Summer • *n.* 1 the season after spring and before autumn, when the weather is the warmest [well it's all relative -Ed.]. • ***v.*** spend the summer in a particular place. > pasture (cattle) for the summer.

– From the Compact Oxford English Dictionary

Dear Reader,

From the word go, the focus of digital printing preachers was on the ability the technology offers for printing variable data – clearly this was the USP. Well, although unique enough, it was not as straightforward a selling point as the press developers would have wished. Though the presses sold at reasonable levels, few users took advantage of the possibility to personalise. Now, of course, the press technology is mature and confidence in the process and quality unquestioned. And yet printers are still not reaping the full benefit of their variable data opportunities, nor of other unique features of their digital workflows and presses. Which is why we found the case of the Kazakh bus tickets so intriguing.

Here is an example of how digital printing can really add value – from the point of view of the Kazakh transport authority in a very literal sense, as they were losing money due to ticket forgery. To solve the problem, digital printer Valeri Art combined a polyester substrate with variable data output for route numbering, with colour coding to denote different bus routes, plus security features and individual ticket numbering. Read the story on page 10 – a real case of digital print coming into its own.

This is the last issue before our (and yours we hope) yearly summer break, which we surely all deserve. We have included a bonus feature, a report from our good friend Naresh Khanna who was one of 160,000 visitors to the formidable trade show, China Print, in Beijing in May.

Enjoy the read and see you in September!

Cheers from the Spindrift crew,

Laurel, Cecilia, Paul and Todd
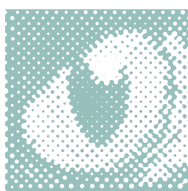
In This Issue

Kazakh ingenuity

Laurel Brunner was a judge at Xeikon's Diamond Awards, celebrating digital print applications. Some digitally printed bus tickets from Kazakhstan caught her eye, so she's looked into why the Kazakh transport authority did away with traditional bus tickets, using digital print. Digital printer Valeri Art got hot on the case of bus pass fraud...

JDF uptake – the picture emerges

Suppliers have banged on about it for years – Job Definition Format, that is – but what's really happening with printers and publishers? We're on a mission to find out how JDF is affecting the lives and livelihoods of early adopters. Increased efficiency and improved margins are the ultimate goal, not just for JDF implementators, but for most of us. Laurel Brunner digs deeper...

Eyes East

It's the world we keep hearing about and it's the world we mostly know least about. But how wise is that? China, the slumbering dragon, is waking up once more. At the recent China Print there was every sign of this market staying more than alert, with massive support from Heidelberg and others. Naresh Khanna was there and shares his insights...

Regular Columns

News Focus

Quark Enters into Strategic Alliance with Enfocus

Quark is working with Enfocus to improve PDF experiences within Quark Xpress and to develop combined solutions for streamlined Certified PDF-based workflows. Quark is a member of the Ghent PDF workgroup and is looking to enhance Certified PDF workflow consistency with this initiative.

The first phase of the partnership involves Quark's growing number of Quark Alliance partners who will immediately get special partner pricing so that they can get going with Enfocus' Instant PDF.

The use of CPDF at the desktop, at the point of document origination will be of immense benefit for Xpress users concerned with document quality control. This announcement could also be a source of huge comfort to Quark's customers, many of whom might be feeling a little bewildered at the moment.

It seems that Quark, and so its customers, have suffered yet another executive casualty. Kamar Aulakh, erstwhile president of Quark is no longer. Apparently he showed no signs of anticipation of his impending dethronement at the recent Quark Summit in Colorado. However the morning after his presentation there came the announcement that he was no longer with the company.

It was a case of there one minute and gone the next, according to what we have been told. Linda Chase, senior vice president of commercial product development, is acting president while a replacement is found.

For Quark's long suffering customer base the efforts of Mr. Aulakh had been a shining beacon in what was for many an otherwise lightless sky. They could be forgiven for assuming this latest unexpected move to be the result of hostile intervention at the very top of Quark's tree. But we have tried to look deeper into the matter, and although we can't be certain, we do not believe this is indeed a case of a Fred too far.

Quark has made immense strides under Mr. Aulakh's leadership, and, although his departure is quite a shock, it should not be a reason to give up on Quark for once and for all. The company's initiative with Enfocus is just one of many such plans designed to help designers and publishing professionals to build well managed automated document production workflows in distributed collaborative environments. This vision is streets ahead of where Adobe seems to see the industry going, and it deserves support for that, if for no other reason. At least it does for the time being.

Last summer Mr. Aulakh said: "From the inside out, we're reassessing the way we do business and the quality and effectiveness of the solutions we develop to help our customers." Prescient or what?

Kodak Act Coming Together

Following completion of its Creo acquisition Kodak has announced its management line-up for the recently formed Graphic Solutions & Services Group. The European business is under the direction of Israel Sandler. In Europe Stéphane Liévain, formerly KPG's vice president of European sales and marketing, is the new vice president of marketing and David Wigfield, formerly vice president of sales at Creo, takes on the equivalent role for Kodak.

Elsewhere Kevin Joyce, previously vice president of sales at KPG (having prior been with Creo) is managing director for the US and Canada, Dr. Kiyoo Shimada, previously president of KPG Japan, is Japan's Graphic Solutions managing director, Gustavo Oviedo, previously vice president and general manager for KPG Latin America, is Graphic Solutions managing director for the region.

They all report to Andrew Copley, managing director and vice president, global sales and operations, Graphic Communications Group. Mr. Copley is one of Kodak's Graphic Communications Group top table: Judi Hess, Creo's erstwhile president, is now responsible for Kodak's computer-to-plate related hardware and software, proofing and data storage. Venkat Purushotham takes care of non-Versamark digital printing, i e Nexpress and direct imaging presses, and Doug Edwards is the man for

consumables. The details of what and with whom Homi Shamir will be up to in the Transaction & Industrial Solutions unit (once known as Versamark) will follow once they've all worked out how best to move forward.

All of these people answer ultimately to Jeff Jacobson, president of the Graphic Solutions & Services unit, who answers to James Langley, president, Graphic Communications Group, and senior vice president, Eastman Kodak Company. He is to be ably assisted by Dan Gelbart who joins Kodak as a senior research fellow and Mr. Langley's special advisor. Interesting.

Xerox Expanding Outsourcing

Xerox is planning to grow its services revenue share by between 20 and 50% over the coming five years, with a potential target of well in excess of €1 billion by 2010. To give the initiative a more than substantial boost, the company is turning to its Graphic Arts Premier Partners of more than 300 members to kickstart the programme.

The Premier Partner Network is getting some help in the form of what sounds like free kit from Xerox corporate, according to Armando Zagalo de Lima. At the group's recent conference in Amsterdam he said that Xerox is: "taking over responsibility of all assets and rationalising usage on behalf of clients". It seems that Xerox Global Services is to acquire the printing assets of larger member companies within the Premier Partner Network, and is setting up new service contracts that include software, support and training.

We understand that the model will include companies with conventional offset printing presses, and will support the current cooperative print ideas, fundamental to the Premier Partner network. Member companies help customers find the services they need within the network, including digital and conventional print services.

The Blink of an Eye

Gretag Macbeth has launched a faster version of the Eye One Pro spectrophotometer. The new version is suitable for calibrating monitors, colour printers and printing presses, and the Eye One Match control software now has improved and more intelligent algorithms. We expect these improvements to yield a doubling of reading speed compared to what was previously possible.

The Eye One Pro can read up to 300 colour patches in less than a minute. It has Teflon pads for a smoother gliding action over a surface, when reading in swipe mode. This autumn Gretag Macbeth is launching a new automated chart reader, the Eye One iO, which will work with the new Eye One Pro.

The new version of the Eye One Match software has an enhanced Digital Camera module with a more intuitive user interface and the ability to choose and view the effect of various settings directly on the image.

Cal Poly's New Standard for Monitor Based Proofing

There's no stopping that monitor monitoror of ours!

It seems that the Graphic Communication Institute at Cal Poly in southern California, has proposed development of a new industry standard. The design goal of the development group for Specifications for the Application of Image Displays (SAID) is to develop a new industry standard for evaluating computer displays, video cards and software used in the reproduction of colour accurate images. It is especially intended to help with accurate soft proofing and aims to provide an objective, measurable methodology for assessing the performance and proper application of soft proofing methods and equipment.

The institute's quite wonderfully named director Hal Hinderliter has said that: "Current methods of display certification rely upon subjective visual evaluations and imprecise data built upon a 30 year-old colour measurement system that is widely regarded as inadequate. By basing the SAID standard on the latest developments in colour science, we can leverage the certainty of objective colour measurements to provide traceability for our computer display evaluations." Is this a sabre rattle for the people at CIE (Commission Internationale d'Eclairage) we wonder?

According to Hinderliter, "Manufacturers are beginning to introduce wide-gamut displays, 10-bit video processing and other new technologies that are not supported by current proofing workflows. GrCI's most important objective will be to create a standard that can be extended in order for improved hardware and software to be utilised, to 'future-proof' the practice of monitor-based colour evaluation."

A panel of distinguished industry experts and colour scientists is being assembled to steer the course of this research project; input from the vendor community will also be encouraged through a board of industry advisers. GrCI plans to work closely with established international standards committees to facilitate the development of SAID. In particular, plans are underway to submit this research for consideration by the International Organization for Standardization (ISO).

It seems that, yes, it is a swipe in the general direction of CIE.

Agfa Gets Closer to Operational Independence

As part of a profits warning, Agfa has announced an acceleration in its program for making its two business

groups operationally independent. Originally planned for early 2007, Agfa Health Care and Agfa Graphic Systems will each have full control over their income statement and balance sheet as of the 1st January, 2006.

By 2006 Agfa expects to see "the first beneficial effects of industrial inkjet, the new growth platform for Graphic Systems, to become apparent" Marc Olivié, Agfa's President and Chief Executive Officer. The current year is to be one of transition where the two divisions see improved figures in the second half although not sufficient to offset first half shortfalls.

Although the second quarter 2005 was not as slow as the first, sales of E355 in Healthcare and E440 million in Graphic Systems were undermined by high raw materials costs and higher than ancticipated price erosion. Operating profits are expected to rise in the second quarter but to be "significantly below last year's".

Other snippets we've come across that you might want to know about:

• Heidelberg's shares are depressed, despite its recent optimism at its annual shareholders meeting.

• RR Donnelley has acquired the Asian Printers Group, a book printer, for $95 million in ready money.

• In Japan Kyocera and Brother have launched an inkjet printer that is supposed to be faster than sheet fed litho.

• Vantage Strategic Marketing has published a CTP study that claims thermal platesetting is the preferred option for new buyers. (Digital Dots has launched research to find out if this can really be true, because of course, it surely can't!)

• Agfa, Mutoh & Xaar have a new flatbed printer. The Anapura is Agfa's largest printer yet.

• Digital printers will have another trade show option next year when Fespa Digital Printing Europe opens in Amsterdam next May 16th to 18th.

• Vutek has a new 3.2 metre rigid and roll-to-roll UV curing printer. It's for higher productivity and relatively lower consumables costs.

• Fuji's got some new preflighting tools in its Open Workflow technology.

• Dalim has now attained Ghent PDF workgroup compliance for its software which can support all nine of the group's PDF output specifications.

• Adobe's second quarter earnings once again broke previous records at $496.0 million, compared to $410.1 for the second quarter last year and $472.9 million for the first quarter of 2005. 21 percent revenue growth year on year! Maybe Bob Geldof is hitting on the wrong people!

Spindrift Surveys Making Waves

We don't like running our own news, but we think this will be of interest to the readership: we have embarked on a programme of survey based research looking at the five areas covered within the Buyer's Guide series. This collection of five titles (the Buyer's Guide to Computer-to-Plate, the Buyer's Guide to JDF, the Buyer's Guide to Colour Management & Proofing, the Buyer's Guide to Preflighting and the Buyer's Guide to Digital Printing) was first published and distributed at Drupa 2004, since when it has continued to be of interest to the market. The first edition is now out of print and the second edition is underway and due for publication at Ipex. But we can't just rewrite what everyone already knows, hence the need to develop something rather more special.
As part of the research we are working closely with our premier clients and partners in order to develop accurate market data in each of the five areas of most relevance to publishing and print processes. Much of this research will be based on questionnaires completed by users on both sides of the printing and publishing divide.

CIP4 is working with Digital Dots to distribute the JDF survey questions to its membership and their clients. In the UK the British Printing Industries Federation, a Spindrift licensee, is encouraging its membership to contribute to all five topics. Several of our clients are putting these surveys onto their websites and a number of Spindrift subscribers are distributing them to their customers and clients. We hope to learn more about such things as the cost of ownership of computer-to-plate across the various business sectors, the rate of migration of print jobs from conventional to digital printing, colour management practices and so on. You get the picture.

Although generalised distribution of the surveys has not yet happened, we are already seeing a terrific response. In the corporate sector, for example, where it is notoriously difficult to get useful information about production workflows, we have already had over fifty respondants! And there are replies coming in every day, so we seem to have hit a nerve with these questionnaires.

Over the summer we are working on a revamped Digital Dots website. The surveys will be available at the site, but if you would like a copy now please contact us.

Introducing Spindrift Reprints

We've got something else to shout about. We are often asked about the possibilities for companies to publish our articles elsewhere. There are various ways we can already do this, but we have decided to add a reprint service for companies who want to be able to publish in-

dividual Spindrift articles and to distribute them to cus-
tomers and clients or partners.

Reprints look pretty much the same as an ordinary Spin-
drift issue and, like Spindrift, are supplied as PDF. The
difference is that a Spindrift Reprint can be distributed
to an unlimited readership, whereas regular issues of the
journal are only distributed to subscribers listed on our
database. At least that's how it's meant to work.

Reprinted articles are published in their original form.
We can provide reprints for any article in our back cata-
logue, so if you're interested, please let us know.
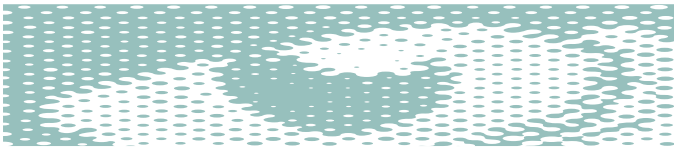
Letter From... Quark

NB: This "Letter from" differs from the usual fare posted under this heading, in that it actually arrived in our inbox courtesy of the actual undersigned, in response to our query about Quark CEO Kamar Aulakh's sudden departure from the company a couple of weeks ago. We think it's important to share it with you.

Laurel,

I'm afraid there's not too much I can add. The matter was a private one between Mr. Aulakh and Quark's board of directors.

It would be inaccurate to state that it was Fred Ebrahimi's decision.

The company's focus and attitude have changed, and I use the word 'company' deliberately, because it is the work of more than one individual. While Mr. Aulakh was obviously an important contributor to Quark's transformation, a change of the magnitude we have seen over the past year and a half could only have taken place with the consent of the board of directors and the commitment and contribution of every employee.

We have received extremely positive reactions from our customers over the past year or so, both with respect to our product vision and our changes in service. We're not going to change course now, because we know the vision is strong and we're doing the right things for our customers. Quark is on a great path and we're still building momentum.

With respect to Mr. Ebrahimi's role in Quark, he will NOT be resuming any involvement in the management of the company. Linda Chase, senior vice president of commerce product development, has been appointed by the board of directors as acting president of the company on an interim basis. We have initiated a search for a CEO to bring professional outside leadership to Quark, and have retained executive search firm Christian & Timbers to lead that search.

I hope this additional information helps.

Sincerely,

Glen Turpin
Director of Communications
Quark, Inc.

Say What?

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

From Printing World June 9th 2005.

"RealityProof includes OIT and ICC colour engines, calibration and colour quality control tools, PostScript/PDF level3 Rip data integrity and dot simulation proofing technology and support for all prepress and imaging formats. Its Delta E automatic calibration allows identical results across multiprinter systems and once a linearisation has been created, the software will report to the user if there is a deviation from the target. Should this happen, RealityProof creates another linearisation to refine the values."

We think we understand what this writer's on about, but it looks suspiciously like a nasty case of Non Oscillatory Nousless Synchro Energising No Clue Syndrome (NONSENCS). Reach for the Prozak and pronto!

(If you really want to know what RealityProof is all about let us know and we'll promise to try and help.)

...And another one, this time in the form of a letter from a concerned reader to Printweek, who had obviously been less than thorough in their research into the repercussions of digital ad delivery – or had they?

"So ad delivery is likely to go through a "shake-up" for newspapers due to Vio's launch of its softproofing solution. Well, the kit looks good and is enjoying a bit of success, what with the Telegraph Group and Associated Newspapers already on board.

You failed, however, to point out, that the main losers from this technology won't be in either the publishing or printing industry. Next time a repro agency sends a soft proof, it should spare a thought for London's motorcycle courier community!"

Keep London congested and polluted – a convincing argument against new technology, if ever we heard one...

Driftwood

(Useful stuff washin' in on our shores)

Metro no match for PDF

At the most recent WinHEC (Windows Hardware Engineering Conference) held in Seattle, Washington in April, Microsoft revealed a new printing platform, code named Metro. Rumours quickly spread that this was a Microsoft challenge to Adobe's document exchange format, PDF. Which, in turn, lead us to investigate further to understand a little better what Metro really is about.

The company that has helped Microsoft draw up the technical specification for Metro is Global Graphics, one of the more successful vendors of Postscript clone RIPs, a vital survivor of those long forgotten Page Description Language (PDL) wars. The Jaws Postscript and PDF interpreter technologies as well as the Harlequin Genesis RIP system are used in many desktop printers, proofers, digi-

tal printing systems, platesetters and filmsetters around the world. Adrian Ford, chief technical officer at Global Graphics, presented the Metro printing capacity on the same platform at WinHEC as the man himself, Bill Gates. (Adrian has written a comprehensive whitepaper on Metro, posted on the Microsoft web site.)

So what is Metro, really? According to Microsoft it's the "keystone of [the new] Windows printing technology". This meaning the next big upgrade of Windows, code named Longhorn (see issue 1-9) and that now is due out in late 2006, but could be yet further away. Metro is both a document exchange format, like PDF, a print path controller and a PDL, like Postscript and XML. So fine, but why should we care? Isn't PDF good enough for Microsoft, and if not, can we trust Microsoft to bring about something that is "better" than Postscript or PDF?

Well, this is really not the question, or the objectives for Microsoft. What drives Microsoft to take this step is the need to improve the printing technology in Windows. There are many known limitations with the existing printing capacity such as no support for spot colours, poor handling of smooth shades, no support for transparency, not to mention poor support for output in CMYK. Windows basically assumes RGB, and that in a very crude way. There was a somewhat impotent move forwards in regard to colour management when Windows 98 was introduced, but since then nothing much has happened in Windows to develop colour management functionality. It's basically time to make a change for the better.

Metro is based on XML, which opens up a whole range of interesting opportunities for it and for Microsoft. Metro also works tightly with the new imaging model in Longhorn, called Win FX, which in reality means that there is no conversion needed when sending documents for output. The PDL is the print spool file, which is also the document exchange format. Clever, and it will be interesting to see it at work.

So how does this relate to PDF? Well, not at all really. According to Adrian Ford, the present and preliminary specification very clearly lacks many of the advanced features

of PDF. But on the other hand Metro has some potential benefits over PDF. Since it is based on XML, the capacity for efficient, if as yet primitive, print-on-demand is obvious. While Postscript and PDF have never been strong on variable data printing in and of themselves (vendors have always had to find ways to work around Postscript and PDF), Metro by its very nature should be good for dynamic print streams, since it supports dynamic calls of objects on the page.

So who will welcome Metro? Probably most Windows users and users of the Office package. Here Metro will make printing faster, easier and help provide better image quality. Amateur digital photographers as well as semi professionals will probably enjoy a better result on their inkjets with, hopefully, better colour management.

Who might not enjoy Metro? Possibly most of the printers and publishers that still struggle to learn how to correctly handle PDF and are learning still what PDF/X is and how to create PDF/X-files for efficient, high quality print production. With this new document file format as the first choice in Windows, Metro files will inevitably find their way to copy shops, printers and publishers. What mayhem they will cause amongst printers and production houses who are not up to speed with format management is anybody's guess. When it all calms down, will Metro make a positive or negative contribution to the publishing industry? We think it will be less of a hassle for publishers than for printers, but it is all really too early to see clearly its impact.

In the meantime keep in mind the simple fact that Microsoft needed to improve its printing technology, and in doing so the developers have happened to create a new portable document format. It's not the first time that a document format developed for one purpose has ended up being adopted for something else. Although Metro is similar to PDF it really is very different from it. In due time we will all have to learn Metro's strengths and weaknesses, whether we like it or not.

Spindocs

(Where the spinner gets spun!)

HP, supplier of digital printing technologies, recently signed a deal with the one, the only, Mr Thomas Kinkade:

"Thomas Kinkade Company Chooses HP to Capture the Spirit of Fine Art Reproduction

HP today announced that it is providing large-format printers to The Thomas Kinkade Company to reproduce original paintings created by Thomas Kinkade.

Known as the "Painter of Light™," Kinkade is the most collected living artist in the United States and the prolific creator of emotionally uplifting works famed for their unique luminosity." *(and so on)*

You must, of course, judge for yourself whether his paintings are emotionally uplifting or perhaps just plain scary. Visit www.thomaskinkade.com, and don't forget to "use the virtual dimmer to view the 'Lumanist Effect'" of the work displayed (can HP technology really recreate this?) Give us strength.

Boomerangs
(Your feedback fed back)

From Paul Sherfield, The Missing Horse Consultancy

Dear Laurel,

An interesting article on Colorbus's Cyclone Visual Proofing [Issue 3-3]. I think you meant to refer to the PPA's 'Proof for Press' certification in this case, rather than their 'Pass for Press' which are the PDF standards.

What is very interesting is the effect that viewing booths can have when 'judging' digital proofs.

The current ISO standard for this area, ISO 3664, 2004 requires lights to match the D50 standard, not 5000K. D50 as a standard requires a set spectral curve, rather then just a colour temperature.

It also states that the CRI, (Colour Rendering Index) must be greater then 90, (a maximum figure of 100 being completely accurate which is not yet possible from any light source), based on 8 test colours. This CRI is in effect a measure of the spectral accuracy of a D50 light source. However a difference of a 3-4 CRI can result in a proof looking different from booth to booth! From memory I have seen figures that say inkjet proofs can 'visually' change by 2 delta E for every 1-2 difference in CRI!

So what is there to be done? I guess use the same light booths and encourage clients and suppliers to use them. The use of soft proofing with the white point of the monitors closely matched to the viewing booth will avoid this issue.

However we may be getting to the area of diminishing returns. As proofing and color management become increasingly more accurate it is pointing out very clearly where the remaining inconsistencies are in the colour reproduction workflow.

While the PPA is looking for and finding proofing systems to match very tight tolerances, an average of below 2 delta E, ISO 2864-1 process colour inks only have to be within 5 delta E to meet the ISO 12647/2 printing conditions. Often this wide tolerance is not met!

It seems there needs to be better coordination at ISO level across the standards relating to print colour management.

Makes the rest of a colour managed workflow look irrelevant when faced with these figures and greater on press!

Paul L replies:

Thanks Paul for the clarifications and additions to the article. However I disagree strongly with the conclusion that it matters little what we do in all the different steps before actually going to press.

While it is a problem that many printers often fail to meet narrow tolerances on press, every other small piece in the puzzle before the press can't be allowed wide (or wider) tolerances. If we let that happen, the colour deviation on press would be even greater.

I insist that for example a proof needs to have slightly less tolerance for error (be it a monitor or a paper proof) than the press. Ideally the proof should show the perfect press result, and the press operator should try and match that through the press run, visually/manually (probably not possible) or with the help of modern press control systems and scanning spectrophotometer inline/online on the press (or nearline as one expression is).

Besides testing viewing booths we probably should also test the measuring devices. For example I'm not sure that the common Murray-Davis formula calculating the dot gain is fully reliable or what we want. Better to set some Lab values for what we want in the quarter- mid- and three quarter tones. Talking about this or that dot gain should be of the past – actual appearance, the achieved tonal value, for certain shades of grey is of more interest.

Cheers!
Paul L

Acrobites

(Something to get your teeth into)

DOM

The Document Object Model is an application programming interface that defines the structure of a document, its access and manipulation. DOM is used to provide the interface for both HTML and XML (as long as they aren't too grubby), and allows software engineers to navigate through document structures, and to edit, remove or add both content and structure.

This is yet another of those W3C specifications, but it is important because it has such a wide range of applications. As a standard API for documents DOM is relevant everywhere from the desktop and beyond.

ZDAs

Zero Day Attacks may sound like the next Tarantino blockbuster, but a ZDA is rather less easy to escape than an over-hyped movie might be. A ZDA is what happens when a computer worm or virus gets its digital toe in the software door, before anything can be done to thwart it.

A ZDA is the ultimate nightmare for IT professionals, and although we can try to pretend it isn't our problem, hack attacks are becoming increasingly worrying within the printing and publishing industries. Newspapers are especially at risk, and although their IT managers work closely with security vendors, they may also want to consider system behaviour monitoring techniques. The idea is to keep track of how servers behave and to programme in checks and halts to prevent servers joining networks unprotected.

The trouble with all these security measures is that they are non-standardised and chaotic. But then that could be an effective defence, so maybe it's not such a bad idea after all?
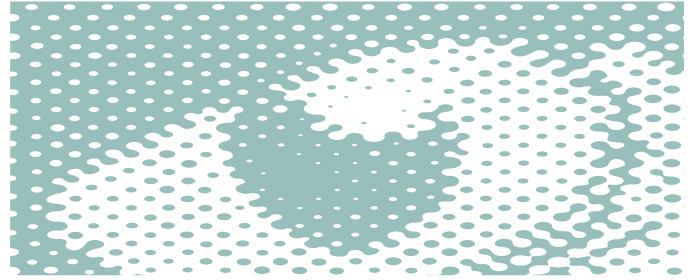
Diamond Class

The press release announcing the Xeikon Diamond Award winners said: "Valeri Art, Republic of Kazakhstan, public transport monthly tickets." It also said: "in 2000 the state company Centre for Public Transportation of the city of Astana wanted to produce monthly bus passes that could not be counterfeited". Kazakhstan? Astana? Bus passes? Counterfeiting? Were we intrigued because it all sounds so exotic, or were we intrigued because of the application? In all honesty a bit of both, but either way we couldn't resist taking a closer look. Red faced and ashamed, we had to start with an atlas.

Kazakhstan is one of twelve member countries in the Commonwealth of Independent States (CIS). This is the multilateral group of independent countries formed in 1991 after the break up of the USSR, and Kazakhstan is the one of the bigger country in the group. It sits between Russia and Belarus to the north, China to the east and Turkmeni-, Uzbeki-, and Kyrgyzstan to the south. The Caspian Sea and Afghanistan are to the country's west. The population of around 18 million people has a per capita income somewhere between that of Russia and the Ukraine, which are the largest and best known of the CIS states. Kazakhstan's natural resources include coal, iron ore, oil and lots of minerals and with this, plus an educated population, the country has the potential to become one of the richest republics in the CIS.

This is why, in 1997, the capital of Kazakhstan was moved by presidential decree back to its historic site of Astana. Astana is at the centre of Euroasia, located at the crossroads between east and west, north and south and it is hoped that the city will develop to become a sort of transport hub for the whole continent. Since 1997 the city's population has almost doubled, with most of the growth due to a thriving construction business and Astana's development as a cultural and political centre in the region. Modern communications are necessary for any effective political and commercial development, so considerable investment is going into developing efficient transport links, including local transport in the city. This is where digital printing and the Xeikon press come into the picture.

Bus Stop

Efficient transportation systems obviously depend on revenue protection, but it seems this was a serious difficulty in Astana. Bus tickets generate a monthly turnover for the city in excess of US$1,000,000, a mouthwatering temptation for potential counterfeiters. Astana was losing a lot of revenue to bus ticket fraud, so the city asked Kazakhstan printers to come up with a solution. Following the city's request for tender Valeri Art, a local print production company, was selected over a printer with an HP Indigo and several small offset printers.

Valeri Art

Valeri Art is a privately owned company active in the Kazakhstan print market for over 20 years. The company has a reputation for expertise in design, digital and conventional printing and advertising, but its primary business is in creative project design. Since its first major digital printing project, the presentation of Astana as the new capital for Kazakhstan, Valeri Art has used digital printing for all output. Valeri Art worked closely with digital press manufacturers Xeikon to develop ideas for ▶

"All a ticket controller needs to do is to try to tear the ticket. If it is impossible – plastic is impossible to tear whatever strength one uses – then the ticket is authentic."

– Vladimir Vassilyez, Valeri Art, Kazakhstan

The Xeikon Diamond Award contenders: colour coded, numbered and security stamped bus tickets from Kazakhstan. Our heartiest congratulations to everyone involved in this project.

presenting the new capital city, including a new logo, brochures and booklets. Valeri Art's owner Vladimir Vassilyez explains that "We were printing all the materials based on our own design drafts for seven days and nights without any breaks whatsoever. Our team consists of specialists aged between 20 and 30 equipped with designing stations Apple Macintosh and PC, scanners of formats up till A3 (Umax Powerlook III and ICG360)." In 1998 the company acquired its Xeikon digital press, then the only such press in Kazakhstan. Besides Valeri Art's press, there are now a couple of other digital presses in Kazakhstan, an HP Indigo and another Xeikon. Apart from its Xeikon DCP-32D press, Valeri Art has all the necessary finishing equipment to provide complete print production services inhouse.

Valeri Art's largest client group is state bodies, for which the company provides services ranging from initial designs and repro, to printing the jobs. Since 1997 the digital press has been used to produce material for all sorts of high profile customers, including the Kazakhstan Parliament and the country's president, and in 2001 Valeri Art produced the print collateral to celebrate Pope John Paul II's official visit to Kazakhstan. The list of Valeri Art's design and print projects is lengthy, and its range

of print products includes such material as prospectuses, booklets, calendars, invitations, programmes, postcards, journals, posters, diplomas, brochures, stickers and so on. It's pretty much what one would expect from a commercial printer yet Valeri Art still considers itself a design house. According to Vladimir Vassilyez "we do not consider ourself as printing company. Valeri Art is first of all a creative design studio".

Valeri Art's print runs range from single copy jobs, to runs of up to 3000, and all the printing is done solely on the Xeikon press. Variable data output is managed with Private-I 2.0, for full page variability and unlimited run lengths. Data is archived to CDs and DVDs as both uncompressed and compressed data, depending on its perishability and data type. Incoming files are submitted to Valeri Art in .cdr or TIFF, with CMYK images at a minimum resolution of 300 dpi. Coreldraw is the most commonly used package for prepress applications in Kazakhstan for historic reasons, so .cdr is the favoured format. It's what operators know and what they're used to so they see no reason to change. Younger generations of operators may not feel quite the same way about it. CMYK is the preferred colour space for prepress and printers in Kazakhstan, so here too there is no reason to move to an RGB workflow yet. Colour is managed with a densitometer. This is one of the reasons Valeri Art wants to upgrade to the Xeikon 5000 which has an inline densitometer.

Preventing forgery

The healthy trade in counterfeit bus passes in Astana meant that they had to be made much harder to copy. According to Mr. Vassilyez "We produce them from 1999. These traveling tickets for municipal transport are a kind of security, monthly turnover for which surpluses US$ 1,000,000. Therefore, there always was and still is a great temptation to forge them. Prior to our proposition they were made on paper and for protection were used holograms. However, such tickets were easily forged and the Ministry of Transport and Communication of the Republic of Kazakhstan begun to look for an alternative solution that would prevent any forgery attempts."

The brief to Valeri Art was clear: design and print bus passes that could not be easily forged. Valeri Art combined a polyester substrate with variable data output for route numbering, with colour coding to denote different bus routes and ticket types, plus four colour black overprinting, microtext and serial numbers. The objective was to produce bus passes that could not be so easily counterfeited, thereby protecting the transport department's revenues. Vladimir Vassilyez explains: "Straight away we dismissed holograms and decided to print on plastic - DuraKote white (Hanita Coatings) additionally using most of the Xeikon protection capabilities. In particular, one of the most interesting ones I would like to pay attention to, is black on black printing which is our own know-how and which cannot be scanned for copying. Using plastic instead of paper allowed us to avoid any need for laminating and therefore prevented a possibility of hiding any defects of forgery behind laminating cover. Furthermore, all a ticket controller needs to do is to try to tear the ticket. If it is impossible – plastic is impossible to tear whatever strength one uses – then the ticket is authentic. If not, it is a forgery that is easily detected. This very plastic is imported from Israel especially for these tickets and cannot be found anywhere else in Kazakhstan. Practice has showed that during the last seven years there has not been even one forgery case."

Valeri Art combined a polyester substrate with variable data output for route numbering, with colour coding to denote different bus routes, plus four colour black overprint, microtext and serial numbers.

From left to right: Wim Deblauwe of Xeikon, Alexander Rankov, Xeikon's distributor in Kazakhstan, and Vladimir Vassilyev.

There are numerous different ticket designs which vary each month, adding yet another disincentive to fraud: "altogether we have produced 250 varieties with monthly runs of over 70,000. Design varieties brought to a tendency to collect our tickets by scholars. We also printed such individual tickets for pensioners allowing for their personal details. Initially it was planned that they would be used for a year. But thanks to the plastic material they remained in almost initial condition after 3 years that they were used. Obviously this may be considered as lost revenue [for us], but what can be of greater satisfaction than the satisfaction of the end user of your product. Right now we are preparing our market for new generation of digital presses, the Xeikon 5000."

It's clear from this application that digital printing is less and less about the technology, and more and more about its use. The scope of applications for digital print is endlessly surprising as is evident from what Valeri Art is doing for the Astana transportation department, and the four other cities now using the Valeri Art bus tickets. It might only be bus tickets, but when was the last time an American, European or Scandinavian bus company had the imagination to use variable data print so creatively? Transactional print economics aren't immune to colour, so maybe we should start thinking sideways. Could travel tickets be the next port of call for local advertising messages?

–Laurel Brunner

JDF: Just Don't Forget (As if.....!)

Not only have we been waiting for many months to see the sun shine: ever since Drupa last year we've been waiting to see the first blooms on JDF's fragile branches. Fragile what? Well, maybe not fragile but definitely vulnerable. The roots might be deep, but when it comes to blooms and fruit, matters JDF have progressed pretty slowly. But they have progressed, and that is more the point. So on behalf of all those hard working people in CIP4, please ignore the sceptics and the cynics; don't listen to anyone who tries to tell you that JDF isn't going anywhere. Instead keep in mind that its adoption is entirely customer driven and that the rate of adoption is determined by the need to invest and the rate at which existing technology is made redundant.

As to uptake, there are a few myths that need dispelling; mostly they have emerged through misunderstanding what JDF is all about. Most important to dispel of all is the myth that says JDF is only relevant for large businesses. Wrong, wrong, wrong, wrong, wrong. JDF is just as important for small companies as it is for large ones. Adoption is not limited to big budget companies or those with large output formats: production automation is not a function of size, but of the sophistication of the workflow. It's about saving money so that it can be better spent and, as George Callas the owner of Metropolitan Fine Printers, a $15 million business in Canada, says: "If I can increase my profitability in anyway [with JDF], I will do it."

The Customers' Voice

It appears to the cynics that suppliers have assiduously wooed customers to persuade them that JDF is some sort of universal panacea for their businesses. Those same cynics believe that JDF is just about getting more money out of customers. However pressure for JDF development has also come from the user community. At Williamson Printing in Dallas, Texas, manager Joe Novak has pushed Creo and Esko-Graphics to work out their JDF interfaces so that the Creo Upfront imposition software will shovel impositions into the Esko-Graphics Scope workflow system with a few clicks of a mouse. What used to take fifteen to twenty minutes to do has been reduced to a few seconds per flat. Upfront is also passing JDF data to Williamson's cutting equipment, so that something that used to take some thirty minutes is instantaneous. It all adds up to substantial speed and efficiency improvements. As the driving force behind Williamson's JDF implementation, Joe Novak explains: "speed is money and the more implementation there is, the more you save. Some people would argue that it costs you money to implement, but we were in the process of replacing presses and bindery equipment with new equipment, so it's not costing us any more than it would otherwise." Through JDF, this company is saving shedloads of cash, given people costs of $150 per hour.

How many and when?

We've come across a number of specific examples of JDF implementations, but it is very difficult to get a solid idea of how many customers are actually jumping feet first into JDF. Many companies are now working actively with JDF. Em. de Jong in the Netherlands has been using JDF for several years and recently upgraded its Agfa Apogee X technology to do full prepress production of 200 jobs per day, transferring informa- ▶

> **As the driving force behind Williamson's JDF implementation, Joe Novak explains: "speed is money and the more implementation there is, the more you save. Some people would argue that it costs you money to implement, but we were in the process of replacing presses and bindery equipment with new equipment, so it's not costing us any more than it would otherwise."**

tion for administration, page and colour management, and imposition. In the UK, Wyndeham Heron has also used JDF for a number of years as has Western States Envelope in the US where Creo's Pandora sends JDF and PDF files to Apogee X. AGI Media, Schultz Grafisk, Kraft Foods, Niedart & Schon, SGS, Alcoa, Connect Digital, Schawk, MCG, and more; these companys' experiences are well documented, but what about rest? How many of those are out there? How long will it take before JDF compliance is a necessity, not an option? How far will the printing and publishing industries be polarised by then between the haves and the have nots?

When it comes to suppliers' approach to JDF implementations, they are very much in the hands of their customers. It's tempting to think that it is the suppliers driving all things JDF but there are some very large companies pushing developers to come up with production process improvements. This is nothing new (think RR Donnelley and Creo), and it's a proven means of getting technology right. Vendors respond to customer demands, which is why there is no overt and visible move to JDF. It is however happening under the surface in a range of applications so customers will to some extent have to wait for their existing technology providers to do their stuff, whether it's local distributors or direct vendors.

Who's Who in JDF?

We have asked suppliers and their agents specifically how many of their customers are actively working with JDF. Responses vary from silence (you know who you are, so we won't shame you further) to the humble such as Agfa, Esko-Graphics and Fuji, who claim some small percentage of their user bases (many hundreds each), through to Heidelberg who blithely claim that "every Heidelberg customer using our integrated workflow system Prinect is linked to JDF." Quite what that means is anybody's guess, but what all of these disparate approaches tell us quite clearly is that JDF is inevitable, it works and is useful, so we are sure that there's growth. But it's organic, subtle, covert and we can't get specific numbers!! Yet.

Several suppliers, such as Creo, have done some interesting studies that suggest JDF workflows are generating excellent returns on investment. However is it the adoption of Creo's workflow technology, or the JDF bit of it that is generating the ROI? It's very difficult to say because it's almost impossible to isolate.

Esko-Graphics has also talked to customers about their view and found that all of them agree that system integration is required. 70% found that JDF will be the preferred integration vehicle and the rest are still trying to decide. It all comes down to education, planning and working out where the money comes from: is this a printing and production matter, or an IT one? None of it is really the sort of thing that lends itself to generalisation, nor is it just about what printers think. Their customers are crucial to automated supply chain development, so there are many sides to the JDF coin. This is why we are conducting some research of our own into companies automation plans within the printing and publishing communities and JDF perceptions (see news).

Technical Update

Really there hasn't been much change when it comes to the JDF specification because CIP4 and its membership did a pretty thorough job in ▶

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"It is our goal to cooperate with our customers in such a way that we will be their preferred vendor," says Ludvig Meinild, workflow manager for Schultz Grafisk. "We listen to their wishes and needs, and we work hard on building our in-house structure so that we can focus on the jobs we have to do. ... [JDF] plays a very important role in our overall production process," Meinild says. "I believe it will continue to meet all our expectations."

the first place, when they released 1.2 last year. The next version of JDF is naturally underway but the committee has also made substantial progress in developing the ICS, the Interoperability Conformance Specifications, written for individual classes of devices such as digital printers or bindery equipment. No single device is likely to implement everything the JDF specification has to offer, so ICS documents are available for describing the specific bits of the JDF specification to be used to facilitate the interface. This is the concept Creo had with its Networked Graphic Production initiative, which provided a means of defining common interfaces within a Creo managed workflow. The CIP4 ICS initiative sort of picks up where NGP leaves off and is vendor neutral. There are ICS documents published for prepress workflow system and a conventional sheet fed printing press controller, for defining the interoperability requirements for a sheet fed offset printing device that consumes JDF job tickets, and for the interoperability requirements related to the communication between MIS and production equipment. These are just some of the myriad of interfaces for which ICS documents will be required and which are being written in order to facilitate JDF implementation.
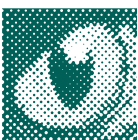
ICS documents provide a standard set of criteria against which device interoperabilities can be checked and so certified as JDF Certified. It sounds simple enough but it is fiendishly complicated and fraught with uncertainty, so it needs exhaustive testing. Matters are made worse by the fact that very few production systems are based on equipment from a single developer. Nor are production systems upgraded unilaterally every time the technobods have money to burn and nothing better to do. So, although an ICS might be specific to its class of devices, such as scanners or proofers or application software, each ICS must also conform to other related ICSs, if it is to function reliably. It's a bit like trying to work out where the plumbing goes before a house is built and without knowing what rooms you'll have to supply with heat and water. You know there'll be radiators, hot and cold water, sinks, showers, baths, toilets, drains and so on, but you don't know anything more. Without standards you know that absolutely nothing will fit with anything else, nor will it do what it's supposed to do. With standards however, at least all the interfaces should fit, and there will be a better chance that things will work out as one would expect.

CIP4 is working with the Graphic Arts Technical Foundation in the US as the first certification testing facility and the organisation has plans to add test facilities in Europe and Asia. The idea is to certify products so that they can be identified as "JDF Certified" since they will absolutely conform to what is required in a specific ICS document.

Conclusion

JDF technology is well developed up to a point, but its evolution is ultimately in the hands of the user community. Fortunately every time there's an investment decision to be made, JDF is part of the conversation. Developers shouted loudest in the early days of JDF but we expect to hear more noise coming from users in the near future.

–Laurel Brunner

China Print05

China Print in Beijing from 11th to 15th May was an excellent exhibition and I think that it was the biggest exhibition in Asia this year, and not Printpack in January in Delhi as wrongly stated by the Xerox India Managing Director Andrew Horne recently. You only have to see the China Print exhibition bilingual catalogue to get an idea of the scale and quality of that event, let alone the actual experience of seeing so much equipment running live.

Demonstrations of equipment from Bobst, KBA, KBA Grafitec, Heidelberg, Komori, Mitsubishi, MAN Roland, Ryobi, Mitsubishi, Sakurai, Adast, Goss are just one dimension of a phenomenon that had to be experienced to be believed. China Print attracted more than 880 exhibitors occupying 92,500 square meters and about 160,000 professional visitors attended the show at the two venues about 20 minutes apart allowing for Beijing's dense but orderly traffic.

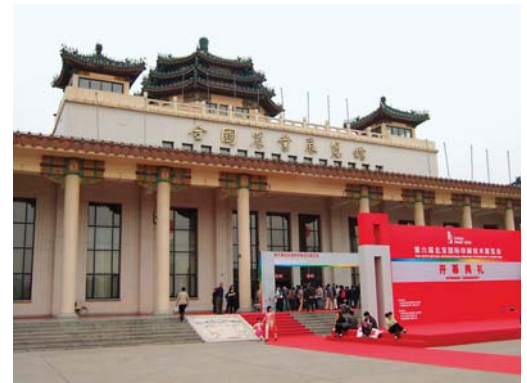Entrance at one of the two China Print05 exhibition sites.

This was an exhibition of far more interest to many Asian printers than Drupa or Ipex and in spite of the linguistic constraints (that may be alleviated by the Summer Olympics in 2008) the Beijing fair will likely become one of the top four fairs in the world with its next two editions. Which of the other four major print exhibitions (Drupa, Ipex, Print, and Igas) is likely to be displaced is not entirely clear at this point. Like global warming, the change may be more sudden than most expect.

A 20-minute free bus ride connected the two locations—the China International Exhibition Centre (a modern exhibition facility with a huge Carrefour department store in one corner and new hotels next-door) and the older more traditionally designed three halls in addition to a new hall of the Agriculture center that is not far from the huge new skyscrapers of the central business district. The CIEC's eleven modern exhibition halls contained all the international companies and the larger Chinese companies. The single largest exhibitor, Heidelberg, had its own hall.

China Print 2009 will be held in April 2009 at a new International Exhibition Centre in post Olympics Beijing. According to the organizers, about 1000 exhibitors will participate in the show with a total show space of 100,000 square meters and 200,000 visitors will visit the show.

Heidelberg

Of course the exhibition was most interesting because of the diverse Chinese exhibitors in all segments and because all the major international players were present but the Heidelberg hall, more than any other, gave China Print its character as a premier international exhibition. In fact China Print was an excellent place to catch up with Heidelberg technology and innovation because Heidelberg's hall was spacious and busy, but not as overcrowded as at most European shows. Not having a repetitive theme song blaring also made the setting peaceful and one could happily sign on for a step by step demo of the Prinect JDF workflow, see the various sheetfed presses in action or study the cut-away of a sheet fed press that showed all the innovations in feeding, transfer, coating, and the delivery that have continuously upgraded and fine-tuned Heidelberg sheetfed press design. The cutaway showed the new chamber blade coating applicators, the cassette style of options for ▶

Heidelberg long press demo at China Print05.

curing and cleaning devices, and above all the entire paper travel and transfer system that is committed to feeding and moving the paper on a thin cushion of air from unit to unit right into the delivery.

Research and development has optimized the alignment of the Venturi air nozzles for better aerodynamics of varying substrates at all speeds. Although with automation they may be easier to control and run, these presses are no longer simply rotational machines, but a complex and precise system of modular subassemblies and integrated systems.

Prinect end to end JDF workflow

Peter Janusik gave us a brief demonstration of Heidelberg's Prinect workflow system running on the Signastation. Prinect handles JDF in and generates JDF out. It creates and writes JDF files and is designed for actually moving information and instructions not only for the prepress but for entire production workflow including folding, cutting and binding machines.

Peter Janusik shows Prinect on a Signastation at Heidelberg's China Print05 Hall. An HP inkjet provides colour managed proofs.

Using the friendly Job Assistant and Print Ready Cockpit interfaces, it has some very interesting features including the optimization of different sized jobs ganged together on the same sheet. This feature calculates the optimal repeats and number of sheets needed to achieve the most economical run for mix and match jobs of varying size and quantity. An imposition layout with minimum paper wastage is generated from the Signastation as a JDF file. There is a nesting option that can read CFF2 format files used by the label and packaging industry.

Prinect performs all the usual workflow tasks of normalizing files for PDF, converting RGB to CYMK and preflighting. It uses Prinect Trap Editor based on Heidelberg's Supertrap product. Although there is built-in preflighting, Prinect can also work with Enfocus preflighting software. The essential idea of Prinect is to provide an open workflow for management, prepress, press, and postpress operations working around a central JDF server that understands (or can be taught) the capabilities of each of the operations (or resources such as CtP, press, folder, binder, cutting machine) in a particular environment. The product demonstrated to us understood complex imposition layouts for printing formats, folding for different types of products, and programmable cutting and finishing operations.

Founder Group

Founder Group Electronics is the Beijing University incubated and promoted behemoth for all things prepress and all things computerised in China. It manufactures almost everything and sells everything from Chinese language fonts, to computers, switches, and computer to plate devices. Most of the CtP devices (including Agfa, Creo and Screen) sold in the country are channeled through one of the company's divisions. In addition the group is diversified in medical technology, healthcare, pharmaceuticals, investment finance, communications, PCB and chip manufacture.

Weisman Jia, General Manager, Graphic Arts Division, International Business, Founder.

In 2004, the group achieved a turnover of 22 billion Yuan (US$ 2.7 billion) with a profit of 1.1 billion Yuan (US$ 133 million). The company has a brand new skyscraper in the Northwest corner of Beijing not far from Beijing University and is easily one of the highly diversified gems of modern Chinese industry. Founder plans to build a huge hospital in a joint venture with Beijing University for the 2008 Olympics.

Founder Software is the leading Chinese company in specialized industrial software solutions for content building and distribution, network information security, finance and government systems including eGovernment and ePublishing systems. The company began with Professor Wang Xuan's Chinese Laser Typesetting System Research Project, in 1975 historically known as "Project 748." In 1987 the first full page output of a Chinese newspaper was output using the Beida Founder Electronic Publishing System, and in 1992, the PKU Founder Group was founded.

Laurel Brunner, Paul Lindstrom and I visited the Founder stand at Ipex 2002 where the company showed RIP for a huge number of output devices, and by 2003 the company had sold its RIPs and workflow solutions to several Asian markets including 300 Japanese newspapers. Having implemented JDF two years ago its PDF to JDF workflow solution Elec Roc, and ePack packaging solution were featured at the China Print show. Its newspaper workflow has been implemented by Kodak Polychrome Graphics and "newsconnect" is to be released in August of this year. I suppose that we may see it at Ifra Delhi in September and at Ifra Leipzig in October.

Founder software development facility, Beijing.

Known most widely perhaps for its Eagle RIP, the company is now doing considerable research and development in the security area. Its Superline security pattern generation software is able to generate low-resolution hidden images. It has already struck an OEM deal for such embedded security software in Konica Minolta and Kimoto photocopiers that will make it difficult to photocopy a secured document without the embedded watermark revealing itself.
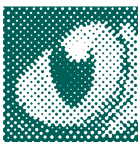
Founder Electronics, like the other major and mostly state funded Chinese groups that spoke at the Print Development Conference preceding the China Print exhibition, is one of the best case studies for understanding the combination of Chinese government and business. The young leaders of these companies speak of the conservatism of the older generation, their readiness to collaborate with and acquire global companies, and their vision for print itself. It is refreshing to see Asians thinking about their task of looking after print and print technology in this century. Of course like all things Asian, it may be a bit too serious.

–Naresh Khanna

(The second part of this article covers many other exhibitors and also the printing development conference, but there is rather more to China Print that we have got space for here. We'll publish the rest of Naresh's story later in the summer on the Digital Dots website.)

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