



We see our customers as invited guests to a party, and we are the hosts. It's our job every day to make every important aspect of the customer experience a little bit better.

– Jeff Bezos, Amazon Founder

## Dear Reader,

What makes something important? Does it mean something has great value? Or is it about being able to have a profound influence on the course of events? Hard questions, particularly when it comes to the significance of IPEX, which is less than a month away.

The revamped IPEX is a show that's all about content, rather than new products. Attendance will reflect the interest within the graphic arts market, both in IPEX going forward and the industry itself, so in that respect it will be a very important show. The numbers will tell us to what extent having new kit to gawp at matters, versus being able to listen to talking heads hold forth.

In emphasising content and debate over technology, the IPEX organisers are gambling on the industry's interest in ideas and opinions. Compelling content might not be enough to persuade substantial numbers to participate in the show, but that might not matter. What does matter is what visitors take away from the many IPEX seminars, workshops and summits. How they apply new ideas to drive the graphic arts industry forwards, is what will make IPEX important.

Enjoy!

Laurel, Nessian, Paul and Todd



## In This Issue

### On demand digital postpress

*On demand digital printing is all very well, but should really be matched by on-demand digital finishing. This is the promise behind the Highcon Euclid, a digital cutting and creasing solution that was shown as a prototype at the last drupa. Paul Lindstrom has been to see the first installation at Glossop Cartons in the UK.*

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### APP Changing its Spots?

*Asian Pulp and Paper (APP) has faced many years of criticism over its destructive approach to forest management, but now appears to be reorganising itself with a positive reaction from Greenpeace for its latest efforts. Laurel Brunner looks at the recent history and assesses the progress so far.*

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### ISO 16759 and ISO TS14067 Compared

*Laurel Brunner explains the differences between these two ISO standards, which on the face of it appear similar but have come from different backgrounds and are aimed at different audiences.*

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## News Focus

The founders of Graph-Tech AG have formed a new company, **Radex AG**, after Graph-Tech was acquired by Domino Printing Sciences in 2012. Radex will specialise in developing complete solutions for both OEM and end user clients. It has already begun to develop core technologies, such as driver board electronics, ink and transport systems, for a variety of applications.

**Canon** has announced details of a new dry toner digital press, the ImagePress C7000VPe, made out of parts from older machines, which have been disassembled to the frame level at a Canon factory. It should be much cheaper, and have a lower carbon footprint, as a high proportion of existing components are re-used, saving the need for new raw materials and minimising waste.

**Konica Minolta** is sponsoring an independent European user group, called Prokom, for owners of its Bizhub production printers. The aim is to provide a forum where they can share business ideas and experiences to build and profitably expand their businesses.

**Mutoh** has launched new ValueJet X-series wide format printers, with the 1638X, which replaces the 165cm-

wide 1638. The main improvement is a new 64-bit RISC mainboard that allows for faster data communication and data processing. It can be configured with Mutoh Eco Ultra inks as well as Universal Mild Solvent (UMS) inks and there's a textile version, the 1638WX, which uses Mutoh's new DS2 series dye sublimation inks.

**Mimaki** has enhanced its popular JV33 wide format solvent printer. This now gains Mimaki's Advanced Pass System, or MAPS technology, which Mimaki describes as 'an innovative approach to discharging ink droplets to minimise, or even eliminate imperfections in high production mode'. As a result the new JV33 should be around 10 percent faster.

**SAi** has upgraded its PixelBlaster wide format workflow to version three. This now gains a new Layout tool, which boasts true shape nesting, manual job positioning, double-sided printing, white handling and cutting. The Library now incorporates PixelBlaster Profile to create and manage colour profiles. In addition, RIP'ing performance has been improved and new rendering parameters deliver significantly improved sharpness.

**Onyx 11** has been released. It uses a job ticketing system and users can input job identification numbers from their own job tracking system, customer data and job-specific notes. This data can be tracked and edited in RIP-Queue and the job editor module as well as the Thrive Production Manager module.

**Masterwork** is launching a new large format die cutter, the MK1450ER, complete with stripping and blanking facilities. It takes carton board up to 2mm thick and corrugated board up to 5mm thick. It's highly automated and can die cut up to 1,450 x 1,050 mm with an accuracy of  $\pm 0.15$  mm and a maximum die cutting force of 600 metric tons.

**Global Vision**, which specialises in proof reading solutions for packaging, has released a new cloud-based, packaging inspection suite called Proofware. This has a number of quality control tools to inspect text, artwork, spelling, Braille, barcodes and add annotations. There's no further software to be installed and can be deployed across an Enterprise. See story on p11.

### Spindrift

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**Markzware** has announced PageZephyr Search Mac, a content search tool for the Macintosh platform. It's a standalone tool that allows users to search InDesign files for specific text content, in conjunction with the Apple Spotlight search tool. Text can be viewed directly within the PageZephyr Search tool or by having PageZephyr Search open the documents in InDesign.

**Hybrid Software** will use IPEX to launch a new Cloudflow Suite signalling a major shift in philosophy and product mix for the company. Cloudflow is a new workspace concept for the web-enabled production environment and an alternative for the established graphic arts market. It interacts with external systems such as MIS/ERP and custom designed web pages, and can submit files to workflows via HTTP.

**Xaar** has formally approved Xennia's Zircon range of digital ceramic inkjet inks for use in its 1001 recirculating printheads. The Xennia inks are already widely used in ceramic tile production environments in various markets around the world. Duncan Gellatly, Xaar's Ink Business Manager, noted: "The Zircon inks showed excellent performance in the Xaar 1001 printhead under intensive testing conditions".

**Marlowe Digital** will demonstrate at IPEX a new version of the StudioRip workflow, StudioRip XF, which boasts a new rendering platform. Some of the new features include a comprehensive suite of flexo-specific tools, multi-core processing, ink-spread compensation, multiple screen types per job, multi-level imposition and improved pre-flighting. It comes with a dot-meter application, the ability to serve data to Mac client computers, faster and more accurate preview with no zoom limit.

**Organic Imaging** has improved its pay per use automated image processing, which is based on Elpical's Claro. The new version features the ability to perform specific corrections on skin-tones and has better control over contrast and details in the mid-tone to highlight range. It's also up to 10 percent faster. Prices start at €10 for a hundred images.

**Alwan** has announced the latest release of its color management and control suite, High-Fidelity

(HiFi), comprising Alwan ColorHub X 5.0, Alwan PrintStandardizer X 5.0 and Alwan PrintVerifier X 3.0. Among other new features, including support for ISO 15339-2, the software now enables print buyers and printers to agree on aims and tolerances for each job and ensure that visuals and brand colors are reproduced accurately and within agreed tolerances.





## News Analysis

In just a few weeks the IPEX show will get under way in its new home at the ExCel centre in London. The show has been dogged by high profile vendors pulling out, with the result that most of the big names, including HP, Kodak and Heidelberg will be absent, though no doubt organising their own events.

At this stage the highlight of the show appears to be the Konica Minolta B2 press, the KM1, that was shown as a prototype at the last drupa. We don't believe that this will be ready for its commercial launch until at least the end of this year but nonetheless we're keen to see what progress has been made on it so far.

LumeJet will show its ink-less digital printhead, which essentially exposes Silver Halide media for photo quality output. Lumejet has developed its S200 printer using the new head technology, which has been beta tested at Altamage in the UK. It takes 305 mm photographic roll paper for page sizes up to A3 landscape double-page spread, full bleed, including trim (1000 x 305 mm maximum).

Otherwise, most of the other announcements so far appear to be a mixture of those label printers that were recently launched at the last Label Expo and wide format printers that were previously announced at last year's Fespa. The most significant of these appears to be the FFEI Graphium, which will be shown on the Fujifilm stand, and which can be configured as a purely digital or hybrid narrow format web press. Fujifilm will also show the Jet-Press 720 which it claims can print ISO 1467-2 compliant output. And of course Alwan is showing its HiFi software suite which supports the latest ISO standards.

The organisers appear to have pinned their hopes on the range of seminars and conferences, with the CrossMedia show running in parallel to IPEX. There is a comprehensive program and the show's owners, Informa, may be able to reinvent IPEX as a place to talk about solutions, rather than a chance to see and compare new kit. However,

much of the justification for the move to London was to attract more overseas visitors and it's hard to see why many people would want to come to London to listen to a talk in English about multimedia production opportunities in the UK and other western European countries.

Still, despite this somewhat gloomy assessment, we do hope that IPEX is a success and will aim to cover the show in the next issue.







## An Interview

### Kodak Newly Minted

Kodak's recent history has been traumatising to say the least. However the company is now fully emerged from Chapter 11 bankruptcy protection, with healthy sales in 2013 and strong liquidity. We recently had the opportunity to speak with Chris Payne, director and vice president of marketing to get a better idea of Kodak's position and future prospects.

2013 revenues are not yet reported however, sales to the end of the third quarter were over \$1.7 billion. For the same period debt was down to \$679 million, compared to \$6.75 billion worth of debts when it entered Chapter 11. Kodak now has a cash pile of \$839 million, so it has no net debt and decent liquidity.

Headcount is down from 17,000 a couple of years ago to 8,500 and most of the people losses resulted from jettisoning the document imaging and kiosk businesses; Kodak Alaris, now owned by Kodak's UK pension fund, took with it 6,000 people. Antonio Perez the current CEO and chief architect of Kodak's reinvention, is soon to step into a consulting role. Payne says: "We've got about 5,000 people in the regions and the other [3,500] are doing manufacturing, corporate work and research and development".

### Structure

The company has two divisions: Graphic Communications, which contributes roughly 60% of revenues and Digital Printing & Enterprise, the output component. Payne explains: "The largest piece of where we are focused, is graphic communications, commercial printers and publishers ... 5,000 of our employees are in the field and most of our customers are in graphics". The split, essentially into prepress and press activities, also reflects Kodak's manufacturing resources and processes. Payne says that it follows the "type of manufacturing required - roll to roll - so [we're] organised according to manufacturing resources." Sales forces are selling across divisions, so the distinction is based on facilities management lines rather than products.

### Customers & Products

Kodak has over 25,000 customers worldwide, a substantial number of whom buy consumables such as plates and chemistry. There are 12,000 Kodak digital presses in the field, 40% of which are Nexpress and Digimasters with the balance mostly Versamark.

Payne says: "The Prosper [press] number's undisclosed ... we've sold a lot of printing heads." He adds: "We continue to work with our customers and we are putting



*Chris Payne, Kodak's director and vice president of marketing.*

S series heads on more and more partner [devices] mostly on web presses." This includes print engines from Manroland, KBA and Ryobi. Putting the Stream digital heads on conventional presses adds considerable value to print, as Payne explains: "[at] CP News UK and Axel Springer we're helping them get closer to customers, for example with gaming or the Web".

He adds: "The largest piece of where we are focused is graphic communications, commercial printers and publishers." Kodak has over 16,000 computer to plate

▶ systems installed worldwide and many more customers imaging its plates, plus 3,000 Flexcel NX systems installed.

## The Model

Kodak's business model is to look for profit margin on both hardware and inks, rather than selling the printers cheaply and relying on the ink sales to generate revenue. Payne also speaks of the hybrid model, saying: "People are going to communicate through Facebook and Twitter but also print. We see that print becomes a premium communications channel and that Facebook and Twitter become commodity channels." He explains: "We see the ability to add value to the printed word through the interaction with multimedia channels." He adds: "We have a lot of confidence in our technologies and in how they are being used".

This confidence is taking Kodak into new markets such as packaging and flexo technologies, where its products can offer more predictability and quality on press. The company is exploring smart packaging so that it can, for instance, include product temperature sensors or sensors that measure bacteria numbers. The approach will extend Kodak's reach into applications across biotechnology and even into energy. Payne explains: "Potentially you can do these [sensors] on anything the question is, can you get the technology to the right cost point".

Thus the plan extends Kodak product lines to have wider applications. With Flexcel Direct and its inkjet technologies, Kodak is working with partners such as Bobst, a manufacturer of corrugated printing systems, and adding tools for packaging and labels for FMCG into its technology portfolio. As Payne says: "Packaging for FMCG can be a premium item, because FMCG companies are willing to spend a lot getting consumers' attention".

Kodak is responsible for the bulk of its own manufacturing rather than outsourcing, which had been the preferred model for consumer products. As Payne says: "We let that go ... for the rest of our business we do that ourselves ... our film business we manufacture locally but some sites are mixed". Some press components are outsourced to third party manufacturers, but he says "we handle the supply chain: plates, inks, toners, all these kinds of things for sure" are pure Kodak.

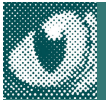
Kodak is also looking at functional printing, the kind of printing that is not used for communications purposes. This includes printing plastic screens with conductive grids to create touch screens and sensors. Kodak claims it has the technology to manufacture such things more cheaply than is possible using conventional processes because "printing is a low cost manufacturing process".

Its collection of technologies that span such a wide range of analogue and digital applications is a strength as long as it doesn't become a distraction. Payne notes: "Customers that have CtP plates and need a partner, are the customers who have a hybrid need [and] are naturals for us." Material science, imaging science and deposition processes are "all working in unison" to serve sectors within and beyond commercial print. This is not a million miles away from Fujifilm's strategy. Fujifilm "represent the closest competitor" to Kodak however, though Payne says "we have a lot of competitors because when you look at the market there are few [single] companies who have the breadth of products".

Kodak is relying on two main sources of differentiation - its Square Spot and Unified Workflow technologies. Not much has been heard about either over the last few years, so it is hard to know how competitive Unified Workflow, and its component colour technology, ColorFlow, really are. Agfa's Apogee has been extremely successful in the market and has been extended to support wide format applications. Fujifilm's XMF is also doing well and moving into wide format. Both systems operate in the cloud, something that Kodak has yet to commit to, despite its aspirations to provide production support across media.

Much depends on Kodak's next steps, particularly with regard to the cloud. The company only addresses some \$2 billion of a graphics market worth an estimated \$455 billion and packaging applications worth \$247 billion where it has a small share. The company is introducing new products this year within its inkjet portfolio and Nexpress and we expect more news on plans for Unified workflow and Flexcel XS within the next few weeks.





## Green Shoots

*Here's the roundup of this month's blogs. We started the year with a plea for 2014 to see greater market engagement with matters environmental, and we're pleased to say there are already some glimmering signs that this is happening. Other topics include some ideas about a sustainability awards programme that has attracted surprising attention, and ideas about a deinking standard. This too has gained traction over the last few weeks, so we'll be discussing it in depth at the next ISO standards meeting.*

### 2014 Wish List

Across the industry, we are all looking forward to writing new stories in 2014, stories that tell of revenue growth and profitability, of new business and rising customer numbers. We all want more engagement and more dialogue with our markets and we all want to see printers and publishers gain ground. And when it comes to environmental impact improvement, there are some specifics we'd like to see.

At the top of the list has to be that markets be more willingly informed about mitigating environmental impact. We'd like to see industry associations providing more environmental support, following the likes of UNIC in France. UNIC has developed a series of tools to help members assess the greenness of their businesses and to learn more about how to improve their environmental impact. UNIC has also developed a carbon calculator for members and their customers.

We want to see wider understanding of how carbon footprint management impacts every business, not least because of how it can improve profitability. Companies should be making proactive efforts in 2014 to improve resource use, rather than waiting for customers to push them. ISO 14001 for environmental management should be at the top of 2014 priority lists and its implementation fast-tracked.

2014 is the year when new technologies for carbon calculations start coming onto the market. Caldera already

## Verdigris

The Verdigris project is supported by Agfa Graphics, Digital Dots, drupa, EFI, Fespa, Heidelberg, Kodak, Mondi, Pragati, Ricoh, Shimizu Printing, Splash PR, Unity Publishing, and Xeikon.

has a rudimentary calculator that operates in prepress using RIP'ed data, but this is only a start. In consumables we want to see wider use of HDPE over standard PVC banner material. This will help reduce carbon footprints in the wide format sector. HDPE is also 100% recyclable, which customers will appreciate particularly if it aids their CSR and regulatory compliance. Recycling rates for all substrates will continue to rise in 2014 and blue chip customers who are subject to environmental regulations will seek out service providers who can help them with compliance.

2014 should be the year when more standards to support print's environmental impact reduction efforts get going. Work is already underway on e-media carbon footprinting, deinking and on paper profiling. This last provides a common means of specifying how a paper's carbon footprint is calculated, so that customers worldwide can trust the numbers for all paper products. Uptake of ISO 16759 for carbon footprinting should also continue apace.

Our biggest wish for 2014 is that printers and customers become more informed about their options. Noisy messaging from industry associations, the trade press and manufacturers could vastly improve market awareness of print's sustainability and its power to improve return on digital media investments. Let's start putting print's environmental sustainability and effectiveness at the centre of media discussions.

### Customers Starting to Care

Pushing the value of environmental awareness has been tough over the last few years of business slump and

economic drear. But that doesn't mean the environment has fallen from everyone's agenda. Kodak and Agfa plus a bevy of their customers have stuck to their eco-guns and their efforts are bearing fruit. The two manufacturers have set up environmental awards programmes to recognise their customers' environmental initiatives and recently announced the winners: <http://bit.ly/1a40hVt> and <http://bit.ly/1gdXR69>

The judging criteria of these two programmes reflect the huge range in approaches for recognising environmental initiatives in the graphic arts. Agfa set up the international

## **The Agfa Sustainability Awards have a much broader remit and are intended for graphic arts companies all over the world, from large format commercial offset printing, through to newspaper printing and digital printing.**

Sustainability Awards program at the beginning of 2013 to recognise and honour its customer's environmental efforts. Kodak's recently inaugurated Sonora Green Leaf Award is specific to Europe and to users of the Sonora processless plate. The Kodak Green Leaf winners are all commercial printers who monitor energy and water usage and constantly strive to improve efficiency and reduce emissions, working with processless plates to do so.

The Agfa Sustainability Awards have a much broader remit and are intended for graphic arts companies all over the world, from large format commercial offset printing, through to newspaper printing and digital printing. The Agfa winners come from all sectors of print and both the Agfa and Kodak awards recognise excellence in production as well as general environmental policies.

This matters for the award recipients and for their customers and it is great that Agfa and Kodak are promoting

them. In doing so the two manufacturers promote the excellent work printers are doing in environmental impact management. It lays a foundation for more specific awards categories in the future such as carbon footprint reduction.

Celebrating the achievements in environmental impact improvement encourages the wider graphic arts market to take the topic seriously. Awards programmes help to highlight how environmental management initiatives can enhance business performance. In the graphic arts they also help push environmental awareness up the agenda. And print buyers have an additional tool for sourcing environmentally aware service providers. This is probably the best reason of all to have them.

### **Awards Idea Looking for a Home**

OK so here's the thing. We would like to see an environmental award initiative for the graphic arts industry that cuts across geographies, technologies and printing sectors. This initiative would include a series of categories that are easy to understand and easy for printers, publishers and manufacturers to submit entries for. Ideally the awards would be judged and awarded at a major international trade show such as drupa. Maybe this should be a target for drupa 2016?

Why do we want to see this, given the fact that there are already various awards out there? As excellent as they are, most of the awards available are limited either to specific companies and product implementations or to single categories. For the print industry's environmental voice to be fully heard, we need some loud and conclusive environmental statement to the world. The industry needs a single focal point that boasts its world leading environmental management credentials. It has to be a single noisy shout because matters environmental are relevant to printers and print buyers in all industries and in all parts of the world.

Here are some preliminary ideas for the awards categories, which should appeal to printers, publishers and manufacturers:



- Most impressive environmental policy.
- Most impressive sustainable printing company.
- Most impressive sustainable publishing company.
- Most impressive sustainable media campaign.
- Most impressive environmental impact management.
- Most impressive combination of cross media services.
- Most impressive investments into green technology.
- Most impressive management commitment to green policies.
- Most impressive carbon offsetting programme.
- Most impressive technology for reducing and avoiding waste.
- Most impressive tactics for controlling supply chain emissions.
- Most impressive environmental content on a website.
- Most impressive reduction in corporate carbon footprint.
- Most impressive reduction in print run carbon footprints.

These last two will be tricky unless companies are tracking this stuff already. In fact all 14 of the categories will be tricky and deciding what's "most impressive" is almost silly. But maybe that is the point; in coming up with an understanding of what should impress a collection of judges, we will get some metrics for how printing and publishing should be measuring its performance.

We aren't sure that the Verdigris Environmental Awards will get anywhere, but it could be something worth developing. If you're interested in taking this further, get in touch. And when someone else pinches the idea, just remember that you heard it here first!

## Deinking Simmering Along

We have had a terrific response to the idea that the industry would benefit from a deinking standard. Some of the response has been very positive, and some has been rather more tempered. Between established approaches such as INGEDE Method 11 and a host of bespoke approaches there is a massive gulf. A standard would have to bridge that gulf without being so feeble that it would be useless.

There is no point to developing standards that are not useful in the market, so we must consider as many approaches as possible. The various ideas people have put forward are providing ISO TC130's WG11 with the basis for a lively deinking discussion. WG11 is the group that

**Between established approaches such as INGEDE Method 11 and a host of bespoke approaches there is a massive gulf. A standard would have to bridge that gulf without being so feeble that it would be useless.**

works on standards related to the environmental impact of graphics technology. Its first standard, ISO 16759 for quantifying and communicating the carbon footprint of print media products, was published last July and has been selling at a healthy clip ever since. WG11 has deinking in its sights and will be discussing ideas for a standard at its next meeting in London at the end of March.

Several factors shape the deinkability of printed papers. The type of pulping machine and how long it takes to turn paper into pulp is obviously important, as is the chemistry, surfactants and enzymes involved. It's a bit



▶ like the difference between washing machines and soaps: some combinations work better than others, some are more expensive than others and some have a higher environmental impact. More recent technologies and chemistries would score high for all factors.

And then there is the printed product itself. The printing ink, paper type and printing process used to create it will all influence the deinkability and the suitability of a given deinking process for a particular printed product. And then there's the type of flotation cell used and the means of ink removal. The flotation cell creates froth which carries the ink up to the surface of the tank, so that it can be removed from the pulp. Obviously the effectiveness of all of this, both environmental and economic, depends on the combination of ink and substrate and its suitability for a given technology and chemistry combination.

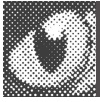
This was the starting point for one of the approaches WG11 will be looking at in March. Four years ago FOGRA, the wonderfully proactive German printing industry research association, looked at deinking as part of its work to improve the recyclability of print media products. Among other things, FOGRA found that the type of surfactant and paper-ink combination were the most important factors for deinkability. The study concluded that "a deinking standard would also be a useful tool in the systematic assessment of the recycling process." This is our goal, but we have a lot of chitchat chatting to do before we can reach it.

For more green news, check out  
The Verdigris Project:

**Verdigris** 

<http://verdigrisproject.com>





## A Review

### Developments in proofing

Efficient handling of the whole proofing process is a well-known challenge, and an area where there are continuous improvements. While many solutions have their origins as prepress tools, mainly aimed at printers, many of the newer solutions on the market are instead aimed at the print buyer (or Brand Owner). One such solution that we have looked at a bit closer is Proofware from the Canadian vendor Global Vision.

Global Vision's history dates back some 20 years, and originally it too mainly aimed its solutions towards prepress houses. But as the workflow moved to involve the print buyer, so the company adapted its solutions to this situation. Global Vision now also offers its proofreading solutions cloud-based in 'light' versions as well.

Global Vision, true to its name, has offices and support centres all over the world, with more than 50 employees worldwide. It lists headquarters in Canada, USA, Germany and UK, but the main base is in Montreal, Canada. Back in 1998 it entered the Asian market, and lists offices in China, India, Japan and Malaysia amongst others.

### Modules

At the core of Proofware are its inspection engines for artwork and text. These core technologies began in 1988 with the TVS Proof-Reader solution (where TVS stands for Text Verification System), and was the main product when Global Vision was formally founded in 1990. Through image analysis and OCR technology the original document is compared with a scanned copy of the proof or print. Over the years Global Vision has expanded its portfolio and now covers six main areas, as seen in the available Proofware apps: DocuProof, ArtProof, SpellProof, BrailleProof, BarProof and Notes.

Starting with the Notes module, which is for collaborative proofing, everyone involved can see which corrections have been requested and the status of the document. This is, of course, cloud-based, so a member of the proofreading team can log in from anywhere in the world.

While the Notes function is perhaps similar to other solutions on the market, it's easier to see its advantage when it's used in tandem with the other specialised modules.

The BrailleProof module can inspect and validate the Braille component of a package or print. This is, of course, of crucial importance for visually impaired end users – a missing dot could mean a totally different number on, for example, the packaging for a medicine.

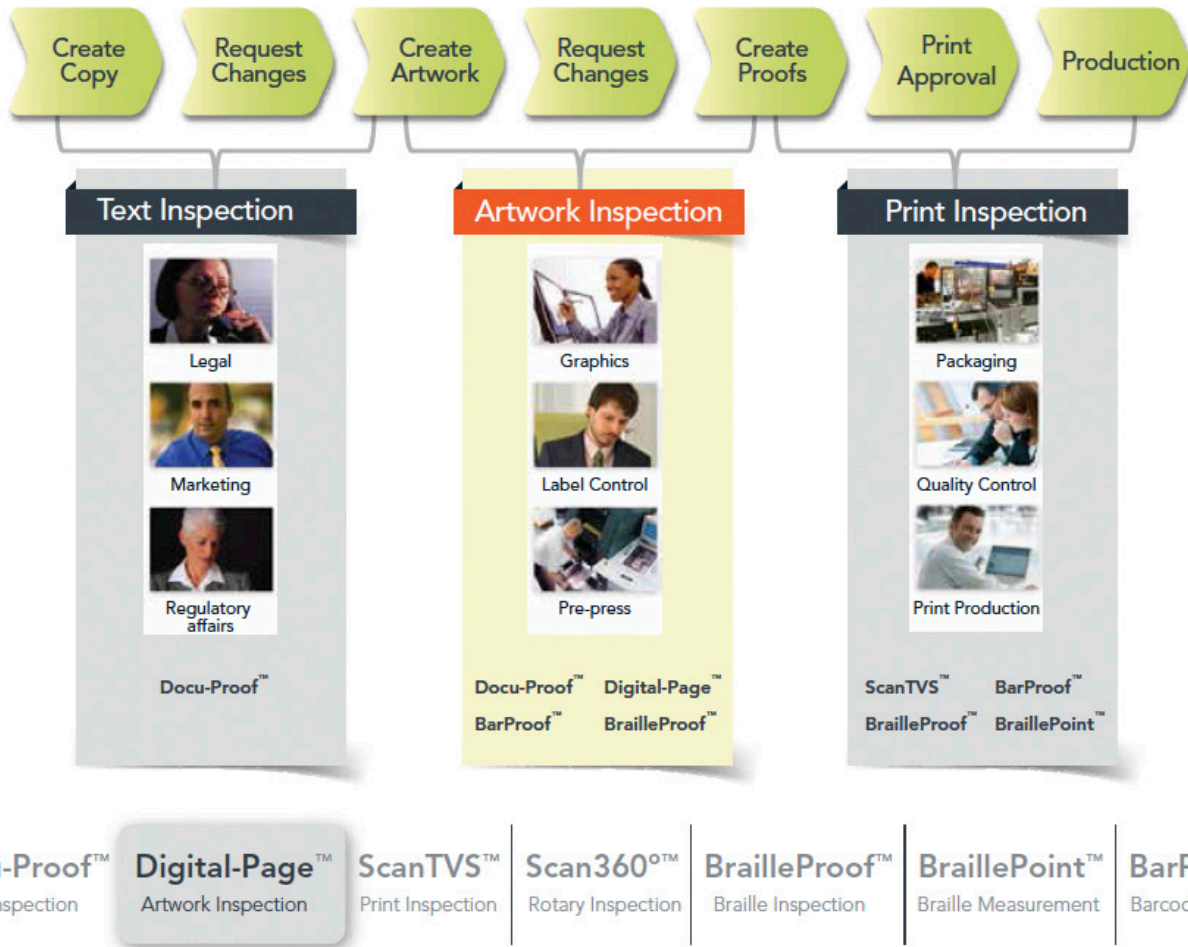
The BarProof module checks that a bar code is readable as such and in the validation a series of criteria is also



*Reuben Malz, president of Global Graphics, about Proofware: "Instead of running multiple inspections, a user can simply upload the files once and run all of the inspections in one go".*

checked, with a grade system of levels A-F applied, where A is the best. The criteria checked include symbol contrast, reflectance, edge contrast and decidability, all according to the relevant ISO standards, such as ISO 15415 and 15416. Global Vision offers a range of scanners, both flatbed and roll fed, so that a whole printed sheet can be checked and validated in one go.

Artproof, (formerly Digital-Page), is perhaps the flagship product in the suite. It automatically validates proofs or



The Proofware software suite from Global Vision has six core components. When used together these enable an automated proofing- and validation process from origination to completed print.

prints compared with the original artwork, and checks the proof against a previously printed and approved package. This has been adopted especially within the pharmaceutical industry, where any error on the package could be fatal for the end user. Not only fonts and images are checked, but also colour differences, die lines and step and repeat patterns.

The final app, DocuProof, concentrates on proofreading the text. As with the other modules, Global Vision supports automated proofreading by dedicated scanners so for multi-page documents like books and manuals, hundreds of pages can be inspected and validated in minutes.

On top of the Proofware suite Global Vision also offers some additional products and services, like Scan360, a scanner that can inspect cylindrical items like bottles, tubes, cans and containers. There is also the ScanWet-ink solution, a roll-fed scanner that can measure and check

the wet ink on freshly printed sheets, without smudging or smearing the ink.

Global Vision markets and supports its products world-wide, both through its own offices and through distributors such as Four Pees, which covers the prepress market. We think it's an interesting range of software modules, and if the ScanWet-ink module is further developed to check for print standard compliance, the validation process really closes the loop in terms of quality control. Global Vision is one of the few prepress vendors that has taken the trouble to go through an ISO 9001 audit, but we think that an ISO 9001 quality management certificate is a good match for those types of services and products.

The cloud based 'light' version of the software suite, called QCanywhere, is well timed to offer a Web-based distributed proofreading solution on a global market.



# On demand digital postpress

**With the slow but constant uptake of digital printing comes a need for digital postpress equipment. One area that has long been outside the digital production process is cutting and creasing, but Highcon is betting that this is about to change with the launch of its Euclid digital converter that is designed to enable on demand cutting and creasing.**

Highcon is an Israeli company, with one of its investors being the Landa Group. The Euclid solution was shown as a technology demonstration at drupa 2012, but during 2013 it has come into full scale production. The first installation was at Glossop Cartons in the UK, and we went there to have a look at how it's used in real life production.

While lasers have been used in industrial production, and also in print production, for a long time, what's unique with the Euclid is that it also creates the creasing forme digitally. The technology is called DART (Digital Adhesive Rule Technology), where the acrylic polymer is applied to the forme inside the Euclid machine, and cured in one pass using UV light. The foil with the creasing forme is placed on the upper drum, while the lower drum acts as a counter blanket for the creasing.

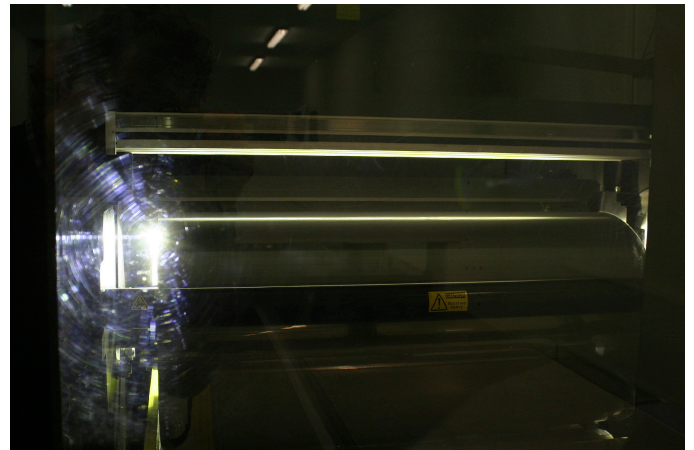
After the creasing process, the cutting is carried out by multiple CO<sub>2</sub> lasers, which are capable of either a total or partial cut. The power of the lasers is constant, so for different thicknesses and substrates the speed is adjusted.

The substrate is fed by a conveyor belt into the Euclid, and after creasing and cutting the sheets are stacked for delivery. The polymer based crease forme lasts for at least 10,000 sheets and a new one can be made in less than 10 minutes if the input data has been prepared and approved already.

The Euclid is best suited for short run production and jobs that are simply impossible to do in the conventional way. But once installed, it will save time and money on many

types of converting jobs, simply because the creation of the crease forme is so fast, and the need for a cutting forme is eliminated.

The cutting can be done using variable data so it can be unique for each single sheet if needed. This opens up a whole range of new applications, where the main limit seems to be the imagination of the package designer. The



*The Highcon Euclid has in all three CO<sub>2</sub> lasers to perform the digital cutting.*

precision of the laser cutting also makes it possible to cut much smaller details than with conventional analogue cutting – an area that is unique to the Highcon Euclid system.

## Fast make ready

While conventional cut and crease formes are quite expensive to produce, the bigger problem is that it adds days if not weeks to the production cycles. And if some error in the forme is found during makeready preparations, it may take days to get a new forme made. With digital production, errors can be fixed immediately, and small corrections done instantly. While make ready for a new job on an analogue cutting and creasing machine is typically 1-1½ hours (though in some cases it can be up to four hours), it's down to about 20 minutes with the Euclid system. The goal for Highcon is to get this down to 15 minutes.

Highcon uses the term Direct-to-Pack, since it believes this technology will have as big an impact on postpress production as direct to plate had on printing. The positive effects are the same: savings in both time and material, and so more ecological.



## The proof is in the pudding

One of the visitors at drupa 2012 who was impressed by what they saw was Brian Sidebottom, Managing Director at Glossop Cartons, UK. Brian and his wife Jacky started the company together with Jacky's father in 1982 and today employ about 50 people. We were invited to see the Euclid in action at their facility in Glossop, beautifully located at the edge of the Peak District National Park.

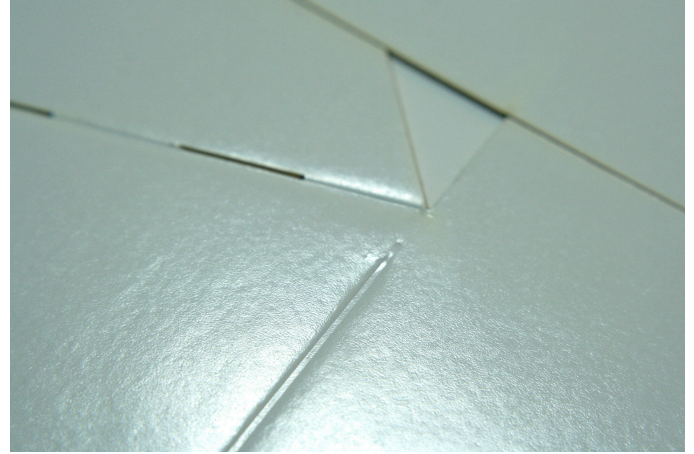
Brian Sidebottom explains: "Immediately after we saw the work produced on the Euclid at drupa my wife Jacky and I started brainstorming with ideas on what we could be offering customers if we had one. Highcon contacted



*Glossop Cartons, UK, use its Highcon Euclid digital cutting and creasing machine at 100%, fed by both conventional offset litho presses and digital large format presses. To the left operator Paul German, and to the right Managing Director Brian Sidebottom.*

us in November 2012 and we entered into negotiations about the machine. When we saw the improved model in January 2013 we decided then to buy one. It was installed in June 2013, and was taken into production as soon as the technicians had finished the installation. We quickly came up to speed on the machine, well aware that both we and Highcon had a steep learning curve ahead to fully use the potential."

Sidebottom makes no secret of the fact that there were several details that needed improvements after installation, both in hardware and software. But he says Highcon were responsive, and today what is left to do is



*The pressure of the DART Counter cylinder can be electronically adjusted to avoid cracks in the carton.*

more or less fine tuning, adding: "We sort of knew that this would be a very new and very different way of thinking, compared to that of the conventional process. We had to get used to a digital workflow and using software for almost everything to be done. But over time we worked out our best practices, and reduced the setup times as well as reduced the number of operator related errors."

With new technology comes the need to explore where the boundaries lie and while we were at Glossop a request came to test a micro flute-based cardboard, popularly used in packaging but not yet tested on the Euclid. Within minutes the job was set up in front of our eyes and a first trial crease and cut was done. The beauty of this type of device is that any adjustments can be done instantly and electronically. Glossop Cartons often use the partial cut to make indicator marks to test out that the creases are in the correct place. When approved by the operator, they are then removed from the template, and the production can start.

It's equally easy to adjust the crease pressure to avoid cracking in the carton and after a couple of adjustments the micro flute carton could be processed successfully on the Euclid. This proved a good test that the Euclid is well out of the prototype stage and ready for full scale production.



## Technical Specifications, summary

Vendor	Model	Max. media size	Min. distance between cutting lines	Cutting speed
Highcon	Euclid	B1 (76x106cm)	0.5mm	1,500* sheets/h

\*For full size sheets. For size 760x470 cm cutting speed will be up to 3,000 sheets/h

Sidebottom says: “We run it full time, and find that the production speed is what was promised, taking into account that some types of substrates take longer to process than others. We are quite confident that over time Highcon will make the machine even faster, and we can move even more of our production to be digital”.

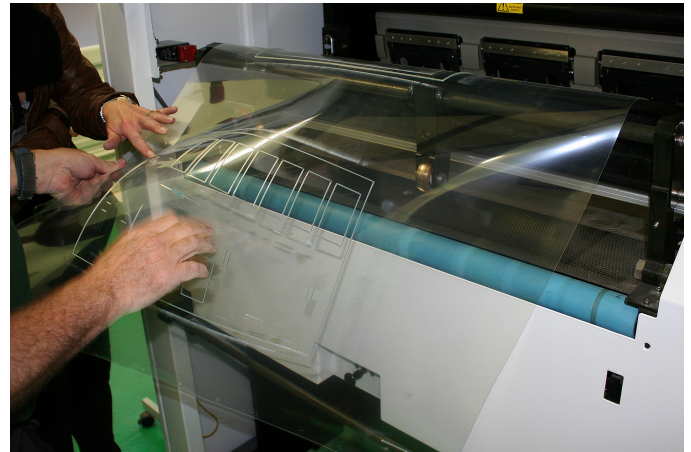
Glossop Cartons prints most of its jobs in offset litho, but also has a large format digital press. The Euclid serves both print processes with its fast crease and cutting facilities.

## Conclusions

While the Highcon Euclid is the perfect match to digital print, in terms of fast turnaround, it's clear that conventional printing technology can also benefit from the digital creasing and cutting functionality of the system. Not needing analogue dies in the supply chain means there's no need for those materials or their transportation. Faster makeready should mean less waste in this process so all in all there is fair reason to claim that this is a more sustainable process than the conventional analogue method.

So, with all those exciting new features, are there any drawbacks? Well, there is of course the unavoidable scorching of the edges of the substrate. When the sheets are printed it's more or less invisible or negligible, but on unprinted sections of the paper there is a slight discolouring from the laser cut. Most of the time this is down to whether or not the customer accepts it, but in a few cases it will probably trigger concerns from the designer or print buyer as well.

But all in all – since there are certain types of cutting that only can be performed in this type of digital system – it is very likely that Highcon will see sales taking off from



*The crease form is applied digitally using an acrylic polymer which is hardened using UV-light. It lasts for up to 10,000 sheets, and takes only about 10 minutes to produce inside the Euclid machine.*

now on. At the moment about seven systems have been sold worldwide, but there is no reason why this number should not grow, and quite rapidly, from now on.

**- Paul Lindström**



# APP Changing its Spots?

Following years of criticism, late last year Greenpeace gave Asian Pulp and Paper (APP) a tentative thumbs up for its sustainability efforts. It was something of a surprise, because Greenpeace, along with the WWF and other NGOs has long been urging APP to change its ways. APP is finally taking steps to put right its environmental wrongs, but can the company be trusted following years of environmental U-turns? So far the signs may just be positive.

## APP's History

APP set up shop in 1984 and by 2001 had pulped 370,000 hectares of Sumatran rain forest. By 2003 APP was in the WWF's sights and the two organisations jointly agreed to protect Jambi and Riau provinces in Sumatra. APP was to prepare a 12-year action plan for its forestry concessions, with commitment to conserve High Conservation Value Forests (HCVF) in Sumatra; ensure the legality of APP's wood supply; and resolve conflicts with local communities. The agreement included land protection for 165,000 hectares of vital Sumatran landscapes. Michael Blake, the CEO at the time said: "APP is changing". He was wrong.

By February 2004 APP was falling short of its Sustainability Action Plan commitments, and distracting NGOs with new ones. Under a debt restructuring agreement covering \$6 billion APP promised to be fully sustainable, and produce all pulp from plantation wood by 2007. Yet APP was still clearing large areas of High Conservation Value Forests at the end of 2004. Maybe they thought it was acceptable as part of its journey to plantation pulp?

NGOs have been dogged in their pressure on APP and its customers and over the years a pattern has emerged: NGOs cry foul and call for boycotts, and APP makes diverting cosmetic promises on some hectares, while setting to with chainsaws elsewhere. WWF disengaged with APP in February 2004 and in 2005 NGOs called for a moratorium on the clear cutting of natural forests. They



Forest land clearing by one of Asia Pulp and Paper's (APP) pulp wood supplier seen from the air at the Kerumutan area in Riau province Indonesia. © Kemal Jufri / Greenpeace



Forest destruction in Sungai Sembilang Nature Conservation Park in South Sumatra. © Kemal Jufri / Greenpeace

formed a coalition of interests, the Eyes on the Forest, to monitor the activities of APP and its equally destructive competitor APRIL.

## Doing Battle

By July 2006 the gloves were well and truly off. The WWF accused APP of failing to live up to its promises, declaring APP responsible for 80,000 hectares of lost rain forest per year since 2002. APP refused to guarantee complete exclusion of High Conservation Value Forest from future logging. In 2007 FSC dropped APP, having found Indonesian rain forest fibres in tested papers. In January 2008 APP was still clearing natural forests in parts of a successful conservation project in Sumatra and the habitat of indigenous tribes, elephants, tigers and orang-utans. APP also built a legally questionable logging





*In February APP held an event to celebrate the first anniversary of its reinvention, received with cautious optimism by the NGOs. Lafcadio Cortesi, Rainforest Action Network (RAN); Scott Poynton, The Forest Trust (TFT); Bustar Maitar, Greenpeace; Rhett Butler, Mongabay; Aida Greenbury, APP; Aditya Bayunanda, WWF Indonesia; and Neville Kemp, Ekologika. Photo by Aji Wihardandi of Mongabay-Indonesia.*

corridor through the rainforest which reached into the national park at the heart of the landscape. WWF claimed that APP had built several roads through the forests of Sumatra, despite APP and the Indonesian government promises to protect the forests and their inhabitants.

## Crisis What Crisis?

It's all been pretty grim. By 2008, major print buyers including Staples, Fuji Xerox, Ricoh and Metro Group, had cut ties with APP. Yet APP still did not stop. According to WWF, satellite imagery confirms that APP was cutting tropical forests inside Senepis, a protected tiger sanctuary inside a UNESCO Biosphere Reserve.

APP had promised to source 100% of its timber from plantation forests by 2004, 2007 and then 2009, but continued using native forest timber right up to 2013. It pushed back the deadline for living up to its sustainability

commitments from 2012 to 2015 and then to 2020. In February 2012 APP's sustainability claims were found to be unsupported by schemes and assessors that APP had nominated to audit its activities, and that none of the schemes covered the most controversial operations: mass clearance of natural tropical forests.

APP countered challenges by either ignoring or sidestepping them, perhaps without fully realising how seriously it risked alienating global markets and customers. APP's elaborate green campaign was described as "hogwash" by the WWF and its partners and ultimately ineffective. NGOs presented further evidence that APP was still clearing natural forests.

## Follow the Money

Then money started talking. The Norwegian Government offered \$1 billion to the Indonesian government for a

moratorium on all new peat and forest clearances starting in 2011. It isn't clear how well this is working, but WWF says it did not stop natural forest clearance by APP and



View over the Kerumutan Peat Swamp Forest \_ important habitat for the critically-endangered Sumatran tiger. © Kemal Jufri / Greenpeace

APRIL. Indonesian forestry concession licensing appears to be a mess, and endemic corruption doesn't help: according to Transparency International's Corruption Perceptions Index of 2013, Indonesia ranks 114th of 177 countries.

Protecting Indonesia's natural forests may be as much a political problem as an environmental and conservation one. By the autumn of 2011 Kraft, Nestlé, Unilever, Tesco and Carrefour had dropped APP and in 2012 sixty environmental and social NGOs requested banks and other financial institutions to not provide funds to APP for its new pulp mill in Sumatra. This, along with the loss of more customers (Disney, Hasbro, Mattel, Danone and Mondy) may have finally convinced APP to honour its commitments.

## APP's Sustainability Roadmap

The original Sustainability Action Plan (SAP) of 2004 had included a promise to cease native forest pulping by 2007. This commitment is in the Forest Conservation Policy (FCP) published on 5 Feb 2013, however by June 2012 there were no natural forests left in Riau to apply the policy to: areas were either cleared, protected under Indonesian law or used as APP showcases to beguile gullible press and customers. APP's mills however are now

ISO 14001 and ISO 9001 certified and APP said in 2012 it would cease clearing what remained of natural forests on its Indonesian concessions so that HCVF assessments could be done, potentially saving 22,000 hectares; over two million hectares have been pulped since 1984.

## Progress Dashboard

The latest Sustainability Roadmap and FCP covers the specifics of HCVF assessments across APP's 38 pulpwood concessions in Indonesia, with a view to management and protection. Assessments will include management recommendations and peer review reports and hopefully include commitments extending to all APP concessions including those in China, Vietnam, Thailand and elsewhere. APP has set up an online reporting system for tracking progress with its FCP. The dashboard is detailed up to a point however, WWF claim that there is much that is not reported.

By Q2 2014 all 38 HCVF assessments are due for completion. Assessments will identify how much forest



Forest land clearing by one of APP's pulp wood suppliers at the Bukit Tigapuluh National Conservation area in Jambi province, Indonesian. © Kemal Jufri / Greenpeace

is left to protect and explain how APP intends to manage and protect all HCS and HCVF areas, This work is the basis for a Sustainable Forest Management plan. APP has said its HCVF reports are to be available to all stakeholders and that they will be the basis for its restoration plans.

Andrew Coker APP's Director of Stakeholder Engagement Europe says: "The first batch of [11] reports are currently



being peer reviewed. The second batch are still in process. NGOs and other stakeholders have been kept up to date on progress and deadlines”.

However Aditya Bayunanda, WWF Indonesia Forest Market Transformation Leader, says: “We have not seen the HCVF reports, they have not been shared with civil society despite promises to do so going back as far as July. The quality of the reports are not known to us, the fact that APP has rejected the use of the High Conservation Value Resource Network as the peer reviewers of these reports raise concerns again on the quality and the methodology of the assessments. ... Until now we have deep concerns on the ongoing HCVF process and it will only be abated with transparency and proven quality of the assessment.”

We asked Andrew Coker about this and he has confirmed that they will be done. He says that they “are late but due for completion very shortly, both the HCS and HCVF”. Aditya Bayunanda says that the “HCVF on the remaining 27 concessions are actually the ones we are more concerned with as these would be done over natural forests. We know that these reports are overdue. And [we] are anxious to see if APP has done a good job in implementing them”.

The assessments will be the basis for APP’s management plan which must be long term, fully informed, transparent and include impact assessments for all activities. Recommendations and the conservation management plan should have been in place by the end of 2013 but according to Andrew Coker the forestry “restoration plan is not in place because it depends on assessments which should be completed Q1 2014 and then there is a mapping exercise and pilot project to work out how to implement the assessment results for a full plan [in] September”.

APP is working across 2.6 million hectares to do these assessments so this is not a simple, cheap or trivial task. The Sustainability Roadmap requires all suppliers to comply with APP’s Forest Conservation Policy and its Responsible Fibre Procurement and Purchasing Policy. A Supplier Forest Management scorecard helps APP demonstrate compliance throughout its supply chains: 1.2 million hectares are vulnerable to APP suppliers who can work the concessions unconstrained.

In its fourth update report on the Sustainability Roadmap: Vision 2020, published in November 2013, APP confessed two breaches of its moratorium by its suppliers, one identified by NGOs and one by APP itself. This report has had positive Greenpeace recognition and WWF Indonesia’s cautious acceptance. Greenpeace found APP’s consultation process “comprehensive and robust” and recommends that APP publish Sustainable Forest Management Plans on its dashboard.

However, in December an NGO coalition called RPHK published a report with evidence that an APP supplier had cleared up to 1,400 hectares of natural forest, violating APP’s moratorium. This report was not mentioned in



*Greenpeace Indonesia lead by Zulfahmi Fahmi (Left) visits Minister of Forest Mr. Darori, Director General of Forest Protection and Nature Conservation (right) and hands over the report of a year-long investigation, showing that Asia Pulp & Paper (APP) is systematically violating Indonesia’s laws protecting Ramin, an internationally protected tree species. © Ardiles Rante / Greenpeace*

APP’s progress report published on the 5th February 2014. In this announcement APP called for NGOs, businesses and governments to collectively tackle deforestation in Indonesia.

APP is also doing growth and yield assessments to review longterm fibre resource availability and developing a Plantation Yield Regulation System for “forest architecture planning”. This was due for completion by December 2013 however Coker explains that “Field verification has been added to the plan, so the deadline for this is now June 2014.”



APP claims to be completely dependent on third party verification for its pulpwood legality and that it contains no HCVF fibre. “What we can say to our customers is we can assure you that our products will not contain any fibre which is linked to any deforestation activities” according to APP’s Sustainability Managing Director Aida Greenbury.

## FSC & PEFC

APP is committed to using 100% certified plantation wood for pulp production, for which it needs reengagement with FSC and PEFC. APP has stated: “We will fully support the FSC in any way necessary in its decision making towards considering any formal re-association process”. WWF welcomes this effort however, is concerned that “PEFC



Activists from Greenpeace and Walhi hold a banner as they bear witness to forest destruction in PT Asia Tani Persada concession, which supplies Asia Pulp and Paper (APP) in Kuala Labai, West Kalimantan, Indonesia. © Ulet Ifansasti / Greenpeace

standards currently still allows conversion of natural forest that are not primary forest which is the dominate condition of the forest lands in Indonesia. Until this loop hole can be addressed PEFC certification can be issued in controversial operations that continue to do conversion of natural forest.”

## The NGO Position

Greenpeace published its APP Forest Conservation Policy (FCP) progress review in October 2013 and gave APP a tentative thumbs up. Greenpeace still recommends caution because the HCS assessments were being done by the Forest Trust, an APP partner. The NGOs had

published in September the EPN Milestones document that highlighted areas not properly addressed by APP’s FCP.

The FCP includes forest and peat restoration and compensation for past damage and independent audits. APP’s FCP policy does not preclude natural forest wood coming from non-conservation areas from entering APP supply chains. APP should obviously adopt a zero natural forest wood policy. Of the yield and growth studies of APP timber supplies, Aditya Bayunanda comments: “If indeed they are completed, sharing them [with] civil society would ease a lot of anxiousness of civil society whether their sustainability policy is genuine.”

NGOs are engaging with APP to resolve these concerns. They have established milestones for achieving agreed goals and commitments on areas of forest covered by agreements. Cessation of moratorium breaches, must be achieved before the NGOs give APP a clean bill of health. Meanwhile NGOs recommend buyers to wait and see.

## APP Expanding Activities

APP has invested huge resource into its Sustainability Roadmap and into persuading everyone it has changed, but has it really? In addition to its two existing mills, APP is developing the world’s biggest pulp mill in Sumatra. (Construction funding has come from somewhere, despite APP’s failure to honour environmental covenants undertaken during previous debt restructurings.)

Capacity is 1.5 - 2 million tonnes of bleached hardwood pulp per year, mainly for Chinese customers. Due for commissioning in 2016, this chemical pulp mill will require over seven million tonnes of wood per year, a 50% increase in APP’s current local demand. APP claims plantations can provide this additional pulp and meet existing requirements: 24 million tonnes of plantation wood annually. However if APP’s priority is survival, only full, transparent and honest responses to markets and NGOs will do. This question of source is no different.

## Where We are Now

APP’s reinvention is about good business, make no mistake. We do not believe the company fully respects

▶ global concerns, or that natural forest resource protection is at the top of APP's agenda. The annual reports for its two mills bury environmental messaging at the back: an afterthought not a priority. The accounts make no real provision for investment into sustainability or executing the Sustainability Roadmap. So how is this work funded?

## Reasons to be Hopeful, Part n

The APP Sustainability Roadmap is clear-ish and reasonably complete although NGOs criticise its vagueness and lack of clearly defined terms. If it's greenwash, it's expensive greenwash. As APP changes from evasion to embrace, the company is moving quickly through a steep and extremely tough learning curve.

The Indonesian government also seems to get the picture. In 2011 it signed Voluntary Partnership Agreements with the EU and Japan for aligning concepts of wood legality and traceability, and to ensure that Indonesian timber complies with the EU Timber Regulation and related rules and trade policies.

APP's wanton destruction of Indonesian rain forests outrage our modern sensibilities, but APP'S goal was money and development, and the exploitation of a readily available natural resource. In Britain's industrial heyday the goal was not so different, while diamond mines trashed great swathes of South African veld and Victorian children were considered the perfect size for cleaning chimneys cost effectively. A 21st century perspective cannot be objective and developed countries are not blameless when it comes to environmental destruction. Nor are we so innocent; today 95% of Britain's peat bogs are gone, yet peat continues to be harvested.

Almost thirty years of sustained pressure has forced APP to realise that doing businesses in today's global market cannot be compared with 19th century models. Any parallels are skewed by hindsight, experience and the knowledge of loss.

Given the history of deceptions and betrayals in many ways it is amazing that APP still has the opportunity to create a ground-breaking and profitable business model. But history has a heavy foot. APP must replace habitual evasion and dissemblance with voluntary disclosure and

transparency. APP's credibility depends on the strength of its actions, robust management and conservation plans, including supply chain discipline, and restoration.

## ... or Not

Has APP now cleared so much of the forest that it can afford to concede to demands to stop? Are economics forcing APP towards a new business model? Have APP's



*Rainforest beside cleared and drained peatland in the PT Bina Duta Laksana concession. The Sinar Mas group affiliated concession, a supplier of pulpwood to Asia Pulp and Paper (APP), is located within the Kerumutan Peat Swamp Forest. © Kemal Jufri / Greenpeace*

credit lines dried up? Is APP simply done with Indonesian forests, turning instead to places such as Vietnam or Thailand or Africa for natural forest timber?

APP has a comprehensive environmental policy on its website but it has not been updated since July 2012 and it does not reflect progress with the Sustainability Roadmap. This is odd, but perhaps they're all just busy?

## In the End

APP must go beyond the minimum. Entire markets have slammed shut their doors, as Andrew Coker acknowledges, saying that in Europe "we are a minnow. We have a long way to go". APP can compete on price and quality, but no conversations can begin without proactive, transparent and honest sustainability efforts. Coker is convinced that APP "has changed – it's changed in the statements and plantations and at mill level all I ask for is a fair hearing".



*A Sumatran tiger is pictured at the Taman safari Park. In Indonesia, forest destruction for palm oil is pushing Sumatran tigers to the edge of extinction, with as few as 400 left in the wild. Companies must commit to zero deforestation and end their role in tiger habitat loss. © Paul Hilton / Greenpeace*

Moving to a plantation model is really APP's only option for survival. Coker understands this: "I can't say we've won any big customers back because we haven't; they are waiting for time and consistency". He adds that there is "a real desire within the business to become a good business partner". APP is breaking away from destruction to protection, because "there's no plan B".

**- Laurel Brunner**





# ISO 16759 and ISO TS14067 Compared

**Sometimes ISO standards appear to overlap, as with ISO 16759 and ISO TS14067 but there are considerable differences, much like comparing a sit-on lawn mower with a tractor.**

ISO 16759 is a standard for quantifying and communicating the carbon footprint of print media products, so it has a very specific purpose. Whereas ISO TS14067 is for quantifying and communicating the carbon footprints of products, which means it could be anything. The two standards obviously have much in common, but the tale of how ISO 16759 and ISO TS14067 reached the light of day is a salutary one.

Work started on ISO 14067 many years ago but it fell at the final fence. ISO 14067 did not make it as a full-on standard because too many countries said 'No' in the ballot to publish it. Their reasons were mostly political or ill-informed, so the document was instead published as a Technical Specification last June.

ISO published ISO 16759 last July and over the summer the standard sold at an astonishing rate of roughly one copy per day. In September Ricoh Europe announced that its carbon calculator had been certified for conformance to ISO 16759, a clear indication that the standard is actually being used. Heidelberg has also developed an ISO 16759-compliant calculator.

This is all very disappointing for ISO TS14067, but it's a great story for ISO 16759. The standard's success reflects market interest and the hard work done since the first draft was presented in September 2010. And it would not have been possible without the equally stellar work done on ISO TS14067.

Early versions of ISO 16759 were closely aligned to ISO 14067 through a liaison between the working groups responsible for the two standards. Coming up with a

single carbon footprinting standard was never going to be easy, but coming up with something that would work for a specific industry sector was within the realms of possibility. This is what has been achieved with ISO 16759, but how different from TS14067 is the document? Does it provide a template that other industries might exploit?

The two documents use similar terms and definitions, for instance, those relating to carbon footprints, greenhouse gases, life cycle assessment, organisations and consumers as well as data and data quality. There



are some omissions of terms not considered relevant for ISO 16759. But both ISO 16759 and TS14067 also have in common their summaries of principles, general requirements, requirements for a life cycle perspective, relative approach and a well-defined functional unit. They have the same requirements for relevance, completeness, accuracy, transparency, avoidance of double counting and indeed throughout the two documents there is a general coherence.

There are however some differences, beyond the obvious additions of print media specific requirements and omissions of content considered irrelevant for graphic arts industry applications. ISO 16759 devotes many pages to definitions related to prepress, press and postpress

▶ activities. It omits terms relating to biogenic material and land use, as well as CFP verification, none of which is presently relevant for the graphic arts. ISO 16759 also omits requirements to measure emissions relating to the use stage “during the product’s service life” since this is impossible for a printer or print buyer to quantify.

Similarly end of life is optional in ISO 16759 because users of the standard do not necessarily know what this will be. In the case of newspapers for example it is likely to be soon and involve recycling, but not necessarily. In the case of books, they may not reach end of life for hundreds of years.

There are other omissions of TS14067 content in ISO 16759. Printers and publishers, for instance, cannot use Product Category Rules as the basis for a carbon footprint calculation as no recognised PCRs exist for print media products. But ISO 16759 does provide for development of PCRs so this may change over time, something that would be reflected in a future revision.

Other areas where the two documents differ are in their communications requirements. ISO TS14067 has specific requirements for communicating carbon footprint information, with added requirements for studies that are intended for public use. Its options include labels, declarations and performance tracking as well as external communications reports. ISO 16759 recommends only the last two for public and private communications.

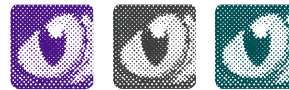
TS14067 has some other requirements that ISO 16759 omits, for instance specifying that a CF study includes a time period for assessment of GHG emissions and removals and for how they should be treated. There is also no requirement in ISO 16759 for life cycle impact assessment or interpretation.

ISO 16759 and TS14067 are consistent with one another, but ISO 16759 focuses on getting the principles in TS14067 expressed in a sector specific document. It is heavily laden with requirements for printed products, providing guidance for companies who want to develop carbon footprint calculators specifically for printers and publishers and their customers. This is the defining characteristic for ISO 16759. It is written to be used

within the graphic arts industry and to be as simple as possible for printers, publishers and their supply chains to implement.

There is an important lesson in this story for anyone involved in standards work. Standards are only really relevant and useful if they have a local relevance. If they are too difficult to understand, they will not be used. They cannot be all things to all people and cannot account for all perspectives and market realities. ISO TS14067 provides an excellent reference document and industries from construction to agriculture should get on and use it. It is an obvious starting point for sector specific carbon calculator specifications.

**- Laurel Brunner**



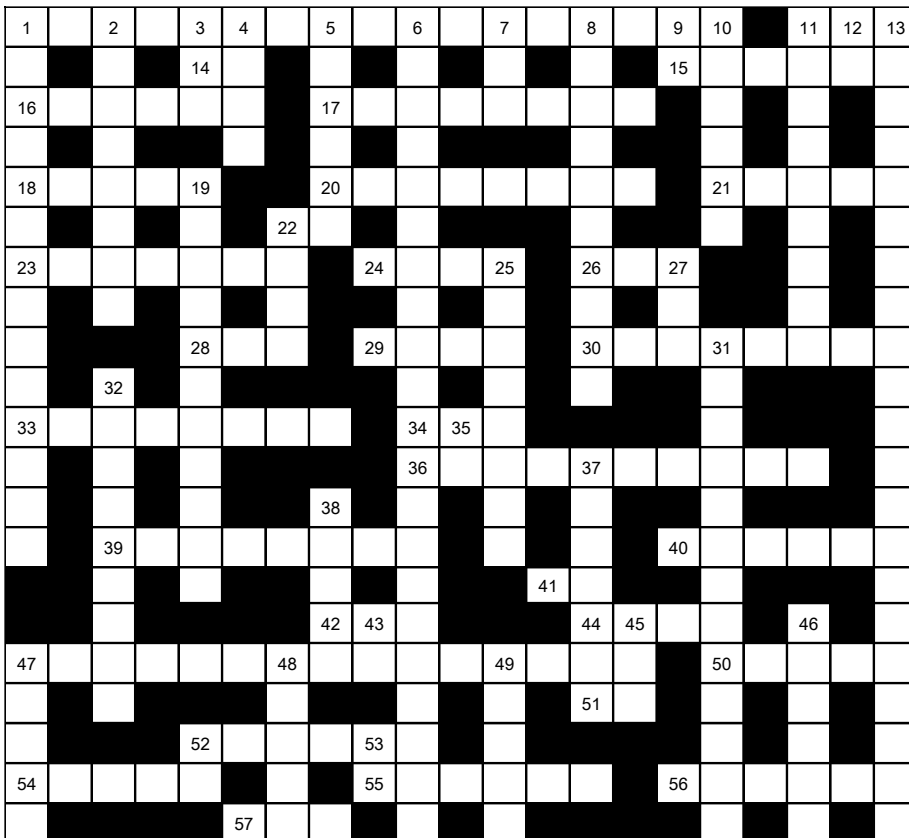




# X-word Puzzle

## Number 50\*

This is another puzzle that slipped the traps rather later than it should, so it is a little long. But it shouldn't tax you too much!



### Across

- 1. Visual representation applied in the heart of cameras, platesetters, scanners, digital presses. (7, 10)
- 11. Poem
- 14. Owners equity. (2)
- 15. You need to use one of these before you can get your plates on press. (6)
- 16. Choose one early for rendering colours accurately. (6)
- 17. Online obsession for vain writers or useful communication? (8)
- 18. Forefinger points to reference list. (5)
- 20. A page that sticks a book to its cover. (3, 5)
- 21. One to whom something belongs. (5)

- 22. Saint. (2)
- 23. Sideways thinking? (7)
- 24. Volatile Organic Compounds. (4)
- 26. Extra Sensory Perception. (3)
- 28. The type of analysis that identifies what's missing. (3)
- 29. Encourage with a spiked device. (4)

- 30. Member of an illegal mob. (8)
- 33. Related to a subject? The main tickle? (8)
- 34. To hit lightly. (3)
- 36. Process of page positioning on plate or sheet. (10)
- 39. Purpose of cooling units on some wide format digital presses. Relaxing. (8)
- 40. Found in most machines; some heavy. (6)
- 41. Infra red. (2)
- 42. Put down, resting. (3)
- 44. To take a sheet during the run. (4)
- 47. NCR substrate? (10, 5)
- 50. Progress towards end of life in. (5)
- 51. Holland? (2)
- 52. Not transparent. (6)
- 54. Material, such as paper? (5)
- 55. Vast river of books. (6)
- 56. To stop. (6)

- 57. Slang for inkjet nozzle. (3)

### Down

- 1. Process of getting your computer booted up. (14)
- 2. Remedy or cure for poison. (8)
- 3. Atom or collection of them that are electrically charged. (3)
- 4. For collecting fish or butterflies or totals? (4)
- 5. Somewhere between a smartphone and a laptop. (6)
- 6. They live skyward a binary world away from your desktop. (5, 9, 7)
- 7. Carp endlessly. (3)
- 8. This one equals 297mm on an A4 sheet. (6, 4)





- 9. Great Britain. (2)
- 10. Not Cyan, Magenta or Black. (6)
- 11. The exception in a small group. (3, 3, 3)
- 12. Germany. (2)
- 13. A mistake that stops your workflow. (5, 2, 10, 4)
- 19. Electrostatic process otherwise known. (11)
- 22. Serial Line Internet Protocol. (4)
- 25. Junked. (8)
- 27. To fix a colour. (3)
- 31. ... and anodised as strata on a plate. (7, 6)
- 32. Look at results in a table? (4, 5)
- 35. Screening that isn't random. (2)
- 37. To make more clear, tighten focus. (7)
- 38. Short alleyway with pews on either side. (5)
- 43. English preposition, adverb and conjunction. (2)
- 45. Universal Resource Locator. (3)
- 46. Drank way too much, unusually. (6)
- 47. Group, category or social delineator. (5)
- 48. Depart. (5)
- 49. To give extreme surprise. (5)
- 52. Alright
- 53. United Artists. (2)

**\*Answers in the next issue**

## Number 49 - Answers

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

