decrepit and costs €4,000.

MAN Roland & PPI's PrintNet system is an integrated JDF workflow that provides an interface to JDF compliant MIS, although PPI can integrate noncompliant systems. This multilayered system has a single user interface that interacts with applications modules. Written in Java with a Sybase foundation, modules handle order, production and business management, plus all associated subsystem elements.

PrintNet is a hierarchical definition of editorial and advertising page geometries, publication and edition schedules, production templates and performance summaries. These can either be bespoke components or operators can work with PPI's predefined modules for specific production templates. Prepress templates reflect the system's input sources (eg Prinergy) as well as layout elements, the imposition, routines for hard copy proofing and plate or filmsetting options. Within the hierarchy, subprocess elements can be added mixing input and output resources, like building a model with Lego.

A digital planning board shows the status of all production scheduling. It summarises production and publishing resources including the machines involved and their usage load. The calendar of orders scheduled is presented as a sort of chronological equivalent to a visual zoom: by month, week, day or even hour. The closeness of the view determines how detailed it is, right down to the specific task modules within a single process. Information presented in the view is reflected in the system's load monitoring, thus the closer one gets to deadline the heavier the ▶

JDF is one means of controlling production and although it might be considered overkill for newspapers, such a view is myopic. Denex and PPI are making huge progress with JDF for newspapers.

Peter Landau, Man Roland's Head of Marketing & Communications Nordic operations giving an overview of PPI's PrintNet and its JDF utilisation.

load on system and this is reflected for each process. Windows 2000 wouldn't let us see how conflicts in scheduling or resource access are resolved, but apparently it goes further than merely warning with red process paths instead of green.

Operators can control alternative scheduling manually and PPI plans to add a cost management tool later. Hopefully will include performance indicators showing comparisons to budget, with a plus or minus value based on the percentage of variance from budget. PrintNet is in beta testing at three customer sites.

Output control

It is all about control and automation, for both software and hardware. An impressive example of this is Agfa's Afirma which combines server based control software, measurement wedge, CCD and video cameras into an holistic system. The system measures platesetter and processor performance parameters such as resolution, dot size, processor balance, imaging speed and chemistry, feeding back data in order to alert operators to deviations from target values. There is no expert system yet, but this ought to come once Agfa has developed a reasonable base of live performance data. Afirma is currently only available for Agfa plates, imagers and processors, largely because this type of system depends on understanding all variables within a system. The success of Afirma also depends on the latitudinal stability of a plate, which Agfa can guarantee with its own materials. There isn't much point to values that could be anomalous because plates image inconsistently across their surface.

Installation of Afirma involves accurate definition of the control parameters and careful set up. This is fundamental to Afirma's effectiveness, so Agfa prefers newspapers to use entirely Agfa kit. However there is no reason why it would not work with non-Agfa plates or processors as long as all behavioural data were available. This is likely to be easier in theory than in practice.

Honeywell introduced a prototype of an on press control system installed at Helsingin Sanomat and based on technology from Finnish Data Engineering Ltd. ColorSpector measures online colour using red, green and blue LEDs shined on the web, and receiver light sensitive diodes that measure the reflected light. The density values and grey balance target are compared and data are fed back to the ink control system. Designed to save time to colour, with improved quality and cost reductions, this is a closed loop control for reducing hassle with advertisers and avoiding costly remakes.

Data Engineering uses its own data format, having built this system for Honeywell's press control system. It plans to replace the proprietary software with a CIP3 PPF compliant version, depending on how partners such as Honeywell respond and their degree of interest in PPF and JDF.

Creo is getting into closed loop control with modules from Primasolve, the computer division of Harland Simon now operating independently. Primasolve management and reporting are already in use at the New York Times and Dow Jones.

Primasolve's RIPSet plugs into the back of Prinergy analysing TIFF files, breaking them down into density zones to work out ink values. Values take into account ink curves, blanket characteristics and types, and
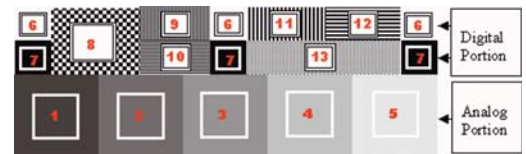
The control wedge used in Agfa's Afirma closed loop system for CTP.

Océ printed and distributed a bevy of newspapers localised for the international audience.

press speed to come up with accurate presettings. Factors used in RIPSet are based on performance criteria Primasolve assesses using a calibration plate on press. Curves are built according to density readings so system performance is subject to the accuracy of this information and calibration frequency.

Creo also uses Primasolve's PrimaEsprit, an automatic dynamic imposition extension to RIPSet that further refines the values. It takes into account the dynamics of each specific press couple (the plate and print unit combination) to profile each unit. Adaptive control technology monitors operator behaviour and anticipates what adjustments the system is likely to need. Control is only based on operator choices as there is as yet no stored target profile.

This arrangement provides Creo with a pretty special add-on and Primasolve with a channel. The technology is installed at several titles including the Chicago Sun-Times and the Commercial Appeal in Tennessee. The largest percentage of Primasolve's user base is Goss, largely because Harland Simon has a close relationship with Goss, but Primasolve is working on expanding its range of press partners and actively looking for distributors.

Proofing Control

Another company looking to expand its presence is GMG. GMG specialises in colour management with 3500 installations mostly in Europe and wants to expand Asian and American operations. GMG has its own proprietary 4D CMYK transformation engine, and claims it can achieve Delta E deviations of less than 1, even in environments with multiple output engines.

MX5 is a four dimensional space incorporating calculations for noise correction, dot gain or loss, CTP linearisation, and anything else that might influence CMYK appearance. GMG prefers to use its own colour matching rather the ICC's. GMG claims this is not accurate enough because the CIElab defined Profile Connection Space (PCS) introduces an additional set of variables to colour conversion algorithms. GMG prefers to go CMYK to CMYK rather than RGB or CMYK to CIElab and out to CMKY or RGB. More luxury limousine for print rather than public transport for cross media applications, the GMG model can be used within an ICC colour managed workflow.

At Ifra the company introduced Colorproof 3.4 which will support RGB and CMYK separations with options for cross media outputs, a new profile editor using GMG MX5 profiles (GMG's internal CMYK based colour management engine). DotProof now has dot gain adjustment and compensation of CTP linearisation curves, plus paper structure simulation for proofs. Both applications support PDF-X3.

GMG introduced a software version for newspapers. NewsProof optimises software and media combinations, and includes a tool for fibre simulation to mimic newsprint's surface. NewsProof includes GMG's Dot Proof to process one bit TIFFs from RIP retaining screening and GMG's custom printer matrix and drivers to avoid false moirés and banding. ▶

Super Suckers

In a corner of hall 2 at Ifra we found the wonderfully practical stand of B-N-E Plastic Products of Calhoun, Louisiana. They had come all the way to Leipzig to market their suckers and the sales ladies sensibly wore big fluffy slippers rather than corporate high heels. B-N-E showed about 120 different plastic suckers in all


colours of the rainbow. These are no doubt big business in the US with the enormous popularity of inserting in newspapers but perhaps the European scope is a bit more limited. Also on show was a laminated letter from a happy customer stating that "We have used your suckers for over 20 years and they are simply the best suckers on the market–––". We love it!

Conclusions

Whatever will work in newspaper environments can be applied in commercial applications too. We can expect the automation and production control themes so prominent at Ifra to spread into commercial print. JDF is already leading the way but closed loop concepts for subsystems and hardware have to be considered within any JDF implementation. Ifra, as always, was a glimpse of what's yet to come.

– Laurel Brunner, Paul Lindström, Cecilia Campbell
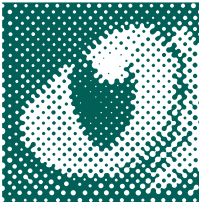
Printing & the Age of Digital Informatics

– the Japanese angle

The "I" in IGAS is supposed to stand for "international" but historically the show's been more inclined to a "J" than an "I". IGAS is about Japan, so rarely do we pay it much heed as a barometer for western markets. This is still true to some extent but it's changing, particularly since the Japanese Printing Industries Federation held their inaugural International Printing Technicians Conference at IGAS.

The JPIF is a collection of ten Japanese printing associations set up thirteen years ago to further development of the industry and printing's contribution to Japanese lifestyles and culture. There are over 40,000 printing companies in Japan employing over 428,000 people and shipping ¥8,1378 billion worth of print annually*. The organisation promotes technological sophistication and development of IT within print. A key activity is promoting international exchange and this was the catalyst for the recent conference. Over 800 people participated in the event and an impressive 20 percent of these were from outside Japan.

The JPIF sees IT as a driver for change in industrialised civilisations, with print the primary vehicle for reform. According to JPIF chairman Hiromichi Fujita the goal is to move away from twentieth century values characterised by mass production, consumption and waste towards a mix that uses IT and print technologies to support mass customisation, rather than mass production. Such a model could yield interesting results particularly if one considers the market potential of one of Japan's close neighbours. The massive Chinese market could make or break such a vision single-handedly.

Taming the Dragon

According to the Chairman of the Printing Technology Association of China, Mr. Wu Wenxiang, rapid growth in China is creating diverse and large volume print demands. There are apparently 1,625,795 printing firms including 72,226 repro houses in China. The graphic arts sector employs 3 million people, producing print valued at some US$200 billion. In the past this has been of little interest to western businesses because the market was closed, operating under strict government controls. Reforms in the sector mean that 100% foreign investment is now allowed into printing and packaging companies. The state still owns 90,000 printing companies, contributing about 34.5 percent of market revenues, but privatisation is well underway. Mr. Wu estimates that some 21 percent of the newly privatised companies will rely on foreign investment. According to Mr. Wu (or at least the translator's version) overseas capital valued at US$500 million has so far been invested into 2,107 companies within the Chinese printing industry. Much of this investment is fuelling the shift from hot metal to CTP. Agfa is already building a plate manufacturing plant in China in anticipation of market development and growth in demand for plates from the growing Asian market. ▶

* JPIF's industrial statistics for 2000

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CTP plate production is coming to China in a big way, with high end equipment imports so far valued at US$1 billion. This will continue as the country depends heavily on high tech imports. However suppliers need to be able to cope with a business culture characterised by a habit of state dependence, caution and market disorder. The market is made up of many small companies plus uncompetitive larger ones, so there's plenty of room for growth. According to Mr. Wu "a more open China will be opened to the world. The graphic arts community should reach out to the Chinese government and work to promote development of global printing industry in a healthy direction".

Cultural Revolution

If the market in China or anywhere else is to develop it takes more than technology. One of the biggest impediments to development of the west's printing industry has been a reluctance to embrace change, apart from high profile early adopters. However this is the age of digital informatics (the science of processing data for storage and retrieval) and the future for print service providers must be in data, information and output management. That much has long been clear, but what has not been clear and what will continue to fox people for a while yet, is the business model. This is as much about culture as anything else, but print services now means rather more than taking and fulfilling orders for print.

Thriving printers continuously change the nature of their service offerings, to provide increasingly sophisticated digital media production services, supporting all media formats. This is the route to growth and survival, but for many printers transition isn't easy. A printer's revenue base depends on a mix of cross leveraged services, producing information on a variety of media on behalf of clients. A culture of passivity, of responding to requests rather than working with clients on media project design, undermines the best of intentions. Market development in China especially is as dependent on business knowledge development as it is on technological investment.

Digital services, particularly those driven by database applications (subscriptions and fulfillment management, asset and brand management, image processing and management, archiving and so on), will ultimately provide the bulk of an information provider's revenue. Press and postpress income will continue to dominate the revenue base for a while yet, but over time the mix will shift with the development of alternative media habits. So will it be printers that own digital informatics, or some new breed of information provider? It's up to printers and their industry to decide, wherever in the world they operate.

Fortunately there is plenty of technological choice when it comes to an assault on the brave new world of digital informatics. Much of what was demonstrated at IGAS turned up at Graph Expo in the US just after IGAS. Screen, Dalim and Creo presented new technologies of particular interest, with a couple of digital press technologies we look forward to seeing at DRUPA. The Miyakoshi TM1200 web press images 1200 dpi and in design is not dissimilar to the Xeikon concept, except that it uses a magnetic liquid toner. Fujitsu also introduced a 1200 dpi device that uses liquid toner. The Kenroku 6 and the Miyakoshi TM1200 will both be at DRUPA. ▶

Shrinking the Pacific

The US association of printing equipment suppliers, I.O. Technologies and California Polytechnic State University's Graphic Communication Institute are working together to develop the Chinese market. NPES' Greater China Project will, with the partners' support, provide a China-based portal, providing core-skills educational material for Chinese companies. The idea is to narrow the gap between printing practices in North America and China. Ya Ping Zhou, NPES Project Director explains: "It is our belief that an educated consumer will be much more likely to invest in the newer technology products and services offered by our members. The portal will also provide a strong target marketing link for our member companies, and as the market matures, may also be used to provide product-specific training and support."

CTP technology was starting to get dull but fortunately Screen has introduced a high speed addition to its stable. The twin GLV (Grated Light Valve) head 8-up PlateRite 8800 platesetter, brings to four the number of 8-ups in Screen's range. This engine outputs 30 plates per hour at 2400 dpi, which Screen reckons makes it the fastest B1 device around. Eighteen have been delivered to customers in Japan and production is already being ramped up.

Screen's Trueflownet or any other independent RIP can drive this engine, but since the front end determines an engine's throughput rate to get the rated performance it is probably sensible to go with Screen technology rather than a basic generic RIP. There have been few additions to Trueflownet and these were also on show at IGAS.

The new modules for Trueflownet are in beta testing in the US and Japan and expected to be announced for Europe in January 2004. e-Order is a web based ordering system built on the foundation of Global Graphics' PDF Courier. This server based system provides logged-on users with interfaces for ordering variable content print and checking files, according to their profile. e-Order also controls preflighting on submitted jobs using Screen's implementation of Enfocus' Certified PDF. The e-Order system works in conjunction with Trueflownet, with access controlled via the user profile. e-Order is already installed at several Trueflownet sites in the US and costs $20,000.

Screen has also developed its own MIS system, although this will only be available in Japan, where the company has an immensely strong position. MIS is very much a local affair, so where Screen lacks entrenched dominance such as in the US and Europe, a proprietary MIS technology would be ill advised. Instead Screen is looking to link Trueflownet via JDF to MIS technologies such as the Shuttleworth and Tharstern offerings, as well as Optichrome's. Trueflownet's JDF links were demonstrated at GraphExpo, working in cooperation with PrintCafé technologies. Screen is also working on a new database driver for MIS support, with a technology currently known as "Production Manager". It's a work in progress and one to watch for DRUPA. Hopefullty the name is also a work in progress.

Screen also showed a couple of products available only in the US and Japan. The ColorGenius digital camera with colour management software costs US$4000, a price considered uncompetitive for the European market which is somewhat in advance of the US in this area. Most professional digital camera users are already working with colour management, such as technologies from Lasersoft or Monaco. Screen's technology could end up as a colour management module for other types of imaging devices, such as photocopiers.

Let's Twist

Previewing its Graph Expo offerings, Dalim also announced Japanese support for its Dialogue soft proofing and validation module (all Dalim tools are now available in Japanese), plus a new front end system for printers. Twist Dialogue is now available as an OSX application as well as Linux.

Printempo is an optional module for Twist that provides a new front end for managing preflight and output controls using a browser interface. All three tools are fully JDF compliant. Printempo effectively extends Twist control to preflighting, soft proofing and impositioning. This is

Speed Demon: Screen's new PlateRite 8800. (It's even bigger in real life!)

a new addition for working via the web, with imposition templates for accepting remote JDF files. Printempo will also show imposition templates by sections.

Printempo allows users to modify a Twist workflow without actually going into Twist, extending the Twist client base to give the system a greater server orientation. Dalim uses its own JDF compliant preflight technology based on Dalim's PDF libraries. The cost for Twist with Printempo starts at €25,000 for limitless users. The system is in beta in the US and was launched at GraphExpo. There are 1,400 Twist users worldwide and Dalim expects that customers would be interested in either Printempo or Mistral, but not both. Dialogue has no built in JDF compliance yet but when this is ready Dialogue will be able to provide JDF data back for a complete soft proofing audit trail. All other Dalim systems are fully JDF enabled.

Creo Amzisetter

Newspapers will be interested to note that Creo is working with Japanese supplier NEC on a twin headed thermal engine that outputs a maximum plate size of 1110 x 87–405mm and 1110 x 797–807mm. The Amzisetter is a joint venture between Creo and NEC which builds everything except the Creo-supplied heads. This engine is only available for Japanese newspapers at the moment, but according to the spokesperson on the Creo stand there is a possibility that the 90 plates per hour engine will be brought to Europe early next year. The platesetter works with Fuji and KPG plates, with testing of the new PTP plate underway. NEC provide its own workflow mangement system which is of course capable of taking pages from any front end. No pricing details are available.

Screen PlateRite Ultima

Installed for testing at the Asahi Shimbun, the official release of this device is January 2004. The Asahi Shimbun is one of a handful of Japanese newspapers moving into CTP. In Japan only 25% of commercial printers have made the switch and most newspapers are still outputting film. This however is beginning to change.

IGAS attracted over 150,000 visitors with more than 10 percent coming from beyond Japan. The decision to add a conference was a sound one, giving the show an added international dimension, a stimulating atmosphere and an appeal to a wider constituency of interest, that reached to the show floor. Even though most of the advances in digital press technologies, processless plates and composition tools are intended for the Japanese market, the broader market is gearing up for the next big wave of new digital developments. This will come in 2004 at DRUPA where we expect to see the industry truly delivering on its digital promise.
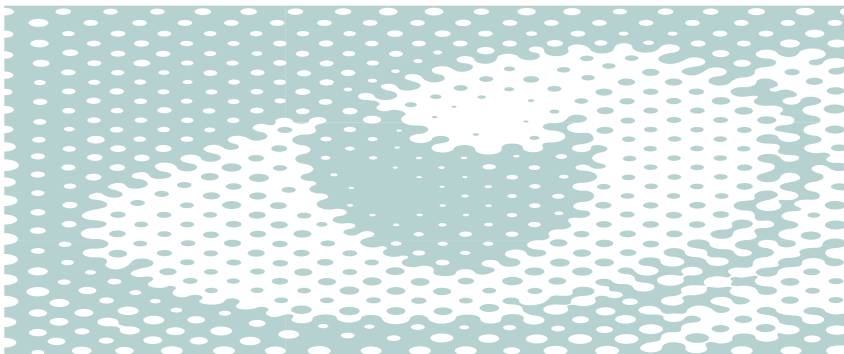
– Laurel Brunner

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