Proof • n. 1 evidence establishing a fact or the truth of a statement. 2 the proving of the truth of a statement. 3 a series of stages in the resolution of a mathematical or philosophical problem. 4 a trial impression of a page used for making corrections before final printing.

From the Compact Oxford English Dictionary of Current English

Dear Reader,

Quel month it's been! Howling winds and storms of the commercial and metereological sort have continued to etch away at the graphic arts landscape. Esko-Graphics has this month bravely declared a shift in strategy, even though feint signs of recovery for commercial printers are glimmering.

With the Internet fast becoming unreliable as an effective communications medium, it seems that print buyers are returning to tried and tested techniques for sales and marketing. That means print, both digital and conventional offset, as well as digital communications.

But print buyers, publishers and suppliers stand on a constantly shifting competitive slope. They need more than ever need to work with service and system providers to come up with innovative ways of producing print. Of course the production stuff won't go away, but production processes are increasingly subsidiary to publishing and print specification processes. As automation and process management become the order of the day, the line between the two gets fuzzier and fuzzier. It's by no means clear where in the process the line will be drawn, but clearly print based services are thriving. How that print gets produced is no longer exclusively a matter of production technology. The business of print is about just that... business.

Enjoy,

Laurel, Cecilia, Paul and Todd

In This Issue

The proof of the pudding?

Proofing is one of those tricksy little problems that just doesn't get any easier, regardless of how clever the software gets. We recently worked with Scandinavian magazine group AGI, to test some of the latest hard copy proofing systems. Not for the fainthearted we can tell you! We used the Altona test suite as the basis for the work, and judged the results both objectively and subjectively. Check out what we found in the results...

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Repro's reinvention...

What steam locomotion did for the transport industry, JDF is supposed to be doing for the printing and publishing business. However JDF and its implementation seems increasingly mired in the bog of committee machinations. Sadly the marketing of JDF looks drab and dowdy, supremely uninteresting compared to that of NGP. Whatever happens on the print side of the production equation, publishers can't wait. And fortunately there are enterprising developers getting on with meeting their needs. One such is Atelier, a repro house that has reinvented its business to become a developer of publishing systems, from building pages to managing administration...

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Regular Columns

News Focus

Esko-Graphics Going Against the Flow

Esko-Graphics is to cease developing its FlowDrive workflow management software as well as most of its line of PlateDrive violet imaging platesetters. The company will instead focus all efforts on developing its packaging technology and the Scope workflow, based on the Backstage RIP. Platesetters for commercial print applications will be limited to polyester engines, the Espresso, the PlateDriver Compact which Esko-Graphics OEMs from Highwater, plus the CDI digital flexo engine for packaging. CDI flexo platesetters image over 90% of the digital flexo plates used worldwide. What Esko-Graphics will drive the commercial print engines with isn't yet certain, but one option is likely to be a stripped down version of Backstage or, more likely, a Harlequin RIP.

According to Esko-Graphics' President and CEO Kim Graven-Nielsen, "The commercial printing market is served by many suppliers and shows little or no overall industry growth. Fierce competition leads to price pressure and low margins. It becomes very difficult for us and for many other offset CtP suppliers to maintain a sustainable business in this segment".

Esko-Graphics will instead focus on packaging and the low end of the commercial sector, at least for the time being. Packaging contributed 60% of the company's revenues and sales are up by 11% with growth in all regions.

The sad thing about this is that people will lose their jobs, and Esko-Graphics expect a 15% reduction in the workforce, primarily in jobs relating to PlateDriver sales and research. However the move isn't a bad thing for either the commercial print market, or of course for Esko-Graphics' competitors in the sector. The reduction in the number of offset CTP engine developers in a market long suffering from oversupply, is in fact a good thing. CTP is mature and proven technology, so the decision to pull back from the commercial market is sound. The numbers, both tangible and intangible, of competing and supporting sales in this highly competitve sector, simply don't work. High relative costs are impossible to offset against the miserably low margins on the engine and associated hardware. So the next time you see the Esko-Graphics slogan to "Expect More" remember that what it really means is that less is in fact more.

Agfa Proactive with ProImage

Agfa has acquired newspaper workflow system developers ProImage for an undisclosed sum. The acquisition brings one of the dominant providers of plate production workflow management into the Agfa fold. Agfa already owns Oman, Intellinet and Eskonet, technologies it has brought together under the Arkitex workflow brand. Arkitex takes the best of Oman, Intellinet and Eskonet but, although all were designed to do pretty much what ProImage's Newsway does, none was really suitable for very high volume sites, with diverse engines. Newsway scales up rather more effectively and is designed for page tracking, managing page pairing and output for high volume newspaper page production. It is used at over 250 sites, mostly in the US at Gannett titles, with numerous installations in the UK such as News International, Trinity Mirror and the Midland News Association.

Agfa has acquired all assets and taken on ProImage's 29 people who will see their numbers grow through the addition of more research and development people. Presumably this means that Agfa will bring together all research for newspaper page output management in all its forms. Digital presses too perhaps? ProImage's sales in 2003 were valued at over $6.7 million. According to Agfa's worldwide newspaper business director Kurt Smits "Using a multi-brand, multi-channel approach, we can now offer customised total solutions, including hardware, software and consumables as well as tailored packaging for customers who prefer a multivendor solution." Of course where output management is concerned, there isn't much option for multi-vendor involvement, since Agfa now owns all of the leading developers of this type of technology.

Xitron RIPs Take On New Dimension

Xitron has announced a new interface for the Presstek Dimension and Excel CTP systems. The interface is based on Xitron's Navigator Harlequin RIPs, Xenith Extreme

Workflow and Raster Blaster technologies for processing 2-, 4- and 8-up output files. The Xitron interface is also compatible with many of the leading Presstek-enabled DI presses, and according to the company's curiously titled marketing manager for off-press, Marc Johnson: "Presstek is known for high quality, small-footprint CTP systems with a choice of chemistry-free or completely process-free plates. Combining our platemaking hardware with a highly efficient and productive workflow on the front-end creates a strong value proposition for the printer, and helps fulfill our commitment to providing printers with a Smarter Way to Print." So there you go.

Global Graphics previews JDF Enabler v2.0

JDF Enabler v2.0 is a tool for integrating a Harlequin RIP within a JDF workflow. The new version is fully compatible JDF 1.2, and is designed to make it easier for Global Graphics OEM customers to bring JDF compliant products to market more easily.

Preflighting integration throughout the workflow is now possible, and the colour correction and colour space conversion tools are improved, for more accurate proofing, plus composite proofing and TIFF file support. This is an open technology that OEMs will be able to tailor to the demands of specific production environments. The software's interoperability has already been successfully tested with a number of products and systems including imposition tools, job management and file delivery.

Xaar ITI Bitty?

Xaar and US developers Imaging Technology International have established a cooperation to integrate the Xaar inkjet print head technology into a range of industrial inkjet development tools designed by ITI. ITI's analysis technologies are used for quality control and in systems that depend on very precise drop placement, the "newly emerging electronic fluids technology" as Xaar calls it. It would have been nice if the PR people had been a little more expansive, but we think this means applications such as flat panel displays, organic solar cell technology and smart packaging, including RFID.

Mr. & Mrs. Gates Go For Chinese

One of China's largest press manufacturers is now partially owned by the Bill and Melinda Gates Foundation, which recently took a seven percent stake in Beiren Printing Machinery. The Gates Foundation had investments of around US$2.7bn at the end of last year. Apparently Bill Gates has been steadily selling Microsoft shares for years and although the Gates Foundation is charitable organisation, it can presumably quite legally avoid tax on the disposal of assets such as Microsoft shares. How the rich stay rich!

It seems the foundation stumped up €1.66 million for the share in Beiren which had a rough operating profit of around €8 million in the first six months of its current fiscal year. Quite what has prompted this move into printing presses isn't desperately clear. However it could simply be a desire to invest in technologies that help developing societies. And of course fundamental to democracy is the printing press. Although democracy isn't at all fundamental to China, the fact that Beiren's sheetfed presses meet CE and German certification standards, means they have a fundamental chance of competing outside China. Beiren is already working on building an international sales force in order to develop its export business. Mr. Gates will certainly be able to give them some ideas on that.

Xeikon Introducing New Label Press

The Xeikon 330 is a web press for short run variable content label printing. Frank Jacobs, Xeikon's marketing manager said that: "The 330 confirms the benchmark for image quality and consistency. Printing at a resolution of 600 dpi with variable density levels per dot, in combination with screen rulings from 85 to 170 lpi it produces pinsharp photographic images and smoother shades that simply outmatch screen and flexo printing quality." Top speed is 14.7 metres per minute regardless of page content complexity.

HP Indigo, not to be outdone has introduced the ws4050 label press. The machine prints full colour variable content labels and replaces the ws4000 engine. Unlike this engine the new press uses a new higher quality inkset and prints on a wider range of substrates. It "enables converters to capture shrink-sleeve, further establishing HP as a leader in the industrial printing market". Yes, that is what HP put in their release. The release tells us that the new press has "remarkable productivity" but doesn't quantify this. There are some interesting finishing options however including an innovative inline laser die-cut system developed by AB Graphic International.

Although an HP workflow system is supplied with this press, HP is understood to also be working with Artwork Systems and Esko-Graphics front end systems for packaging applications.

Xerox Ups & Unders

Xerox is to introduce a new press that sits above the Docucolor 6060 and below the iGen3. The substrate support will be better than the 6060's but not as good as the iGen3's, with pricing to match. The idea is to provide a suitable upgrade for 6060 users, and to have a system for companies not quite ready for iGen3.

The DC8000 is an 80 page per minute 600 dpi engine that has a new imaging system and toner for improved colour quality. Hopefully this means that the output isn't always so very shiney. The Xerox Docu SP front end drives the engine, as do the Creo Spire and EFI EXP RIPs. The

price including server will obviously depend on where the machine is purchased but it should come in at around €325,000.

Creo have launched a new version of the Spire colour server to drive the new press, and called the CXP8000. Some of the new features are comprehensive variable information support, workflow management utilities, colour management, and support for Brisque and Prinergy workflows. Naturally JDF compliance is a key feature.

Scitex Dumbing Down

Scitex Vision is making its three metre digital printer available in four and six colour versions, besides the existing eight colour model. These models will be upgradable to the full on eight colour machine.

The move puts Scitex Vision in an unique position as the only company with four, six and eight colour super wide format engines, with upgradeability across the line. The move also gives Scitex greater market scope. Pricing has yet to be announced.
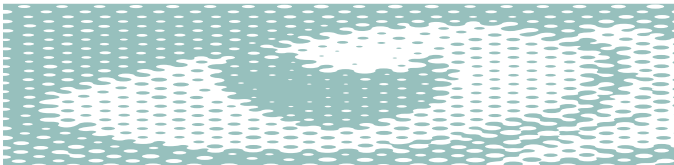
Spindocs

We just love this conference invitation from Pira. The conference's purpose seeems to us to be not so much shedding light over erstwhile darkness, but about coming up with ideas to tempt the punters into handing over their hard earned sheckels to Pira. Do the speakers dress for the part we wonder?

"The Future of Smart Textiles and Clothing

Imagine a world where your clothing can control your temperature, provide up to the minute access to the internet, music and communication devices and can even respond to and demonstrate your emotions. In fascinating pilot projects around the globe scientists are uncovering new ways to merge the worlds of electronics and textiles.

Driven by a variety of technology breakthroughs such as printed electronics, inkjet technology, fibre optics and nanotechnology, the future of high performance functional clothing and textiles is upon us. Find out what this means for you and your business. Pira's new programme will put into perspective what these dramatic changes really mean. The two day programme will ask all the important questions about smart textiles and presentations from leading global experts will provide the answers you need to assess this integral part of our business and consumer future.

Equip yourself for the future [!!], uncover where the real money is being made in smart textiles and clothing, who will be the first to benefit and how your business can enter this emerging new market place. "

Such horrors. We have seen printing and publishing's future, and it is paisley.

Letter From... Heaven

Ahoy there Spindrifters!

I can't tell you how bloody awful it is up here in heaven. Surrounded by goody goodies, smiling sweetly all the damn time. Sanctimonious gits, that's what I say. Honest, decent, law abiding types, and so bloody many of them I can barely take it. It's the worst and a pretty devious thing for the man upstairs to have come up with as punishment, I can tell you.

The reason for contacting you is that I want to congratulate your readers in the newspaper trade, hacks and hoaxsters, all of them on recognising the importance of people like me in the newspaper business. I realise they don't recognise the importance

of the likes of you, but that can't be helped can it? If you insist on not playing the game, grovelling and brown-nosing, what can you expect? As for them I take off my halo, especially to that noble fellow Mr. Black and the other one responsible for taking my old rag to such new depths. That Mrs Black certainly had some foresight in the names department, eh, what d'you reckon she called him for short?

It takes dedication to live up to my standards and I'm jolly bloody proud of the man. Not many flies on him poor sod. And of the other one. Pierce Moaning was it? And that Black's blessed with a gifted wife as well. Between them I hear they apparently trousered and knickered some 220 million quids worth of Hollinger's profits between 1997 and 2003. That works out to be about 92.5%! Bloody good going say I. Halos off all round!

I'm also jolly pleased to see so many newspapers copying my ideas and going tabloid. Even the Telegraph will go that way, apparently.

I'd better be bobbing along now. There's a bunch of do gooding, exdinner ladies coming to tempt me with sticky toffee pudding and marmite sandwiches. They show me the goods and then make me hand over my share to others less needy than me. Tempt? More like taunt. It really is a bugger this caring for others rubbish. You've no idea how bloody awful heaven is. Kindness, consideration and thought for others, what the blazes has that got to do with success I ask you?

Swimmingly (or rather not) yours,

Captain Bob Mixwell

Driftwood

More effective, nonlife threatening paper recycling

VTT, Finland's highly respected technical research centre, has developed some new technologies for more environmentally acceptable paper recycling. As has been reported in Spindrift and elsewhere, there is a growing problem with the mixing of digitally printed papers and ordinary household waste paper in the recycling bins. A few sheets of paper printed on a digital offset press, for

example, can apparently mess up the de-inking processes, resulting in recycled pulp that is essentially polluted with noxious toner particles. The new technologies developed by the Finnish scientists Saara Isännäinen, Pia Qvintus-Leino and Juha Saari could improve the recyclability of fibres as well as decrease the amount of unexploitable fibre.

Their technique is based on the use of high powered ultrasound processing and magnetic separation. It sounds (sorry) like they are shaking the ink off of the paper using sound waves and magnetism to enable printed inks to be separated from paper fibres, using fewer chemical compounds than are required with current technologies. The environmentally friendly process saves fibres to improve their recyclability, and also decreases the amount of unexploitable fibres, the so-called zero fibres, that can't be reused.

Digitally printed ink detaches in large particles, or even not at all in some cases. However high powered ultrasound can split the ink particles into a size more amenable to the pulp deinking process, by encouraging the ink to detach from the fibres more cleanly. In addition, some types of office wastepaper are printed with inks that contain ferromagnetic, or iron-bearing components and these can pose a problem for recycling. With the VTT technology these inks are easily separated from the deinked pulp through magnetic separation and by using lower amounts of chemicals.

Two patent applications have been filed for the technologies developed in the project. VTT hopes that, thanks to these new technologies, it will be possible for equipment manufacturers to launch new moe environmentally friendly products on the market and that de-inking plants will be able to improve their de-inking processes according to changing raw materials.

Boomerangs

(Your feedback fed back)

Dear Spindrift Crew,

Spindrift is great except for a few things: it's too long, there are too many columns, it's digital only, the jokes aren't funny and you take yourselves too seriously. Otherwise thanks for a great read!

John Lomax

Thanks John for the, er, kind words. We'll try to keep up the... good (?) work.

Say What?

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

From the Sunday 5th September edition of the UK's generally reliable and highly respectable Observer, James Robinson argues with wonderful incoherence about why newspapers need to spend multimillions on new presses. The article concludes with:

"Murdoch's Wapping move replaced old-fashioned typesetting with the 'web-offset' system but the next generation of presses will use inkjet printers, which print straight onto the page. The ramifications this simple innovation will have for the industry are huge ... Inkjet presses are far slower and more expensive at the moment, but the process is being refined and experts estimate they will be cost effective in five to 10 years time."

Indeed.

Acrobites

(Something to get your teeth into)

PPML/VDX

That PPML stands for Personalised Print Markup Language is probably fairly well known by now. But what does the addition VDX mean? Well, it means Variable Data Exchange and it is a standard for specifying how to insert variable information into a PDF file for variable data printing applications. The PPML/VDX standard was developed by the Committee for Graphic Arts Technologies Standards (CGATS), and it was approved by ANSI in 2002.

PPML/VDX technology is based on a subset of the PODi PPML specification. According to CGATS the PPML/VDX standard provides a framework to enables software and hardware vendors to create variable data printing solutions that allow variable data print jobs to print at or near rated speed on a digital printer or digital press. This standard is probably due for an upgrade given the increased output speeds of new digital presses. It could well be more sensible to handle the variable stuff in documents through suitable additions to the JDF specification, however.

SSL

SSL is short for Secure Socket Layer, a protocol developed by Netscape for transmitting private documents via the Internet. SSL works by using a private key to encrypt data that is transferred over the SSL connection. Both Netscape Navigator and Internet Explorer support SSL and many

Web sites use the protocol to obtain confidential user information, such as credit card numbers.

Another protocol for transmitting data securely over the World Wide Web is Secure HTTP (S-HTTP), which is probably heard less frequently because of how it gets pronounced. Also because whereas SSL creates a secure connection between a client and a server, over which any amount of data can be sent securely, S-HTTP is designed to transmit individual messages securely. SSL and S-HTTP, therefore, can be seen as complementary rather than competing technologies. Both protocols have been approved by the Internet Engineering Task Force (IETF) as a standard. (from www.webopedia.com)
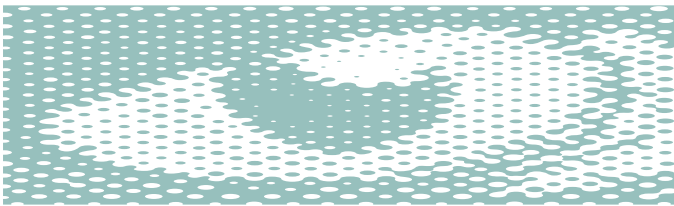
Measured quality proofs

Quality control is fundamental to printing and although digital colour management has helped matters considerably, there is still no getting away from the fact that for many people, a hard copy proof is an absolute must. We at Digital Dots have been looking into ways of testing and evaluating different proofing systems of late. There are many possible approaches, but it is very difficult to come up with testing models that are relevant for all workflows. However together with the Scandinavian trade magazine AGI, we recently got involved in testing a selection of proofing systems. The test was based on the ECI Altona test suite and was done with the help of Sara Leckner from Sweden's Royal Institute of Technology. Sara has done her postgraduate research on proofing systems.

The purpose of these tests was not just to measure the performance of the proof engines, but to see how various engine and RIP combinations performed together. A proofing system has two major components: the proofing engine, which is essentially a colour printer, and the RIP. As can be seen in the test results, the same printer yields different results depending on the RIP driving it. While you can buy many types of inkjet printers and print out colour images, you really have no control over the result without a good Postscript RIP. Some of the vendors participating in these tests offer both the RIP and the printer of their own manufacture, and others only the software RIP. In this kind of test its difficult to separate the one from the other, so in reality you test a complete system, configured according to the suggestions of the vendor.

How accurate does a colour proof need be, in order to be accepted as a contract proof? FOGRA says colour deviation has to be less than Delta E 4, but what does a deviation of Delta E 4 really mean? Is there any proofer that meets such a demand? Can a printing press and its operator reasonably be expected to meet such a demand, over a whole print run? These were some of the questions we hoped to be able to answer once testing was complete.

The participants

AGI had already tested many of the proofers on the market, using their own test form, designed in conjunction with Digital Dots. Therefore only manufacturers with fairly new proofers or vendors with a new version of RIP software were invited to participate in the test. Of the companies invited, the following supplied proofs within the time frame given: Creo, Dupont, Efi, Fujifilm and GMG. We plan to continue testing as developers launch new or improved proofing systems.

Creo participated with the Veris proofer, coupled with a Prinergy RIP. Dupont participated with the Digital Chromalin B3 proofer, connected to the Cromanet RIP server. Efi, through their Swedish distributor Network Innovation, participated with the Best Color RIP driving a Epson Stylus Pro 4000. Fujifilm used a Epson Stylus Pro 7600 with the Colormanager controller, based on technology from GMG. They can combine the same configuration within a Celebrant RIP. GMG participated independently with the Colorproof RIP driving an Epson Stylus Pro 7600.

(Figure 1) The test page called Visual has a lot of different images to help evaluate different aspects of imaging quality.
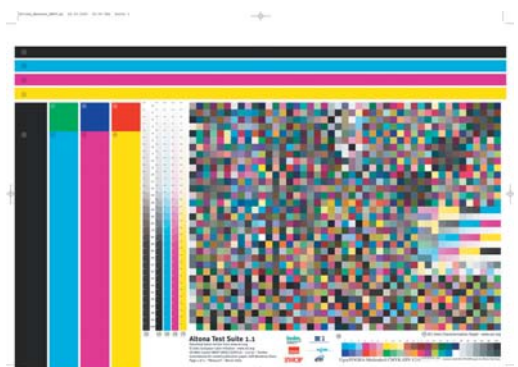
(Figure 2) The test page, called Measure, contains more than 1500 colour patches for extensive colour measurements.
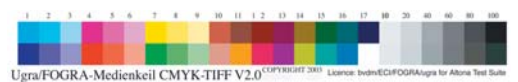
(Figure 3) It is likely that many of the proofing system vendors will include the FOGRA media wedge as an integral part of their proof validation procedures.

The test procedure

ECI (European Color Initiative) has worked closely with FOGRA, the well respected German research institute and the German Print Federation (bvdm) to design a series of test forms that, among other things, helps to check a proofing system's colour accuracy. At the core of the Altona test suite are three PDF/X-3 documents. The first page, called Visual, has a lot of different images to help evaluate different aspects of imaging quality (see figure 1). The second page, called Measure, contains lots of colour patches for extensive colour measurements and the third page, called Technical, is dedicated to checking how a RIP handles a range of tricky Postscript and PDF interpretation situations. Amongst these checks is how to correctly handle any transparency and overprinting in the file.

For the purposes of our test we focused on the two first test documents, Visual and Measure. To be able to judge whether a proof matches the print or not, you need a reference print. ECI and FOGRA have spent a lot time (and paper) making sure that the reference prints that are part of the package are right. In fact the Altona test suite was originally intended for launch in the autumn of 2003, but FOGRA and ECI found it more difficult than they had expected to keep the print within tolerances. The reference prints were supposed to keep density deviations to within the ISO 12647-2 standard, but this wasn't achieved until the final print runs in early 2004. ISO 12647-2 is the standard being put forward to replace both SWOP and Euroscale ink standards as a universal standard.

The recommended average colour deviation FOGRA suggests is no more than a maximum of Delta E 4, which as a key criteria for a colour critical proof seems reasonable. A colour difference of Delta E 2 is barely visible, even under perfect lighting conditions, so considering that it's generally hard to keep the colour deviations on press below even Delta E 10 throughout the run, Delta E 4 is a reasonable compromise. Keeping the print within the tolerances described in the ISO 12647 standard and expressed in density values, should result in a average deviation of around Delta E 4. Even under ideal circumstances, where there were no customers expecting delivery at an exact date and time, FOGRA themselves found it difficult to live up to required tolerances.

The Altona test suite has been used before in tests conducted by ECI, but on those occasions the approved reference prints weren't available. Also the results were not published with full data describing how each vendor scored. Only if you participated in one of the special seminars arranged through third party commercial organisations, could you get access to the results in any details. In other words the results were not made public. To our knowledge Digital Dots and AGI are the first publications to present measurements and evaluations based on the reference prints. ECI is about to conduct a new round of tests, and we await eagerly some official results.

Evaluation

As anyone who has ever tried testing technology for graphic arts applications knows, judging the results in a way that everyone accepts and supports is virtually impossible. It is especially tricky with colour proofs and no matter how tightly one tries to control it, evaluation is inevitably a very subjective business. Sometimes it's maybe a little too subjective. While image quality is admittedly hard to quantify, it is at least a little easier when it comes to colour accuracy, since we can

The Creo Veris proofer is a high end inkjet colour printer. Coupled with a good Postscript RIP it serves as a digital proofing system.

The Digital Cromalin B3 is one of the proofing solutions offered by Dupont.

The Stylus Pro 4000 is the latest high end inkjet colour printer from Epson. It's a popular printer to integrate in a proofing system. Efi can drive it from their BestColor RIP.

measure this electronically. Even if we can't agree that the proof is an accurate rendition of what will appear on press, at least we can try to get the numbers right. The increasing number of spectrophotometers that are being bought and used in graphic arts production, suggests that measuring devices are being used more and more to take out some of the guesswork and subjectivity involved in colour proofing.

We decided to make a subjective visual evaluation of the proofs in addition to measuring results with a spectrophotometer however. Each test participant produced a proof of two of the PDF files, conforming to the instructions and specifications described by ECI. There are five paper types included in the test suite, but we chose to only test paper type 2, a matt coated white wood free stock.

The Stylus Pro 7600 was used by both Fujifilm and GMG as a favoured inkjet printer to be part of a proofing system.

The results

After a quite time consuming series of measurements, it was exciting to start comparing the visual evaluation scores, with those of the spectrophotometer results. When doing the visual evaluation we had looked at several of the images in the Visual test form. Aspects such as grey balance, gradation (smoothness), resolution (image sharpness) and colour accuracy were marked between 1-10, where 5 was acceptable and 10 denoted a perfect match.
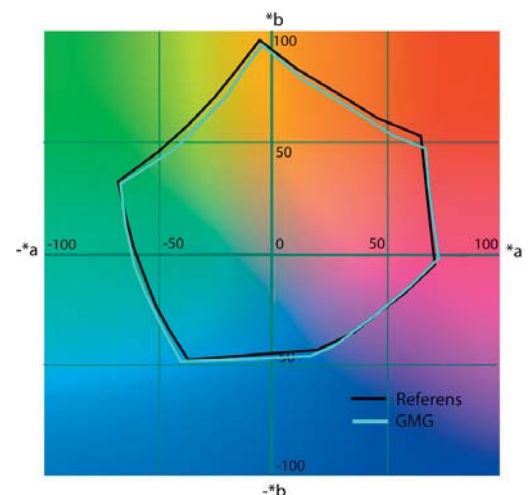
Results					
	Creo	Dupont	Efi/Best	Fujifilm	GMG
Colour Deviation ∆E	5.02	4.65	4.14	5.93	2.97
Visual Evaluation	8.1	8.8	7.7	8.8	8.1

Somewhat surprisingly the visual evaluation and the spectrophotometric measurements didn't entirely match. Participants like Dupont and Fujifilm scored the highest marks in the visual evaluation (on average 8.83 points out of 10), while GMG obtained the lowest colour deviation of all (2.97 Delta E). It's worth noting that both Fujifilm and GMG used a Epson Stylus Pro 7600.

When trying to work out why the human eye and the spectrophotometer came up with different results, we realised that this wasn't in fact what had happened. Instead, the difference comes from the fact that the visual evaluation was made between a real print (the reference print), and the proof. The measured values are instead a comparison between the ideal values of the ICC profile (the normalised characterisation data that are the basis for the print profile) and the measured proof. We happened to have two different reference prints to hand, the second one kindly provided by Dupont, and the colour differences between the two prints were clearly visible. This, despite being printed within tolerances for ISO 12 647-2!

The colour gamut of the proof should ideally be identical to that of the print. Here the gamut achieved by the GMG Colorproof RIP driving a Epson Stylus Pro 7600. The average colour deviation is as low as Delta E 2.97.

The conclusion we draw from this is that it's difficult to achieve a lower colour deviation than an average of Delta E 4 over a print run. A proof however should not exceed this deviation. As can be seen from table 1, most of the proofers tested stayed very close to the recommended maximum average colour deviation of Delta E 4. Even a result close to Delta E 6 (Fujifilm) didn't prevent their proof from getting very high marks in the visual evaluation.

The Altona test suite is free for anyone to download from the ECI web site, but the reference prints and the characterisation data have to be purchased through their publishing partner Print & Media Forum. An important part of the test suite is a test strip from FOGRA called the UGRA/FOGRA media wedge (see Figure 3). It is likely that many of the proofing system vendors will include this media wedge as an integral part of their proof validation procedures. The ECI should be credited for making an important contribution, helping to take the guesswork out of proofing by offering a standard way of testing and evaluating proofs.

– Paul Lindström

Links

ECI (European Color Initiative)
www.eci.org

Bvdm (German Print and Media Federation) www.bvdm-online.de

FOGRA (Graphic Technology Research Assiciation), www.fogra.org

Print & Media Forum
www.print-media-forum.de

Repro Reinvention

There is no doubt that the printing and publishing business has changed irredeemably over the last decade. Of course it has, but although times have changed the basic requirements for getting ideas into print haven't. The links in print and publishing's supply chain may not be the same, but the chain remains. It's links are no longer forged one by one, and the possibilities for processes happening simultaneously are why we have such a huge array of technologies available to support publishing and production . The associated processes haven't gone away, but where and how they happen is very different. We still have repro requirements but repro is no longer specialised in the same way as it was in the past. Instead we are seeing a new generation of reinvented repro businesses providing tools to manage publication processes as well as production tasks. Such a company is Atelier.

Based in the south west of England, Atelier has its origins as a provider of typesetting services. The company was always keen on digital technologies, using databases to keep track of jobs inhouse, but the advent of the web gave the company a means of publishing production tracking summaries so that they were accessible to Atelier's customers. This was the start of a gradual migration of content and information management from within Atelier's operations, into the operations of their customers. For the most part these were magazine publishers, and magazine publishers are still Atelier's largest customer group. They include Redwood, Dennis and Caspian, companies that have elected to use Atelier's services instead of bringing repro inhouse.

Atelier provides digitised workflow management services. Atelier's Digital Publishing Desktop or DPD is a set of web applications for publishers. Users can access, via the web, anything and everything to do with their titles, for tracking all parts of a publication from advertisement booking to edtorial content. Atelier is, in common with other repro houses, redefining the nature of services it provides to publisher customers. The issue and its associated production process can be defined precisely according to the demands of a given title, giving the publisher complete control over how publications are produced.

DPD is a series of modules configured into a publishing solution specific to magazine publishers' needs. Web based with logon controlled access, DPD is about magazine production automation for reducing costs and lead times, in order to increase sales time and so revenues. It also provides tools for improving revenue control as well as the obvious conventional repro tasks for management. This is perhaps at the heart of why Atelier represents a new kind of prepress services supplier.The company's technology is not focused exclusively on production management tasks, but also on more general business management. This is one of the fundamentals of efficient workflow management, JDF et al, and it is the essence of what DPD is all about.

The system connects printer, publisher and MIS technologies within a single environment. Obviously DPD has to support MIS including accounting services such as credit control and estimating, plus databases for content archiving and access, and production tools for real time job scheduling and flatplanning. Besides all of this in all of its multifarious guises, the software has to support ad sales and copy chasing, as well as production management with effective preflighting and proofing tools, plus output management to plate or digital press.

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DPD is database driven, with the database of all elements providing the foundation for building an issue. The software presents users with an interface appropriate to their individual function. In the editorial booking interface for example, a series of panels are the basis for the new issue of a title. The issue is specified by the number of pages and a flat plan including covers and global or master pages. The writers, photographers, designers, and anyone else associated with the project are assigned in these panels and it is possible to include pretty much anything the publisher wants as part of the interface. It could, for example, be possible to have financial information here, so that the editorial team can see immediately the impact of project assignments on budget. For example if an issue required lots of highly specialised contributors, such that editorial costs were higher than budget, this would immediately be known at the point of commissioning. The DPD software uses any information available to create a description of the issue, allowing publishers to impose an automatic discipline on editorial content ordering and commissioning.

Once tasks are assigned, the software automatically notifies everyone involved via emails. Subject to access rights, people can log on to the system to get a status update using the booking reference. This is also their means of confirming acceptance of a commission and the portal through which completed content gets uploaded into the editorial workflow. The arrival of files ready for production, triggers another automatic email to everyone involved who needs to know when texts and images are available, as well as sending an automatic acceptance to the contributor. Uploaded images and texts are constantly collated and processed ready for the database, with the associated metadata automatically assigned to the record. There are however no other checks to the content and this is an area that could be developed to provide more comprehensive asset management. The system will support multiple workflows according to the needs of numerous titles and is easily flexible enough to mirror even very complex business demands. The progress and history of the issue is viewable on all panels.

The user interface for booking ads works in basically the same way as editorial user interface, except that the booking screens obviously have the necessary supports for ad booking. This interface can also include specific branding information if required, so that a publisher could deploy these modules in agencies. Once ads are ready for publication, they are placed into page templates via filters set up to select the ads suitable for a particular page. Classifieds are managed according to section type and automatically flow into the available space, much as they do in newspaper classified advertising systems.

The base production file format is PDF, with Global Graphics Jaws creating individual PDFs for each component in an issue. These PDFs are then stitched together, providing perpetual file management and soft RIPping throughout the workflow. Thumbnails of processed pages appear in the flat plan, but there are as yet no alerts for missing content, such as ads or editorial content that haven't arrived close to deadline. Currently contributors and advertisers are notified via email, if the production staff happen to notice that time is ticking, but there is no reason why this could not be automated within the DPD software.

PDF creation, processing and preflighting tasks are managed through a combination of softwares from Markzware, Enfocus and Atelier's own technology. The combination handles all preflighting providing short ▶

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PDF reports, with automatic fixes for as much as possible within the preflight process. The report PDF provides a description of the fixes, any conversions and why preflighting failed and can be automatically sent to advertisers. This is conceptually not dissimilar to how Quickcut deals with bad PDFs within its advertising delivery service.

Like Quickcut, Atelier's technology is about automating publishing, as well as production. As digital prepress technologies have solved the mysteries of production management, so the focus now is on improving publication management and this is what Atelier is all about. Atelier is one of a new kind of technology developer, as are Quickcut, Enfocus and Markzware. All of these organisations are about automation and quality assurance management, and all of them are moving into the publishing rather than the production working space.

One of Atelier's newest customers is Parker-Ellis, publishers of a range of titles for the construction industry, and based in southern England. According to Simon Reed instead of bringing repro inhouse and following a conventional workflow Parker-Ellis plans to work with Atelier to develop a rather more ambitious way of working. The publisher is using DPD to upload PDFs to the Atelier server which produces print ready files for approval, and subsequent transmission to printers, Wyndeham Heron. These are highly standardised pages, and therefore highly suitable for production in an automated workflow. Mr. Reed says of his workflow and DPD that: "we feel it lends itself to the Atelier system [but] in the longer term Atelier seems to be geared up to offering us a publishing system but, also to working with the front end so that our advertising clients could upload files direct to their system. These could then come back to us for approval. It's early days but we seem to be getting on OK and we hope to be able to use the Atelier server to keep administration and other information that is not production lead."

Atelier isn't a particularly well known company and their visibility on the JDF landscape is virtually nil. And yet the systems so far designed for publishing customers, have the capacity to do just what JDF is supposed to do but hasn't yet. Clearly it's time to stop talking to the committees and start talking to those publishers forward thinking enough to let business efficiency requirements drive process developments, instead of the other way round.

– Laurel Brunner

> **As digital prepress technologies have solved the mysteries of production management, so the focus now is on improving publication management.**

A Special Message

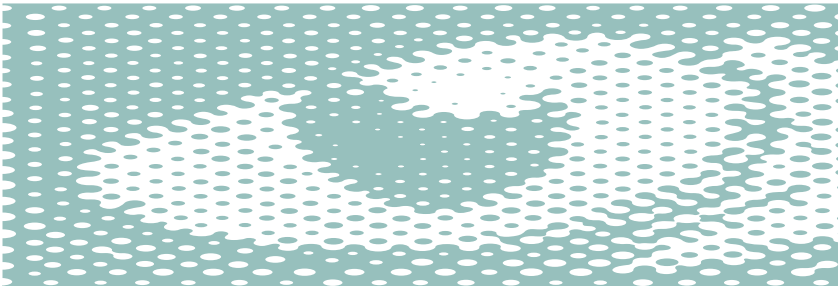We hope you have enjoyed reading this issue of Spindrift.

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