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Spindrift

...Serving The Graphic Arts Industry Since April 2003

News Focus • Opinion • Reviews
Techno-Babble • Attitude

Volume 1, Number 5
21 September, 2003

Existence

N. *reality*, realness, actuality, material; event, real thing, not a dream, no joke, nitty-gritty, basics, fundamentals, bedrock, nuts and bolts

Adj. *real*, essential, not imagined, actual, positive, factual, well-documented

Dear Reader,

Barely have we folded up the deck chairs and put the grill in the garage – at least along the northern latitudes where most of the Spindrifters dwell – before the graphic arts industry launches itself into another season of trade events. Hurrah! And this particular one ends with a real clincher, Drupa, famous mainly for its enormity and the ubiquitous fresh Spargel, the divinely delicious fresh white asparagus indigenous to Germany, that we, along these latitudes, only get to eat once every four years.

There is no doubt that JDF will be one of the big issues at the great Düsseldorf get-together, if not the issue. And rightly so – as the regular reader of Spindrift knows, we believe a universal and standardised Job Definition Format has the potential to bring the printing and publishing industry to an utopian level of efficiency and seamlessness. In this issue Paul Lindström describes the current JDF status among the main prepress suppliers. It is apparent that for these players the roll-out of JDF compliance is as much about strategies as it is about actual systems implementation. With marketing departments running the show, it can be difficult to tell at what point strategies turn into reality. In the run-up to Drupa we will endeavour to clarify who does what and how well, as well as continue to write about users for whom JDF is already a production and business reality.

Getting a sense of the real can be a problem among busy, buzzing, noisy and technologically inebriated enthusiasts at trade events. The other week we were in Stockholm for the Grafex show. In the morning of the third day word spread among the stands that Swedish foreign secretary Anna Lindh had not survived the knife attack of the previous afternoon. Suddenly the buzzing was perforated with grim countenances and murmurings of disbelief. Unfortunately no-one in the organisers' HQ had the presence of mind to alleviate the shock by acknowledging the tragedy through a minute of silence.

We vow to always keep reality in mind – especially when there's a danger of getting carried away on a tsunami of technical hype. Enjoy the read!

Cheers from the Spindrift crew,
Laurel, Cecilia, Paul and Todd

In This Issue

The Who's Who of JDF

All major RIP developers are building JDF compliance into their next generation RIPs whilst ensuring that yesterday's technology doesn't have to be entirely pensioned off. Paul Lindström takes a look at how they are succeeding and why. From the sidelines he informs us that Heidelberg, Agfa and Creo are currently ahead in the race for implementation. Stay tuned...

see page 8

Adding brains to PDF workflows

Enfocus' recent announcement about taking Certified PDF to the Internet is not just technologically interesting. It is also interesting because it reflects where the industry is going. Preflighting isn't enough anymore and its evolution isn't only about moving preflighting upstream. So what is it about? Laurel Brunner takes a closer look...

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Spotlight on Sri Lanka

The graphic arts industry in the west tends to be very focused on, well, the graphic arts industry in the west. Naresh Khanna, editor of Indian Printer & Publisher, gives us a unique look into an Asian printing industry, that of Sri Lanka. It turns out it is emerging as a hub for global packaging exports...

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News Focus

Creo Manufacturing its Own PTP Plates

Creo is getting into the plate manufacturing business and launching the high resolution, low water consumption Creo Positive Thermal Plate. The result of extensive investment and research, Creo launches PTP at Graph Expo at the end of October and will supply it to US and European markets. Creo's emulsion has already undergone extensive market and production testing and Creo has apparently supplied it to "several manufacturers" who have produced and sold plates under their own names over the last 18 months.

Plate manufacturing will be under contract through third party manufacturers and Creo is acquiring its very own plate production plant in Pietermaritzburg, South Africa from First Graphics (Pty) Limited for US\$11.5 million. First Graphics will continue as Creo's exclusive distributor in South Africa and as distributor for KPG, for whom First Graphics distributes film.

A deal like this was always going to happen. Platesetter manufacturers really do need some sort of consumables deal to compete with the likes of Agfa, Fuji and KPG and if anything it is surprising that Creo took so long. It's undoubtedly a good move for Creo but the road ahead is anything but smooth. Manufacturing takes huge support investments in plant, and in product and customer support. The quality control issues are myriad

particularly if Creo is serious about combining its own manufacturing plus outsourcing. Production volumes will influence quality and if Creo's plant isn't operative 24 hours a day it could cause consistency variations. Quality control across plate batches will be hard enough inhouse, but add to the mix a bunch of outsourced material and it could be very messy. And then there are the logistics to consider, not only for quality control but for testing, storage, transport and distribution.

Creo will also need to be pretty shrewd when it comes to working out volume and price ratios, and its global competitive position. Other plate manufacturers are hardly likely to take a laissez-faire attitude to PTP and the plate business is already ferociously tough. Creo is supplying processing chemicals for PTP and claims that it offers a "wide processing latitude". This may be too simplistic.

Creo estimates the world market for plates to be worth some US\$3 billion. Creo also claims 20% of the world's installed base and that this deal gives its customers considerable benefits. And they are right to some extent, at least theoretically. The deal gives customers a single point of supply, with the benefits of operational leverage that Creo should pass on. Customers should expect plate and platesetters to be optimised for overall improved performance off and on press. But there are plenty of reasons to be cautious.

The depth of Creo's commitment to existing plate and proofing materials, plus manufacturing and R&D related issues, has to be considered. Customers also could find themselves vulnerable to the fallout from what will inevitably be a learning curve for all involved. At the moment the South African plate line has capacity for Creo's unstated projections, but the logistics of supply and support will still be far from trivial. The choice of South Africa gives Creo access to other continents besides Europe and North America, so emerging markets in India and China have to be in Creo's sights. All of this takes more than a few training sessions with local distributors to manage, particularly where the competition is already well entrenched.

It will be interesting to see how plate manufacturers react to the new contender and how seriously Creo will be able to continue to qualify and support existing and emerging plate technologies. Ideally all manufacturers should cooperate in order to meet customer requirements, but ideal is unlikely come into it when it comes to equipment and plate contracts.

Of course if it all goes brilliantly well and Creo's PTP takes over the world, the company will be the dominant perhaps even exclusive plate manufacturer on the planet. If that happens Creo may want to ponder its future survival. There is another organisation called Creo

Spindrift

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

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

Subscriptions:

Spindrift is a digital only publication, distributed in Adobe .pdf format. A ten issue subscription (our version of a year) costs €50 and can be obtained by going to www.digitaldots.org and subscribing. We strongly suggest doing this as it is the only way to legally obtain this publication and we know you all want to be legal, especially at this sort of price. Discount multiple subs are available. If you're undecided and require some high-powered sales encouragement, ring Laurel at the number above.

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▼ which might be able to help. The Committee on Recently Extinct Organisms' mission is "to foster an improved understanding of species' extinctions that have occurred in recent times".

New Twist for Dalim

Dalim has announced new versions of its workflow technologies to reflect their JDF compatibility. TWIST PRiNTEMPO is Dalim's JDF-based front-end capable of driving pretty much any platesetter on the market. Dalim has also renamed Ficelle its automated project and workflow collaboration technology. Mistral is now fully JDF based and combines MIS, automated production and collaboration within a virtual shared workspace.

JDF based MIS system

Admera, a Swedish software company, has recently launched what we believe is the world's first fully JDF compliant MIS system designed from the ground up for the graphic arts industry. Admera has its roots in the company Inreco which showed a system for estimating and production planning at Drupa 2000. This company was a spin off from a large commercial printer. The introduction of JDF inspired Admera to consider a total rewrite of this system. Following an investment of SEK50 million and one year of solid graft, this they have now done.

Admera VCS (Visual Communication Systems) clients are written in Java and the system uses JDF's root/node process structure for job handling. This process structure enables the system do such things as warn an estimator if they forget to input an item necessary for production calculations.

The Admera MIS system is fully configured for integration with different JDF-enabled RIP and print management systems.

3B2-FO (or should that be Threebeetuf?)

Advent is one of those companies that is simultaneously well known and yet not at all well appreciated. This may be down to product names such as this one! This is a pity because this new tool ads composition and page formatting to documents, either for printing direct or to a PostScript file. 3B2-FO takes raw XML files or ready made XSL-FOs and turns them into PostScript or PDF files, but as with so much XML it's not that simple. XSL-FOs files need to be fully formed and contain the necessary formatting and layout information and raw XML needs its associated XSLT transform details.

The technology is based on Advent 3B2, well known in the technical documentation market. This software has developed over many years and is in use across a range of applications including scientific and legal publishing. Advent certainly knows what it's doing when it comes

to writing code and has long been a fan of XML and structure in publishing applications.

Despite its uninspiring name this is an important piece of technology because it does away with the need for a pagination engine such as XPress or InDesign. For newspapers and indeed any users of high volume editorial and content management technologies, 3B2-FO is worth a look. Just try to avoid acronym overload. A 30 day trial version of 3B2-FO will be available at www.3b2.com at the end of October.

Cut variables with CGATS

CGATS (see Acrobites) has updated its creaking 1993 standard for spectral measurement and colorimetric computation for graphic arts images.

The most recent version, CGATS 5.0, specifies how to measure graphic arts images in order to ensure that the resulting data are valid across images and that they can be compared. The idea is to provide a standard so that there is only a limited way in which to measure spectral information and perform colorimetric calculations. Using a non-standard method could result in different numerical results for the same colour, according to how the sample was measured.

The new standard can be used in the preparation of images for all kinds of printing including traditional long run work and short run digital printing and proofing. In a piece of prose worthy of Spindrift's Say What? spot the CGATs people explain one aspect of the standard thus: 'The normative section on sample backing material, and the related informative annex, have been significantly expanded to include the use of white and self-backing in specific cases. Guidance on the choice of backing is provided, and information is given on a procedure to be followed to determine the opacity of the substrate, an important factor when selecting the backing material to be used when making reflectance measurements.' But don't be put off. Anything that reduces the number of variables in a colour managed workflow has to be a good thing. And it only costs USD25 from the NPES in the US.

Colour Knowledge Management

Singapore printers A&P Coordinator Pte Limited is funding development of a new colour management system based on AI (Artificial Intelligence – see Acrobites). The developer, Kikuze, started life as a division within A&P, but has recently been spun off as an independent company. In conjunction with the Singapore Institute of Manufacturing Technology Kikuze is working on the application of AI for rule driven colour management. The system will be able to take into account contextual variables to ensure that colour rendering is accurate and consistent. It is based on Focoltone's technology for CYMK specification used in various tools such as

▼ Xpress, Freehand, Photoshop and Illustrator. Focoltone Intelligent Colour Calibration System (FICCS) is intended to provide colour standardisation across complex output systems as an adjunct to ICC based colour management. The assumption is that we need a methodology for colour management that reflects both the demands of new media production and the proliferation of distributed network printers.

Kikuze's mathematical analysis is based on perceptual value differentiation, plus AI to bridge objective and subjective colour perception. The company's application of AI relies on the use of filtered data sets to establish data variables and Kikuze has a number of patents pending. The idea is to filter data so that only the crucial data is held, all else being treated as noise and so not included in processing calculations. Thus in a colour management application noise and zero values for cyan, yellow, or magenta data are excluded from calculations. This effectively reduces the amount of data to only include colour critical values.

The system uses fuzzy logic and AI to adjust CMYK values by relative values rather than absolute ones. Perceptive and objective colour measurements differ and it has proved very difficult to build colour management modules that allow consistent processing of profile data across CMMs from different developers. This has not been adequately addressed by the ICC and the ICC does not appear to be making any progress in developing tools for verifying colour outputs. Alwan Colour Science (see Spindrift Issue 3) is the only company of which we are aware developing this kind of tool. Kikuze's technology is intended to be a means of optimising ICC colour management framework using high speed sensing, colour measurement and comparison and intelligent colour controls. It will function as a Photoshop plug-in.

FICCS provides a measurable and repeatable colour calibration process, based on subjective and objective colour output comparisons, measuring perceptual differences between colours as well as spectral values which do not always correlate. Colour characteristics are stored in a Knowledge Base and subsequently used to automatically detect colour inconsistencies. The system objective is to minimise a printing system's colour inaccuracies and ensure digital colour output accuracy. The key part of this system lies in the reuse of knowledge and expertise in order to develop a foundation for colour knowledge management.

Artificial Intelligence's record for graphic arts applications has been less than glittering, largely because its rule application has been too rigid. It has also been unable to take into account the interaction of variables within digital production. There have been a few successes such as Harlequin (now Global Graphics) use of AI for RIPping and Screen's use of it in scanner set

ups. Kikuze's software is currently in testing and is due for completion at the end of the year.

Océ Pushing Ahead

Following its recent reorganisation Océ has announced a strategy not dissimilar to that of Xerox and HP, going for the facilities management and outsourcing corporate cake. The company is going all out for the document services market, working with volume corporate and commercial accounts to increase output to Océ engines. Océ already provides such services to Rolls Royce and has now signed a five year contract valued at £4 million with British Nuclear Fuels Limited. The Rolls Royce contract signed two years ago has yielded 30% additional revenue over its initial contract value and Océ are confident of a similar extra value on the BNFL deal. Such contracts can generate 18-20% per annum in knock on sales in other European markets.

Océ has also signed a contract with Invesco fund management company to provide variable data print and colour output management. Annual output is an anticipated 4-5 million A4 pages and 2.5 million envelopes. Océ is installing two Varioprint 5000s and two CPS7000s plus Prisma control and management software.

Océ has a new colour engine. The hybrid TCS400 Multifunctional Device (MFD) adds 508 ppi (optical resolution) scanning with support for colour input. The first installation of the four colour inkjet device is at Cathcart Property in two weeks time. Océ also announced two new colour devices with engines sourced from Minolta and Océ front ends. The OCS 170 and 220 print 20 and 30 pages per minute respectively using a polymerised wax toner and the company describes the output as "consistent with the CPS 700", installed at several hundred sites worldwide.

Developments on Océ's wider format inkjet technology are progressing but slowly it seems. Meantime upgrades to the CPS700 are imminent with new toners and improvements to the paper handling, and according to Bron Curley business unit director for Digital Document Systems, "more and faster production printers are coming". Two new colour engines are expected to be announced in the CPS family later in the year. The Minolta engines provide Océ with a stopgap meanwhile.

Separately, Océ announced a new addition to its growing number of digital newsprint publications. The International Herald Tribune will print a number of its Asian editions in Sydney at Security Mail Pty Limited saving 24 hours in distribution time. This printing company is one of Océ's strategic partners (customers) and will print the IHT on the Newspaper 7000 digital press. The UK Guardian is also printed at this site.

Spindocs

(Where the spinner gets spun!)

This, found in an industry newsletter, caught our eye as much for its gratuitousness as because it is soooooo last century.

"Digital Media: The Future Is Now

Digital media. The words combined scream the future of communication, but what does that really mean in the shifting pixels of the computer world?

With digital print, delivery of documents, video, audio and instant communication taking place on the desktop, laptop, palm and tablet devices, digital media encompasses a fairly wide swath of definition and opportunity.

Digital media is indeed the future. But how it is defined, implemented, converged and seen by end users is still in the infancy stage. Finding ways to tie each set of tools, each workflow, each concept and then sharing all of that information falls to the various software and hardware manufacturers, as well as users. Sundance Media Group is in the middle of the fray, attempting to help some manufacturers sort out the priorities of ubiquity."

There then follows an invitation to join Sundance at a pricey little seminar. Maybe this sort of thing has something to do with why the conference business is so depressed!

Acrobites

(Something to get your teeth into)

AI

AI (Artificial Intelligence) is closely related to logic programming and neural networks. One man who saw its possibilities in computing very early on was J.C.R. Licklider of MIT. In August 1962 he presented the "Galactic Network" concept. He envisioned people interconnected globally, able to access data and programs quickly from any site. In 1962, Licklider was the first head of the computer program at DARPA (Defense Advanced Research Projects Agency) and was able to convince his successors Ivan Sutherland, Bob Taylor, and MIT researcher Lawrence G. Roberts, of the importance of his networking concept.

Besides connecting computers to each other the idea of using AI to "train" them has also been around for a while. In the graphic arts industry we have seen possible usage of AI in scanning software, OCR (Optical Character Recognition) applications and job management. One of the most ambitious projects using AI in job management

was presented by Harlequin with their concept EP2000. The idea was that the workflow system should be able to handle job queuing (load balancing) by itself, using AI and a list of rules. Unfortunately the founder of Harlequin, Joe Marks, never got to see the system launched because Harlequin sunk in a sea of red and was acquired by Global Graphics.

Nowadays Global Graphics' RIP solutions and workflow systems take a more pragmatic approach to the use of computers, which may be just as well. Movies like 2001: A Space Odyssey (remember the computer Hal?!) and the Matrix speculate as to what might happen if the computers get just a little too clever.

CGATS

CGATS (Committee for Graphic Arts Technologies Standards) is a North American organisation formed in 1987. It was set up following a year-long assessment of the need for an umbrella graphic arts standards committee by the Image Technology Standards Board (ITSB) of the American National Standards Institute (ANSI). CGATS received ANSI accreditation in 1989.

The committee's goal is to have the entire scope of printing, publishing and converting technologies represented within a single national standardisation and coordination effort. This effort should also respect the established activities of existing accredited standards committees and industry standards developers.

CGATS has five working groups to address such issues as correction marks and prepress exchange formats. Working group 2 handles such topics as TIFF/IT, PDF/X and PPML. CGATS has a close relationship with NPES, the US based association for suppliers of printing, publishing and converting technologies.

Say What?

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

We couldn't resist this gem from Shell's annual report:

"We are also talking real partnership: Shell and others in the private sector innovating affordable locally relevant solutions; local customer and civil society groups being deeply involved in local energy distribution approaches that ensure both access for the poor and conservation; and governments, often with limited administrative capacity, that nevertheless create a policy environment that both keep energy affordable for the poor consumer while ensuring the energy producer the return necessary to stay in business."

Letter From... Esher

Ciao Spinnininasimos,

Me name esto Frankie e I esto malincolia e sad. I used to esto a printissimos assistente but I was no bene at it. I esto ever so piccolo so now I esto a jockey. I labore in Esher at Sandown Park Racecourse. I esto molto sad because there esto so molto ignorante stupidos losing so molto monarios allo races. They no comprende that race courses esto full of liars e cheats.

Mi brother workeroste in a betting shop e Luigi dicce dat his bestissimo customer losta €500 yesterday. Dis esto a pitissimo because de silly punter investissimo in bookies e horsotti but no in their compagnatos. Il peopola working away i compagnatos need investissimo, especialamente the not so smarticcato ones con me. Dey need books e journali, like Spindrift to keepa in touch. Losing molte dinaros at the races no esto a good thing for il peopola!

When nextissimo I ride me horsotti i Sandown I will watch con beady eyettatos for the ignorante stupidos. I tell dem gamblingato on horsotti no esto profitablita but gamblingato on people esto.

Con men felicitas bravissimo e fortissimo!

Frankie Dotkomori

Driftwood

(Useful stuff washin' in on our shores)

Linux

In 1991 a Finnish student called Linus Torvalds set about developing the operating system that we know today as Linux. A derivative of Unix, Linux was the OS equivalent of a hippie: friendly, easy going and infinitely open to personal growth. Linux has evolved steadily over the last twelve years and has now permeated through to the very heart and soul of information technology. That Linux developers IBM and SCO are engaged in an undignified scuffle over licensing of Linux code is testimony to the credibility Linux has achieved.

Linux is an open source software free to anyone who wants to use it. The operating system is distributed and maintained under the GNU General Public License. This license is protected by copyright of the Freedom

Software Foundation in the USA, can apply to any software, and guarantees a user's right to share and change software. It is definitely not a license that the music and film industries would want to use!

The GNU deal is not about money however, so it is entirely within its remit that Linux developers could charge for their services. It is also reasonable to expect that companies would choose to pay developers, which is why Linux has gained widespread respect beyond Hackerland. Money is of course the reason why SCO and IBM have got their corporate knickers in such a tricky twist. Contrary to myth Linux can most definitely provide a revenue stream.

The other important thing about the GNU licensing arrangement is that it allows people to use the source code and to use it in new free programs. Anything distributed carries with it the recipient's rights to also pass it on. The policy has encouraged the widespread deployment of Linux and derivative technologies, and has fuelled a huge development community.

SCO and IBM are arguing over Linux. SCO reckons that IBM infringes SCO's code copyright and is trying to get license fees out of IBM's Linux users. This of course entirely contradicts the Linux philosophy but that hasn't stopped SCO. Even worse SCO has elected not to tell Linux users which bits of Linux SCO thinks it owns the rights to. This means that it isn't possible for users and developers to remove the offending code. But whatever happens we can be pretty confident that the Linux development community has already worked out how to avoid conflict with SCO. It is easy enough to get a supplier to provide legal indemnity, otherwise provide protection, or simply to switch to companies that use no SCO code.

Linux has yet to really take off within the graphic arts community. Dalim is the lone high profile developer basing its technology on Linux. This is likely to change however, particularly as workflow technology matures and we need real processing muscle. Hardware manufacturers increasingly support Linux because of its robustness and scalability. It's a bit like the choice between the steroid enhanced athlete and the one that wins exclusively on merit. Both might produce equivalent results but the use of steroids will catch up in the end.

Boomerangs

(Your feedback fed back, or, in this instance, Paul's)

Laurel, you got it wrong!

In a recent Acrobites entry our esteemed colleague Laurel Brunner dismissed AdsML as a data format too far. But ad delivery and management is about much more than creating and sending PDFs. At Ifra Expo in Leipzig this October AdsML version 1.0 will be officially launched. Yet one more standard based on XML, and yes Laurel it will help us to improve ad management.

Technology evolution happens in small jumps rather than as a steady, linear and predictable stream of events. We've busily learnt how to create digital documents, and PostScript and PDF are central to digital workflows. Digital production is technologically mature and most shortcomings in file formats have been ironed out over the last few years. But much of our person-to-person communication has to a great extent been paper based, despite the fast adoption of Internet based communication such as FTP and email. Looking at ad booking and management many of the systems used are still paper based and have looked more or less the same for the last twenty years. A paper based ad booking order may travel back and forth between the parties twenty times before all the details are considered correct. Outside the graphic arts industry much of this paper based document exchange is getting replaced by EDI, Electronic Document Exchange.

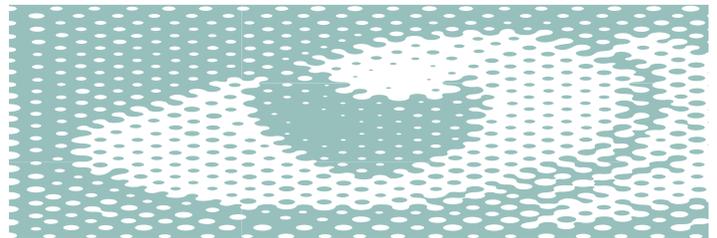
Enter AdsML, the EDI for newspaper ad management, much as JDF is the EDI for the commercial print and publishing industry (and yes, there are links between AdsML and JDF). For some reason Scandinavian newspapers are quite quick to adapt to new technology, and many have been involved in standards used beyond their home markets. The production management standard IfraTrack is to a great extent based on an initiative from the Royal Institute of Technology in Stockholm, commissioned by several Swedish newspapers. Ifra's XML-based standard AdConnexion, for ad management, has operated for some years now in Scandinavia, and has been recommended by Ifra to its members since 2000. AdConnexion started life as an XML DTD (Document Type Definition) for electronic ad booking and management forms.

But is it really only in Scandinavia that this type of development take place? Of course not. In parallel to the work in the far north, the Australian company Quickcut has developed similar solutions. The NAA's Crest format for classified ad mark-up management, Associated Mediabase's ADS and the UK Newspaper Society's AdFast are further examples.

All of these different parties acknowledge each other's work and have lately joined forces to bring some order in what might become quite a messy bunch of file delivery standards. That is what AdsML is about. The hope for AdsML is that it will be the accepted international standard for ad management, not limited to ad delivery, but including ad booking and efficient placement on the actual page (and this might be a web page).

What will then happen to Ad Connexion and the other existing standards? To put it simply AdsML will be an umbrella for existing standards. Companies can continue to use them where they serve a certain need. For anyone planning to develop more functions and features for ad management, from now on it will be very wise to look carefully at what the AdsML working committee is doing with the format. As with all good standards, when implemented intelligently, it will be more or less invisible to the user. AdsML, like PostScript, is a page description language with a user interface built on top, so that it is user friendly and integrates into other desktop applications smoothly and conveniently. So yes Laurel, we do need AdsML!

-Paul



RIP Systems and JDF

Much JDF rhetoric seems to hover somewhere between mind-numbingly complex and even more mind-numbingly dull. This may be why many printers and publishers are reluctant to get on with building their implementation strategies, but fortunately the development community is less faint hearted. All of the major RIP developers are building JDF compliance into their next generation RIPs, whilst ensuring that yesterday's technology doesn't have to be entirely pensioned off. Strategic views are in several ways shared but there is by no means a consensus for JDF technology. JDF implementation strategies can therefore be designed according to the publishing imperatives, rather than constrained by technological ones. Paul Lindström goes through the latest developments from the major players.

Agfa – Apogee X and Delano

Along with Adobe, Heidelberg and MAN Roland Agfa is one of the founding “gang of four” companies that initiated JDF in 1999. The company was one of the first RIP vendors to embrace Adobe PDF and PJTF (Portable Job Ticket Format), but the problem for Agfa was that Adobe's specification wasn't very complete. In order to build its PDF workflow Agfa had to add commands to the PJTF code set to make it work for their customers. This work gave Agfa a solid knowledge base when it made the switch to JDF and JMF (Job Messaging Format).

The Apogee Series 3 is the current JDF compliant system, with real users running it live. The system can read and write JDF commands, although internally it still works with PJTF. Truly comprehensive JDF functionality will only happen with Apogee X, currently in roll-out. It works with JDF in conjunction with a job database managed within Corba (Common Object Request Brokering Architecture) in an XML environment well suited to utilising JMF for communicating between processes.

In cooperation with Quebecor, one of the biggest printers in the world, Agfa has also developed an order management system called Delano. Delano works with MIS systems and Agfa has a couple of alpha and beta systems running at the moment. Delano isn't necessary for JDF compability because Apogee X works directly with MIS systems. Delano's strength is in facilitating order and project management, both for the printer and the customer. Agfa isn't currently planning to launch any MIS system, opting to integrate instead with the many existing systems on the market. MIS system options are very regional and a system dominant in one country might be virtually unknown across the border. Quite often printers develop “home brewed” systems of their own, a phenomenon especially common in newspapers. The same thing can be said about Media Asset Management systems, so Agfa prefers to focus on integrating within the Apogee and Delano architectures with JDF the golden link in the workflow chain.

Creo – Synapse making the link

A synapse is the juncture between two nerve cells so Creo clearly has to win the prize for the best JDF system name! Following the divorce with Heidelberg, Creo chose not to replace Prinergy with a completely new product built exclusively for JDF. In order to support their RIP systems over time, and to support JDF, Creo has designed a common interface for Brisque, Prinergy and Spire. The Synapse Director suite will be

It is excellent news for users that so much work is being done to make RIP technology JDF compliant, particularly since much of what has been said of JDF has been more theory than reality.



Agfa Delano is a joint project with Quebecor. It is designed to help the project manager and/or production planner with job management.

officially launched next year and its modules will provide Creo systems with links to MIS and other JDF systems.

Implementation will take time. Brisque is still very popular with its users, and the Synapse architecture will certainly prolong its life. Brisque 5 is in beta at four sites and is due for launch later this year. It has a new user interface built in Java (just as with Prinergy) and optimised for Synapse connection. Creo's RIP is Spire used with digital presses and high volume printers. This RIP has a lot in common with Prinergy and Creo provides this technology to other companies including Xerox. Xerox uses Spire as part of its JDF compliant workflow and is rebranding all Xerox related workflow system components under the Freeflow banner, incorporating JDF technologies within this strategy.

Synapse is a suite of many software modules but Synapse InSite Server and Synapse Link are the crucial ones. Creo has established links to several MIS systems already through Synapse Link, most notably the Prism system. Creo has made available a DTK (Developers ToolKit) to help integrators and MIS programmers build connections to the Synapse technologies. Initially such integration was taking 9–12 months but now integrators such as Dutch MIS providers X-gram Open are taking as little as a couple of months.

Synapse InSite Server provides Brisque and Spire users with bridges to the outside world via JDF. InSite supports decentralised proofing over the Internet, as well as soft proofing on screen and remote proofing on calibrated colour proofers. There is a series of smaller Synapse modules for designers and publishers. Synapse Prepare creates preflighted PDFs using the same rules and quality thresholds as Prinergy. Synapse Page Assigner allows a designer to assign an imposition template and page order to a document. This information is saved in a JDF file and used to automate processing in the prepress department.

Clearly Creo already has a range of JDF aware or JDF compatible products running at some customer sites, but few they are willing to boast about. Nonetheless Creo customers are working to some extent with JDF in live production. Creo's cooperation with Print Café has provided the company with experience in online estimating and job procurement, especially through its work with the Hagen MIS system. This experience will stand Creo in good stead for its continuing R&D efforts, even if the cooperation with Print Café has been rather shaken by Efi's recent Print Café coup.

The Creo solutions are pragmatic in that they leave the RIP systems more or less as they are, using a common JDF layer in the form of Synapse. Over time it's likely that some JDF and JMF processing will get integrated directly in Prinergy and Spire. However Brisque, in spite of the new version 5 is still not based on PDF. It will at some point have to be abandoned.

Esko-Graphics – Backstage the path to JDF compatibility

Esko-Graphics supports two RIP lines: FlowDrive originally a PurupEskofot technology and Fast Lane a Barco Graphics development. Esko-Graphics intends to keep Flow Drive for small to medium sized applications and Fast Lane for high volume, high speed production. Esko-Graphics has added a suite of modules to FastLane called Next Generation and Backstage is the job management module. Esko-Graphics' PostScript interpreter is the Flex Rip and this now works entirely with PDF as



Synapse InSite is an important part of Creos' JDF implementation. It's the link between RIP systems and MIS systems.

Clearly Creo already has a range of JDF aware or JDF compatible products running at some customer sites, but few they are willing to boast about.

the preferred file format. Esko-Graphics has finally abandoned GRO Barco's internal format. According to Esko-Graphics PDF version 1.4 together with some special plug-ins for Acrobat and Illustrator had all the features required for professional production, even in demanding environments such as packaging production. PDF 1.5 only improves this situation.

In addition to Backstage Fast Lane consists of various modules including DeskPack, Pack Edge, Plato (for step-and-repeat work), and Flex Rip, which drives virtually any kind of output engine.

All JDF files are converted before coming into or out of Back Stage. Esko-Graphics works internally with rich sets of metadata. In the future this may very well be JDF/JMF metadata. The OutWrite module in Backstage can already create PDF files containing the information for correct impositioning and step-and-repeat work. At the moment Esko-Graphics use XMP (eXtensible Metadata Platform), Adobe's open source technology and a means of capturing file metadata. JDF is also an XML application, so working with XMP helps Esko-Graphics phase JDF implementations over time. Backstage is the obvious platform to expand in this development.

Fujifilm – treading carefully towards JDF

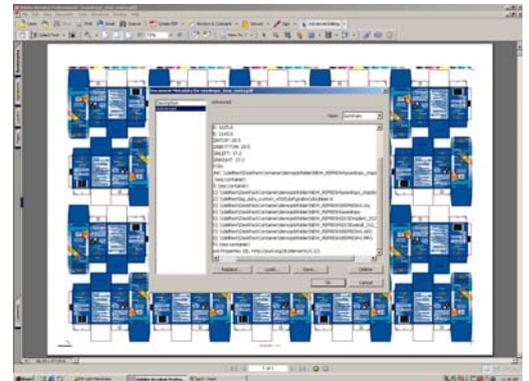
Fujifilm has had some degree of JDF compatibility in its RIP systems for a while. Fujifilm showed a prototype JDF module at Ipex 2002 and this is now installed and in beta testing at a number of sites. Celebrant is Fujifilm's own RIP and Rampage is sold under license. Fujifilm has its own MIS system of sorts although Valiano VBMS is currently only available in the UK. Some tentative effort to get into Internet based workflow management was made with the launch of the myFujifilm.com portal. The difficulty is that the Valiano VBMS came out of a cooperation with an existing UK based MIS vendor, but it hasn't been approved by Fujifilm internationally. It's still uncertain if the Valiano VBMS will be exclusively a UK product or if it will be available internationally. If the former, we should expect some new solutions to come from Fujifilm some time in the near future.

Another link to JDF in the Fujifilm workflow is through products such as Scenicsoft's Preps and UpFront. Fujifilm intends to present its wider JDF strategy later in the year. Maybe. At that point Fujifilm may also reveal which MIS technologies will work with its RIP systems.

There is still no known name for Fujifilm's overall JDF interface, but according to John Davies, responsible for Fujifilm workflow systems in Europe, there will be added and expanded JDF and JMF capacity to the existing JDF prototype.

Heidelberg Prinect – the digital glue in workflow systems

Heidelberg has a unique position within the graphic arts community. The company's product portfolio spans the industry's entire technology requirement from input devices to bindery equipment. According to Heidelberg six different encoding standards manage communications within its complete technology range. JDF provides Heidelberg with a technology that fulfills external system and customer demands, but it is also a logical means of simplifying and streamlining the company's internal workflows and systems. The overall name for all Heidelberg



Esko-Graphics has moved over to PDF as its internal file format. This means that it can embed metadata into the files, for example in the XMP-socket. This may very well contain JDF-data in the near future.



For the last year there has been a JDF-option to the Celebrant RIP system. Fujifilm will reveal a more complete JDF strategy later this autumn.

JDF related products (over time this will include all Heidelberg devices and software) is Prinect. The main components are Prinect Prinance, a Heidelberg branded MIS system, and the Prinect Printready workflow system. Prinect Prinance is based on the Alphagraph MIS system, installed at over 2000 sites worldwide. Heidelberg is responsible for about 200 of these.

Following the break with Creo Heidelberg won't develop Prinergy any further. Instead the company has raised the profile of its Metadimension Adobe CPSI based PostScript interpreter. Unlike Prinergy Metadimension has no underlying Oracle database but instead relies on Printready, possibly in conjunction with an MIS system such as Prinance for database related functionality. Heidelberg's approach is also modular so users can start with a basic Metadimension RIP and then upgrade when needed. In the Prinect Printready workflow there are additional modules such as Prinect CP2000 to control sheet fed presses, Prinect Omnicon for controlling web offset presses, the Prinect JetBase DAM system, Prinect Signastation for impositioning, Prinect Image Smart the front end to the NexPress and Prinect FCS 100 to control bindery equipment. On top of all this there are numerous other modules that perform specific tasks within the workflow.

The Metadimension RIP can be used as a standalone system or expanded with Printready modules, with Printready providing the user interface. Printready consists of Normaliser, Preflighter, Image Handler, Color Carver, Trapper, Archiver, PDF Splitter, PDF Merger, PDF Imposer and Auto Assigner. Auto Assigner allows designers to set imposition templates and page order in documents. Heidelberg has also developed some Acrobat plug-ins to provide extended capabilities in impositioning and trapping. Enfocus Pitstop Pro is still a part of Printready and manages preflighting and PDF editing.

Last year in the US Heidelberg launched an Internet print procurement portal called Heiport, but this will not be introduced to the European market. Instead Heidelberg is suggesting customers use Prinance as the Internet link. It's likely Heidelberg will present a more elaborate Internet based solution to the European market later on, possibly at Drupa.

Prinance and Printready can both read and write JDF today. Over time Heidelberg's internal use of JMF will increase to gradually replace proprietary data tags. This is unlikely to be completed in time for Drupa 2004, but Heidelberg is striving to make major workflow modules JDF aware by Drupa.

Screen – Trueflownet JDF Production Controller

Screen's Trueflow RIP system with its web browser interface already works within an XML compliant architecture plus underlying database. Screen intends to establish connections to JDF and MIS through a single interface. Trueflow Net is modular and is built around a central JDF Production Controller. Screen users upgrading to Trueflow Net will replace the existing Trueflow interface with the JDF Production Controller for handling job management and job tickets.

Today's Trueflow is already somewhat modular. A customer can start with a well-specified base configuration, adding extra functions as needed. Amongst the modules are Archive Manager, Flat Runner and Flat Worker. The system has a JDF import/export module, but

JDF provides Heidelberg with a technology that fulfills external system and customer demands, but it is also a logical means of simplifying and streamlining the company's internal workflows and systems.



Heidelberg will use JDF as electronic job tickets all through their systems, including the Prinect PrintReady workflow system.



full JDF compliance will be through Trueflow Net which is still under development.

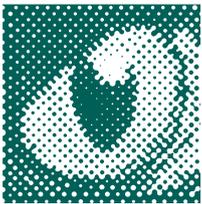
In the US Screen has launched its own MIS and DAM systems. In Europe the company tends to work on integrating existing MIS and DAM systems. An SDK (System Developers Kit) is available from Screen to help third party companies integrate systems with Trueflow and Trueflow Net.

It is excellent news for users that so much work is being done to make RIP technology JDF compliant, particularly since much of what has been said of JDF has been more theory than reality. Over the coming months manufacturers' strategies will unfold and by Drupa JDF will be well on its way to being an established component of digital workflows.

– Paul Lindström



Screen's Trueflow Net infrastructure.



Adding Brains to PDF Workflows – Enfocus one step ahead

PDF. Its possibilities, probabilities and potentials are endless. This much we know. PDF is our industry's security blanket, the one technology everyone knows about and everyone supports. It's the publishing industry's equivalent to electricity, and as with electricity there are loads of ways of producing it, although some are better (and much more fun) than others. Like electricity PDF works all over the world, but not always in the same way.

PDF and its X relations are, like electricity, based on a standard foundation and configured for specific purposes. Universally measured in Watts, electricity flows at different speeds in different countries. Universally based on PDF, Acrobat Readers don't see all PDFs as equals. And then there's that user interface thing. Three pin British plugs, two pin European ones, those wonderfully silly little American jobs – hardly a standard interface. Is the proliferation of PDF standards, like the electrical plug problem, undermining the original purpose of making a powerful technology mindless?

But do we really want mindless if mindless can still go wrong? Zips still get stuck, shoelaces still tangle, circuits still short out and computers still crash. What we really want is system intelligence that doesn't upset the balance between flexibility and reliability. When it comes to PDF we want intelligent processing that both preserves form and respects function.

Function not form

This is where Enfocus is going with Certified PDF.net. In concept the idea is not dissimilar to that of Quickcut, although Enfocus has very different origins. Quickcut is a digital ad delivery diva and Enfocus dominates preflight. Both companies have developed tools to add delivery intelligence to distributed PDF workflows, using a hub and spoke model for file delivery. Their technologies automate PDF processing and provide quality control, but where Quickcut is building an international ad delivery model, designed to support every publisher on the planet, Enfocus is more concerned with preflighting and generic file management. Certified PDF.net is not as clearly defined a service provision as Quickcut's, but it could provide equivalent file management techniques for any company working with distributed PDF workflows.

Enfocus' strong engineering bias focuses on fixing wayward digital data interpretation. The company's core technology is based on Pitstop Library, Certified PDF and PDF Profile, a rule set for preflight functionality. Pitstop Professional and Pitstop Server provide editing and correction tools with preflight rules written according to application demands. Instant PDF allows document creators to set up several print queues using these preflight rules to push the preflighting process upstream. Certified PDF incorporates all of these products. Although Certified PDF enables reliable file exchange in any graphic arts workflow, as Marc Goldchstein Enfocus' vice president marketing puts it, Certified PDF is only "the beginning of an answer".

Certified PDF combines comprehensive PDF editing and correction with a complete audit trail. It has a common pricing structure and support ▶

About Enfocus

Enfocus was founded in 1993 to provide PostScript editing and preflighting tools. The company shifted its attention to PDF in 1997 and with venture capital investment in 1999 was able to develop the tools for which it is best known. Artwork Systems acquired the company in 2003 but Enfocus' 37 people, 19 of whom are in development and support, still operates pretty much independently.

Consolidated revenues for Q3 2003 were €1,89 million, an increase of 43.5% over the €1,31 million recorded in the first quarter of fiscal 2002. Q3 operating profit was €701,000, compared to an operating loss of €62,000 in the first quarter of fiscal 2002.

Enfocus is the world's market leader in PDF editing and certification, selling both direct and through a small army of OEMs that includes the major players in the industry (Agfa, Creo, Fuji, Heidelberg, Xerox). Most Enfocus OEMs use its technology within workflow management systems but recent OEM additions such as Compose use the Enfocus technology for checking files prior to RIPping, and as part of direct imaging RIPs for digital presses.

tools, universally supported by the Enfocus OEMs. The scope of projects for which Certified PDF is used gets ever more ambitious. For example at Walsworth Printing in the US, Certified PDF is the container for the job history data and management information for over 40 high school yearbooks in production. So where next to go with Certified PDF for workflow development? To the Internet of course.

Certified PDF.net

Enfocus Certified PDF.net is a website for managing and synchronising PDF quality specifications between design and production. Its main goal is to ensure document creators and receivers use up-to-date PDF specifications for PDF creation, preflighting and subsequent production. The site has all required preflighting and production specifications for checking and delivering production ready PDFs. Currently the site mainly provides standard specifications such as PDF/X and file specifications from various industry associations, primarily those working with the Ghent PDF Workgroup. The Ghent PDF Workgroup has developed and maintains a set of PDF specifications using Enfocus technology as a reference implementation. Besides the availability on their own website these specifications will reside on the Certified PDF.net server. According to Enfocus there are now 50 printers and publishers registered for the site, representing a community of an estimated 500 users.

This strategy could take Enfocus well beyond workflow applications development, and gives it more than a foot in the door of large scale validation applications. It will be interesting to see how this all fits once JDF gets into its stride.

Enfocus Certified PDF.net follows a similar principal to Quickcut which hosts a database of file specifications maintained by participating publishers. The objective is to provide a quality control reference check for file delivery. In Quickcut's case the files are ad files, and in Enfocus' case the files can be anything. In both cases the publisher is responsible for maintaining the specification's currency, so the host company is not responsible for file delivery or compliance.

PDF creators choose the specifications they use. A notification mechanism, built into all Enfocus products, will check whether the specifications used to create or check the PDF are still current and will notify the user when there are changes. The site is thus a quality control hub for production, synchronising specifications for PDFs both point and with multiple targets. ▶

The idea with Certified PDF.net is not to provide a centralised preflight model, where preflighting is done when the file reaches the receiver's server. In the Enfocus model preflighting is done on the document creator's desktop where the tools are available to correct possible errors. Certified PDF.net provides a centralised resource for PDF specifications allowing to access to the right PDF specifications for clean file transmission in the first place. This means no files are transmitted unnecessarily, and there is no delay between file uploading and getting the preflight report.

Enfocus derives revenue from Certified PDF.net subscriptions income. Subscribers such as printers, publishers and industry organisations provide free specifications to their users and customers such as designers and other document creators. Users have immediate access to specifications via Certified PDF.net and receive automatic change notifications via e-mail or directly from within their Enfocus applications. The subscriptions fee is based on the number of clients or users the fee paying subscribers want to support: up to 50 users costs €500 per annum, up to 500 is €1500, and up to 5000 is €5000. The subscriber controls the number of clients supported.

Pitstop Server 3.0 & Other Product Upgrades

As part of its Certified PDF.net initiative Enfocus is upgrading its other products. Pitstop Server 3.0 is now an OSX application and in line with other Enfocus products has the Certified PDF.net notification mechanism built-in. PitStop Professional and Instant PDF, both plug-ins for Adobe Acrobat, are now fully Acrobat 6 compatible and support PDF 1.5 features. In a minor upgrade expected later this year Pitstop Server will detect and fix PDF 1.5 features. Pitstop Server 3.0 is no longer based on any Adobe technology but is instead built on Enfocus' very own Pitstop Library, which is now OSX compatible and entirely an Enfocus development.

Adobe Out of Focus

Enfocus' move away from Adobe gives it considerable flexibility in developing tools based on the Pitstop Library. The Pitstop Library provides a tool set for programming application specific preflight checks. According to Enfocus, it can do far more with Pitstop Library than was possible operating within Adobe's constraints (a familiar cry). Enfocus now provides a public API for companies who want to integrate Pitstop Server into their applications. Apart from the attractions of this to smaller workflow companies, opening up Pitstop Server will be attractive to developers that want to support PDF in their applications but who have been reluctant to do so because of the costs involved.

This strategy could take Enfocus well beyond workflow applications development, and gives it more than a foot in the door of large scale validation applications. It will be interesting to see how this all fits once JDF gets into its stride. Pitstop Server 3.0 costs US\$2999 or US\$499 to upgrade and the developer programme is US\$2000 per annum.

Certified PDF.net is about distributed workflow management and this technology takes Enfocus to a new phase in its development. The shift from preflight to distributed workflow positions the company out of its vertical niche and into a broader space. Operating horizontally rather than vertically will allow Enfocus to provide tools for any application

What we really want is system intelligence that doesn't upset the balance between flexibility and reliability. When it comes to PDF we want intelligent processing that both preserves form and respects function.

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CertifiedPDF.net is an **on-line resource for PDF specifications**, accessible to all members of the Graphic Arts community. Contributing members (printers, publishers, creative companies or industry organizations) publish the PDF specifications they advocate on the website, as well as all related documentation. Subscribing members can query on these specifications and subscribe to them.

Moreover, contributing members can present their company or organization on their **personal page**. Other resources will be available to the visitors

- A database of **tips, solutions** to commonly encountered problems and other useful resources will make life easier for Certified PDF users.
- A forum will allow all the players in the Certified PDF initiative to communicate and exchange information.

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Basics Implementing workflows PDF & PDF standards Help

PDF & PDF standards

PDF, Certified PDF and PDF standards making sense of it all

Introduction

The vast majority of print jobs are cooperative efforts involving several companies. Designers create the artwork, prepress companies often finalize the artwork technically, publishers collate input from several sources into one publication, printers let their presses hum producing the end product. Transferring the documents in a way that is both simple and technically reliable is a key challenge for the graphic arts industry.

Initially, film was the medium of transmission. As the artwork was hard coded into molecules there was no risk of misinterpretation. But as the prepress process became increasingly digital and time-sensitive, film lost its appeal as a workable medium. So the quest for a workable digital file format started.

A brief history of digital file formats

A number of file formats became popular over the years: native file formats, PostScript, TIFF/IT, and vendor specific formats like the Scitex CT/LW.

▼
 where data is presented as graphic pages, from variable content printing through to content management.

Enfocus' recent announcements are not just technologically interesting. They are also interesting because they reflect where the industry is going. Preflighting isn't enough anymore and its evolution isn't only about moving preflighting upstream as Agfa has done with Apogee Create and Creo have done with Synapse. Just as Quickcut has had the prescience to understand the implications of web based automated file delivery for the advertising industry, Enfocus recognises that the web will be the dominant production environment for the graphic arts. The company is providing quality control tools based on complete, scaleable and streamlined workflows to facilitate the management of preflighting specifications and what constitutes compliance or not. This means letting preflighting processes reach into every part of the workflow and allowing them to interact within dynamic automated production environments.

It will be a long time before PDF circles the globe like electricity does. However bringing PDF file validation to the web can only help in the development of universal standards for distributed publishing and production. At least this evolutionary process will not follow that of electricity. In America it takes twice as long to boil a kettle as it does in Europe. So much for workflow efficiency!

– Laurel Brunner

Enfocus' move away from Adobe gives it considerable flexibility in developing tools based on the Pitstop Library. According to Enfocus, it can do far more with Pitstop Library than was possible operating within Adobe's constraints (a familiar cry).



Sri Lanka emerges as a hub for global packaging exports

Sri Lanka, with its excellent highways, modern port and telecommunication infrastructure could well become the hub for South Asian print and packaging exports. Its printers are smart and willing to employ the latest technologies and techniques and they have already established joint ventures with European and South Asian companies.

The business friendly government of Sri Lanka has made it easy for printers to raise capital and absorb foreign investment by decreasing bureaucracy and by regulating a transparent stock market. The import formalities and tariffs for sourcing equipment and consumables are minimal and that makes Sri Lanka's printers modern, professional, and competitive in the world market.

The export emphasis is on packaging material of all kinds. The larger suppliers such as the Print Care group and JF&I in Colombo have the most modern equipment for both flexible packaging using synthetic laminates and for board and paper packaging and labels. They use extrusion and coating lines from Brampton, gravure presses from Rotomec and MDI, flexo presses from Schiavi and Cerruti, offset presses from Heidelberg and Komori, and die-cutters and folder gluers from Bobst. The leading packaging plants of Sri Lanka are gleaming with new hardware and are fully committed to completely digital workflows, presses with full automation, and all the options and special machines for label punches and corrugators that instill confidence in the fussiest overseas packaging buyers.

Sri Lanka has vibrant textile, garment manufacturing, and tea industries (Ceylon tea is the leading export product of the country) and these have provided support for developing capabilities in international quality packaging. Strategically located and poised to be a gateway to South Asia, Sri Lanka with its good port facilities, can import machines and consumables from the East or the West and efficiently ship out its exports. The manager of Print Care, a leading converter, tells me that she imports her gravure cylinders from Germany and the cutting and creasing dies come from Switzerland. Specialising in packaging for lingerie for European department store chains and the third largest tea tag printer in the world, the government recently included Print Care as one of the twenty export businesses entitled to gold cards enabling fast track duty free imports with the merest of formalities.

The hardware at Print Care consists of two gravure lines and eight narrow web flexo lines specially converted and equipped for the printing of tea tags, sachets, and envelopes for manufacturing of tea bag packaging. The multicolour Heidelberg sheetfed presses include a 4-colour plus coater and a very unusual looking press with two units and two coaters and an embossing unit. Altogether the Print Care group uses 28 units from Heidelberg.

There are complete facilities for UV and aqueous coatings, blind embossing, foiling, stamping and punching with gravure, flexo, and silkscreen all under one roof. In addition, at Print Care's joint venture plant, Packages Lanka, there is an 8-colour Rotomec gravure line and a 6-colour Schiavi flexo press that can annually produce 30 million square

A workflow is the art of achieving maximum throughput with the given resources.

A glimpse into the South Asian Print Congress and Exhibition, provided by our Asian correspondent, Naresh Khanna, reporting from Colombo.

The first South Asian Print Congress was held in New Delhi, India in 1995 and the second in Kathmandu, Nepal in 1999. The third SAPC has just taken place in Colombo, Sri Lanka, on August 15 and 16. This Congress movement for sharing technology and business ideas in the printing industries should eventually rotate to all the seven South Asian countries. Pakistan has been designated as the host for the next event.

The conference at Colombo's Bandaranaike Memorial International Conference Hall was inaugurated by Sri Lanka's Minister of Power and Energy with a brief welcoming message to the delegates.

In his keynote speech at the conference, K R Ravindran, managing director of the Print Care group, said that although Sri Lanka may not have heavy industry such as steel or automobile manufacturing, there was no reason why it could not sustain a printing industry of international repute or the most cost effective printing and packaging plants in the world. Speaking about the experience of his own company over the last ten years, he said that apart from huge investments in new technology and an annual expenditure of US\$ 500,000 on training, the company has invested heavily in human values. He concluded that, "Emphasis should be placed on core values such as truth and credibility in order to be persuasive, and to establish the trust without which we ▶

▼ meters of flexible packaging. Packages Lanka is a US\$6 million joint venture with the diversified Packaging Limited group of Pakistan and the International Finance Corporation.

Corrugated star

Another leading converter in the Colombo area JF&I, is also one of the most diversified with equipment and expertise turning out board, plus flexible and corrugated packaging. The pre-printed C, B, and E flute corrugated packaging at JF&I is of a very high international standard. Sensitive and knowledgeable about the ecological issues and laws, JF&I has developed adhesive free corrugated boxes using PE coating as a binding agent for all flute profiles and its outer cartons can be fed into automated packaging lines. The company won four awards at this year's print awards competition including the Master Award as the best printer in Sri Lanka for the second time. JF&I have also won the AsiaStar packaging award three times - most recently for its corrugated carton for Noritake.

With five Heidelberg sheet fed presses, a 6-colour rotogravure from DCM, and an extrusion and coating line for flexible laminates from Bramton, and its variety of specialised converting equipment, JF&I has 300 employees and an annual turnover of US\$11 million. While this ratio of employees to turnover may be high by European standards it is low in comparison to most South Asian printers and converters. JF&I count amongst its customers Wal-Mart, North Pole, and Ansell Healthcare in the United States, and Sara Lee and Belami in Germany. Other customers include Unilever Ceylon, Nestlé, Noritake, Fuji, and Hallmark.

Prepress infrastructure

Sri Lanka's infrastructure for digital workflow for packaging prepress is formidable. Prepress companies based in Colombo such as Iris Graphics, JDC Graphics, and Premadasa have an enormous depth of knowledge and skill when it comes to industrial strength packaging workflows. Iris Graphics was funded in 1992 by venture capitalists and is run by David Jeyaraj, a computer engineer who began doing desktop colour separation in 1988 on a Linotronic 300P. The workflow is based on Barco Graphics' Creator, Kaleidoscope, and InkSwitch and the two Dec Alpha RIP workstations have not crashed since they were bought in 1996. Jeyaraj has realised "that a workflow is the art of achieving maximum throughput with the given resources." He is eloquent in his praise of software features such as treating transparency as an attribute that can be applied to any element and even at the vignette level; of treating special colours as process colours which radically improved the printability of all kinds of jobs; and of working in the vector format till the RIPPING stage which permits late binding.

Jeyaraj says, "We create a PostScript file out of customer files. The whole file becomes editable, even the vignettes. Whatever software the job was originated in, once it is in the Barco System it is editable as a vector. We were really selling off the workflow." Now Jeyaraj wants to create an automated workflow and a backend hub and spoke service for his customers. He plans to train his customers in workflow and he is encouraging them to buy and install the client software on their own premises.

The biggest single location prepress house in Sri Lanka, JDC Graphics, is completely equipped with the entire packaging software suite ▶

▼ lose the integrity of our business, and all is lost."

The conference contents over the two days ranged from global growth scenario of the printing industry presented by Jackson Tan of Heidelberg Asia, to technical presentations on rollers, inks, proofing for flexography, and the technical evolution in film and plate technology. Computer-to-plate was a hot topic discussed in four presentations and there were presentations on digital printing and several on management issues such skills upgrading, MIS, and branding.

Significantly, the SAPC program committee included a presentation by Donald Gaminitillake that discussed the obstacles in the widespread use of Sinhalese scripts for digital communication and prepress technologies. Gaminitillake proposed the establishment of a 2-byte allocation table for Sinhalese scripts that could be distributed as freeware and thereby become a standardised resource for software applications.

The exhibition organised alongside the conference was remarkably state of the art with the live running of a fully automated CIP4 Hamada 4-colour offset press from Japan as well as several other presses that are manufactured in South Asia itself. Quite a lot of sophisticated postpress equipment was also on show. Two CtP machines were displayed, the Screen Platerite 8100, and the Esko-Graphics PlateDriver shown running live. Both Kodak Polychrome Graphics and DuPont showed their latest inkjet proofing technologies at the show. TechNova, the largest Indian plate manufacturer, showed its PolyJet inkjet polyester plate technology that is currently undergoing beta testing all over India, the UK, and the US. The technology is heading for a launch at Drupa 2004.

The exhibition drew tremendous interest in Sri Lanka especially among young people who were who were not aware of the high technology that now pervades the industry. Bejan de Silva of Colt, one of the large machinery dealers in the country told us that, "Out of all the ▶

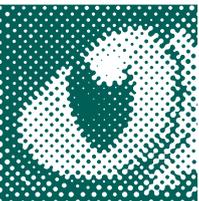
from Esko-Graphics and every type of digital output device except electronic cylinder engraving for gravure. JDC Graphics outputs colour managed proofs to HP DesignJets, film to a Barco 3700, die-cutting and creasing samples to a Kongsberg cutting table, digital flexo plates to a CDI SparkXT, and offset plates to an Esko-Graphics PlateDriver 8-up computer to plate device.

Premadasa Graphics is a multi-location and multinational prepress company based in Colombo with outlets in Sri Lankan cities such as Kandy, Mount Lavinia, Pitakotte, Galle, and Ja-Ela. Premadasa also runs prepress houses in Dubai in the Middle East and in Dar es Salaam in Tanzania. Supplying film and plates to offset and flexo printers in these places, Premadasa use Artwork Systems packaging software extensively with output to Screen imagesetters. In Colombo, Premadasa has also installed the first Indigo digital press in South Asia.

Apart from prepress trade houses that have provided very high quality inputs and support to the packaging exporters, the large packaging houses are themselves continuously upgrading their in-house design, workflow and digital output. To service packaging buyers that include retail chains such as Tesco, and Marks & Spencers, Print Care has a complete design and prepress department outputting film to a Barco imagesetter. Recently, Print Care signed an agreement to install a complete CtP system from Creo including Art Pro and other software for a new joint venture project with Jennings, one of the leading repro houses in the UK. Jennings intends to source their repro requirements from the newly proposed Print Care-Jennings company.

The experience of the SAPC and the visits to some of Colombo's leading printers is a confirmation that South Asia will play an increasing role in the globalised print of this century. South Asia has all the ingredients – content creators and managers, software suppliers, consumers of print and packaging, manufacturers of equipment and consumables, and print service suppliers. Sri Lanka is a leading provider of both prepress services and packaging exports. For South Asia itself, Sri Lanka is the model for rapid technology absorption and modern business practices.

– Naresh Khanna



exhibitions this has drawn the biggest and most interesting crowd. Almost every printer in Sri Lanka visited this well organised exhibition.”

The event highlighted the cooperation of various institutions and the government in establishing training institutions such as the Ingrin Institute of Printing and Graphics in Colombo. The Ingrin Institute founding has been supported by the European Union, the Ingrin Foundation of the Netherlands, the Sri Lanka Government and the Sri Lanka printers themselves. A basic study was undertaken in 1995 and since 1997 Ingrin and its partners have collaboratively taken up the mission of making Sri Lanka's print industry globally competitive.

SHNM0 (NAMAL), Normal & Bold, 24 Point.

පින් මද පුතුන් සියයක් ලදුවත් නිසරු
ගුණ නැණ බෙලන් යුතු පුතුමය ඉතා ගරු

එක පුත් සඳින් දුරු වෙයි ලොව ගණ අදුරු
නෙක නරු රැසින් එලෙසට නොම වේස දුරු

SHHR0 (HARMONY), Normal, 24 Point.

එක පුත් සඳින් දුරු වෙයි ලොව ගණ අදුරු
නෙක නරු රැසින් එලෙසට නොම වේස දුරු

ඉංග්‍රීන් ආයතනය මගින් මුද්‍රණ හා ග්‍රැෆික් විෂයයන්
ඇසුරෙන් පාඨමල සම්මන්ත්‍රණ වැඩමුළු සහ පුනුණු
සැසි පවත්වනු ලැබේ. දේශන පැවැත්වීම නෙදර්ලන්තයේ
පුනුණුව ලත් ශ්‍රී ලාංකික වෘත්තිකයින් සහ නෙදර්ලන්ත
ජාතික කටිකාචාර්යවරුන් විසින් මෙහෙයවනු ලැබේ.

Sinhalese scripts cause problems in digital communication and prepress technologies. During the conference (above) the establishment of a 2-byte allocation table for Sinhalese scripts was proposed. This could be distributed as freeware and thereby become a standardised resource for software applications.

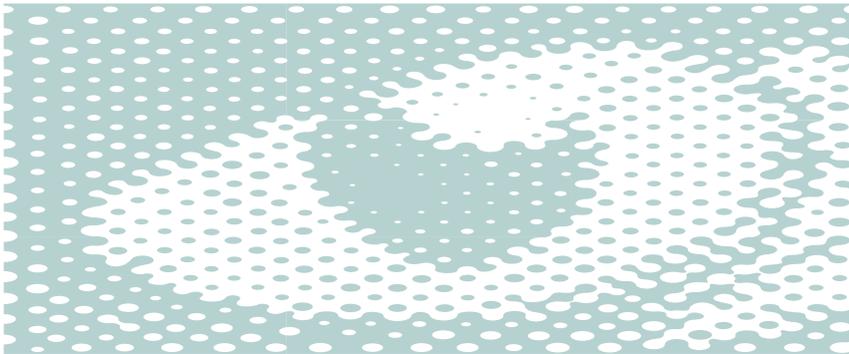
(Top: Two Sinhalese fonts from CDAC. Bottom: A paragraph from the Ingrin Institute in Colombo brochure)

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