# The Seybold REPORT <sup>SM</sup>

### Drupa 2004

# Gone But Not Forgotten

THE IMPACT OF DRUPA 2004 CONTINUES TO REVERBERATE LONG after the displays have been packed and the last attendee has departed Düsseldorf. While this year's Drupa might not have lived up to the standards set by its predecessor in terms of attendance and innovation, it was nonetheless a success. Customers appear to be buying once again, and companies like HP, KPG, Agfa and MAN Roland claimed that sales from Drupa exceeded expectations.

Innovations in technology were, in fact, on display, perhaps obscured by the overarching emphasis on JDF and workflow. You just had to know where to look.

*For news between issues, visit:*

# *Seybold365.com*

*For subscriber services
& archive access, visit:*

**Seybold365.com**

## Our Perspective

# Significant Change in CTP Technology Developments

BY MICHAEL MITTELHAUS

**Evidence at Drupa proves that CTP is changing direction, but no one seems to have noticed.**

CTP news was not, of course, the highlight of Drupa 2004, nor did anyone expect it to be. But the change in the strategic direction of computer-to-plate technology does deserve a spot on the list of conference highlights. The weird part is, no one seems to have noticed it yet.

My opinion could be off the mark, but in any case I hope it stimulates discussion.

You could describe the history of computer to plate, and in particular, the history of CTP at Drupa as "the rise and fall of the thermal empire." To avoid completely upsetting my friends and clients in the thermal camp, I must immediately add that this is just a metaphor. But there is something substantial behind it, and that something is Fuji.

When Fuji said just prior to Drupa that it saw the best prospects for CTP in the area of violet technology, most people seem to have missed it. In any case, I've heard essentially no reaction to this, even though this is the most remarkable announcement since Drupa 2000.

Fuji's comparative restraint about introducing processless thermal plates is a logical consequence of its own statements. Why would Fuji bring out a product whose prospects, from its own point of view, are nil? Fuji is working on such a plate to make sure it doesn't fall behind the competition, but it's beginning to look as if it is really just the basis for introducing a processless violet plate. Fuji could easily bring a half-finished product to market, as Agfa and KPG have done, but it refuses to do that.

## Watch for Processless Violet

I wouldn't be surprised to receive an announcement from Japan in 2005 (or 2006 at the latest) that the time of the processless violet plate has arrived. It only makes sense, considering how the power of violet diodes has been increasing. For silver-based plates, no additional power is required. But in four years, will we still be using poisonous and expensive-to-process silver plates?

In 2000, we had, realistically speaking, 5mW of laser power available. By 2002, it was up to 30mW; and at Drupa 2004, 60mW lasers were everywhere and Krause was already showing 100mW (others had 100mW in the works, too). A source who knows the laser scene told me it won't be long until we have 150mW diodes, perhaps even 200mW or more.

Since 60mW is enough to make any commercial printer happy (and diodes aren't developed just for the handful of newspaper plants that want to expose 300 plates per hour on a single machine), we don't need 150mW diodes for thermal plates. We do need 150mW diodes if we want to image processless violet plates, however. Just as with thermal technology, processless requires the most energy.

I'm not claiming that 150mW diodes

will be developed because of the need to image processless violet plates. Just the reverse. Because 150mW diodes will be developed (for reading and writing multi-session DVDs, for example), processless violet plates will be possible.

I don't want to create the misconception that the future is entirely processless and that violet only has a future via processless technology. Quite the contrary; I was somewhat disappointed with this Drupa in terms of what I saw and heard about processless technology.

Presstek was the only vendor that had materials you could call to some extent "processless." However, Presstek was not able to explain how as a "minivendor" it could produce five different process-free or processless plates economically enough that the majority of small printers could afford to use them on their presses.

At Drupa, I didn't see any processless plates that were economical in volumes above 2,000 to 3,000 square meters per year. But if you use so few plates, why would you buy a CTP system for metal plates in the first place? No one could give me a plausible explanation, probably because there really isn't one — not one based on ROI, at least.

## Does 2-up or 4-up Thermal Have a Future?

Apart from the apparently unbending bastions of Creo and Presstek, no one active in the 2-up or 4-up market seems to believe in a thermal future for these installations. But 2-up and 4-up are the future of CTP, since these are the formats of the majority of presses.

Most smaller vendors (such as Mantra-graphics, Lithotech, Highwater, Escher-Grad and ECRM) just don't believe in a thermal future for pure offset CTP. And



Bruce Harrison (left) and Phil Burke with the Jetplate 7600 Plus, Inkjet CTP.

ECRM had an extraordinarily successful Drupa and might be on its way to its best year since Drupa 2000. I don't expect much from Creo's effort, in association with KBA, to sell a mini-Lotem as essentially a fifth printing unit with each press. It worked very well for Heidelberg a few years ago, but times have changed. It's a shame when a company like Creo, which owes its ascendancy to its timely recognition (or even invention) of the real trends of the day (as the NGP, which Creo brought to life, dramatically illustrates), starts to demonstrate the exact opposite in its core business. Where were Creo's great CTP innovations at this Drupa?

Earlier, I said that Fuji was the substance behind the change in trends, but that's not entirely true. In the flickering fog of Drupa, KPG emerged as the third-largest violet vendor of the future. No one said so officially, but even an empire like

KPG looks foolish if over the long term, it simply ignores 50% or 60% of a market. And the newspaper market is currently 80% violet, with a violet market leader (Agfa). That's why KPG will introduce its violet plate at Ifra this year.

Some at KPG will have a hard time understanding this, and Creo won't understand it at all, but history has frequently shown us that people often fail to understand developments that are happening right before their eyes.

## The CTP Market in 2008

Perhaps the best way to explain the shift in CTP trends is to take a look at how CTP will appear by the year 2008. By then, we'll see a lot of CTP systems that use inkjet technology to image a plate. This might not be sufficient for all applications, but then neither are any of today's technologies. Three inkjet-CTP systems were on display at Drupa 2004, from Jetplate, Glunz & Jensen, and (unnoticed by many) Technova. An Indian vendor of cost-effective laser-printer plates, Technova is destined to be the company that finally conquers the small-offset market with



The new UV CTP device Espresso from Esko-Graphics.

affordable CTP technology. At Drupa 2004, the company showed an interesting first step in that direction.

Inkjet technology still needs to be improved to reach the level of classical commercial printing, but in comparison with 2000, the improvement in image quality was huge.

*History has frequently shown us that people often fail to understand developments that are happening right before their eyes.*

The use of conventional plates with digital imaging technology also will increase noticeably after this Drupa, at least once the Esko-Graphics Espresso device is released to the market. Unlike basysPrint, Esko-Graphics is not making the price difference between conventional and CTP plates its primary focus. But this strategy by the Danish-Belgian company removes precisely the one development that could get basysPrint into trouble: the decreasing price difference between the plate technologies.

This is not to say that cost differences have already disappeared; quite the contrary. We find that CTP plates cost 30% to 80% more than conventional ones, depending on the market. But this price difference has been cut roughly in half since 1997, so you wouldn't want to argue that the difference will persist for another seven years.

This is not a criticism of basysPrint, which has done a good job of continuing to develop its technology. BasysPrint now has machines producing more than 120 plates per hour in the newspaper market. But the trends indicate that even

basysPrint, which has been persistently producing computer to conventional plate (CTCP) machines for eight years, must think about new directions if it doesn't want to let opportunity pass it by.

You can be sure that the coming competition with Esko-Graphics will fire up the CTCP market among both the vendors and their customers; that's the beauty of competition. Something else that also went unnoticed by most was that Esko-Graphics, with its Espresso, wants to make its mark in quite a different way. Imagine for a moment the filigreed Espresso next to a fully-automatic Platedriver and you'll see what I mean.

The Danes finally caught on, and instead of huge, exquisite machines, they have made an "everyman's platesetter." (I



Glunz&Jensen showed its Inkjet CTP device called Platewriter 4200 iCTP.

am tempted to call it a "trendsetter," but that would probably be the wrong expression to use here.) This complete and highly intriguing about-face in machine design is one of the first really visible signs that new Esko-Graphics CEO Kim Graven-Nielsen and his team have taken charge. It's a good illustration of the positive things that can happen when someone from outside the graphic arts industry influences the direction of a graphics company.

A quick look at the past and the present reveals the future, as we see it:

- In 2008, the great majority of all CTP systems offered, sold and installed will be non-thermal. Will the whole CTP market then be violet? Surely not. Small islands of stubborn thermal diehards will resist the stampede. In 2008, we will see violet systems co-existing with CTCP systems from basysPrint, Esko-Graphics and at least two or three other vendors, along with whatever varieties of CTP that inkjet technology is capable of by then.

Thermal will be more focused on market niches, which requires a very different approach to the market, as the clever flexo machines from Lüscher illustrate. They are clever not only because the internal-drum design greatly simplifies the handling of flexo mats, but because many users in the label and packaging industry now have a single machine with which they can produce both flexo and offset plates.

I've thought long and hard about



A.B.Dick's chemical free Vector CTP system with the "thin drum."

whether I am mistaken in this prediction. Perhaps Presstek and A.B. Dick are correct in the direction they have taken with their plates and systems. The announcement, the pricing and what I was able to see at Drupa were all impressive to a degree. But on the other hand, I'd like to see this technology proved in practice in the field, and that won't happen until at least the end of the year.

We will still see thermal systems at Drupa 2008, but in contrast with 1997, they will no longer be the definitive technology for CTP and its continuing development. Thermal will continue to find strong niches in VLF and certain 4-up and 8-up markets.

That's a great shift in trends that went nearly unnoticed at this Drupa.     **TSR**

**About the Author:**
Michael Mittelhaus has been active as a CTP consultant since 1994 and can be reached via his Web site: www.mitttelhaus.com.

# Lessons from Drupa:
# Going With the (Work)flow

BY JIM FELICI

**The publishing technology industry goes in cycles like any other, and they're evident to the trained observer at trade shows such as Drupa. Our informal poll reveals who will benefit first from JDF.**

At times of great technological innovation (and ample venture capital), all the headlines are about new products and how technology will revolutionize the revolution. In slack or uncertain times, such as now, the news is all about "partnerships," strategic alliances" and "new standards for interoperability." Fierce competitors start to sound like old pals because after all, we're all in this together.

Where would we be without standards, the ties that bind? From the tone of the companies presenting at Drupa, you'd think they were all about to merge into one big happy family.

You'd have been hard-pressed, for example, to find any device more complicated than a cellphone that couldn't drive a Hewlett-Packard Indigo digital press. HP evangelists and deal-makers were everywhere, leaving a cloud of press releases in their wake. Kodak Polychrome Graphics' inch-thick press kit was packed with announcements of deals, connections, compatibilities and couplings with the wares of other companies. The same could be said of all the major players: Xerox, EFI, Canon, Epson, Creo, Agfa, and on and on.

Nominally, the theme of this Drupa was job definition format. But behind the mantra of JDF lurked a more basic leitmotif: workflow. JDF is the stickum that's supposed to hold workflows together, and if there had been a Workflow Village at Drupa (as their was a Print City and an Innovation Park), the majority of vendors at the show would have been crowded in there, so ubiquitous was the term in everyone's marketing materials.

You could have come away with the impression that all these systems actually worked in harmony and that they really did get work to flow. Now that we have JDF, the story goes, it's a plug-and-plug-and-plug-and-play world.

Much of what's referred to as workflow in these contexts, though, might better called "process automation." Successfully printing a PDF file isn't the same as having control over a workflow; it's just printing a file. That process has been larded up over the years with concerns for create-once-distribute-everywhere-in-all-media publishing (one file that can be infinitely "repur-posed"). But it should not hide the fact that we're still talking about taking a finished file (from a content point of view — remember content?) and printing it. The real issues of workflow, such as the ones that hinge on people's behavior, remain largely out of reach.

I'm basing this conclusion in part on an informal poll I took at Drupa, asking about half the vendors I talked to about their impressions of JDF and its likely impact. To whom, I asked, would it make the biggest difference? Who would be the first to adopt it and where would we see its first impactful implementations?

The answers were surprising first because of their near unanimity, and secondly because they didn't involve any of the big names in the CIP4 consortium that cooked up the spec in the first place. The winner of the JDF grand prize is the accounting department.

For all the talk of interoperability and of a job ticket that would provide a focal point for the various needs and forces in the publishing process (and perhaps even rationalize them), nearly everyone I asked agreed that the early adopters would be the bean coun-

Using Enfocus InstantPDF 3.0's queue editor, users can control all aspects of a PDF file's creation and disposition. Here, the editor defines how the program will work with Adobe InDesign, which can feed jobs to InstantPDF's automated workflows directly from the File menu. PDFs can be created using Adobe Acrobat Distiller or Enfocus's own PDF library.
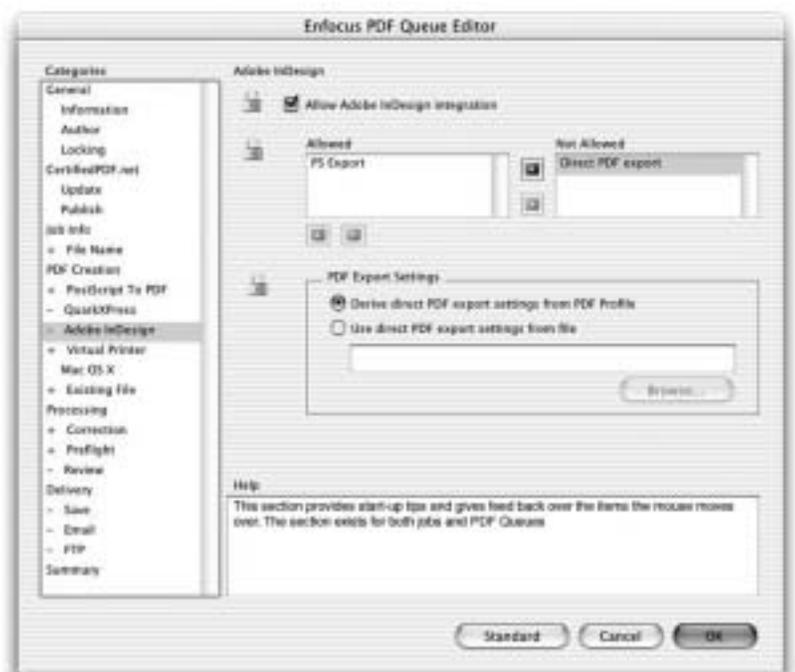
ters, who would have a cost- and work-tracking and billing system that they could never have built if they'd lobbied for it themselves. It sneaked in through the back door, championed not by the chief financial officer but by the chief technology officer.

Accounting is actually a great place to start because it creates the opportunity to establish what the high-tech publishing industry has never had before: a chance to reliably calculate return on technology investment.

Now that could really be revolutionary.

### Also catching our eye at Drupa:

### Enhanced PDF Enhancement from Apago

Apago (www.apago.com) continues to come up better ideas for handling PDF files. At Drupa, the company showcased its PDF Enhancer 2.5 The idea of the program is to direct generic PDFs of uncertain or uncontrolled origins to a specific output goal, which could include print, screen, archive or all of the above. The program comes with a dozen or so default output profiles for reworking the PDFs (users can create their own as well), and a single PDF can be directed through any number of these at the same time to create various output versions in assorted places.

The list of the transformations Enhancer can accomplish is impressive, going well beyond the obvious targeting for output at specific resolutions. It can, for example, convert color spaces, standardize multiple gray descriptions to create a single black separation, and "set page size to trim" to lose bleeds and crop and registration marks when converting print documents for use on screen. It can merge specified page ranges of one PDF file with another. Its Acrobat-compatible security system offers either 40- or 128-bit encryption.

PDF Enhancer runs on Mac OS X or Windows 98/NT/2000/XP. Prices start at $179 for the standard

*J*DF *is sneaking in through the back door — the big winner is the accounting department.*

desktop version to $1,499 for the JBIG2 server version.

Apago also showed two other PDF-related workflow tools at Drupa. Piktor 3.0 converts and modifies raster, PDF and PostScript files, producing customized PDF/X-1, raster or optimized PostScript files at the other end. The new version also can recombine separated PS and PDF files. Piktor costs $2,500. Piktor CEPS, which accepts input in Scitex Brisque and TIFF/IT formats, is priced at $3,500.

A brand-new offering from Apago is pdfGetAttrs, an unpronounceable product for extracting a comprehensive list of document attributes from a PDF file. These attributes, such as color spaces, use of transparency, PDF/X compliance, font and image use, could

be used for preflighting, archiving or asset management purposes. The technology seems useful for integration into a host of workflow systems working behind the scenes to make PDFs more predictable and manageable. One of its attractions is that it can preflight a file without taking into consideration its content, speeding up the process significantly. A probable OEM product, pdfGetAttr's price and availability are not yet finalized.

### In-Acrobat Imposition for Digital Printing from Callas

Hot-folder-based process automation for digital printing was everywhere at Drupa, as were tools adapted to them. Callas (www.callassoftware.com), long a maker of PDF plug-ins and workflow automation elements, weighed in with its latest: processlaggregation, a combination toolbox for preflighting, correcting, color-adjusting and imposing PDF files that we first saw at Seybold Amsterdam in April. Output is in PDF/X format.

The aptly named package represents an aggregation of a number of Acrobat plug-ins that take turns massaging a PDF file before it's printed. With AutoPilot, the user can assemble the hot-folder workflow, where a file is passed from one folder to the next and acted upon automatically upon arrival.

Callas MadeToPrint drives the printer. Callas pdfInspektor preflights and creates the PDF/X file. Callas pdfPrepare supervises quality management and guides the normalization of the file. Quite Software's Quite a Box of Tricks performs auto-corrections. And Callas pdfImpose and pdfSplitAndMerge, as their names imply, impose pages and split and merge PDF files automatically.

The system works with Acrobat 6 on Windows, but since not all of Callas' products are Macintosh OS X-compatible, they only run on Acrobat 5 on the Mac for the time being. An OS X-native version will ship later this year. The basic license for processlaggregation, which covers two workstations and a single server, is €5,400.

### File Transmission with Flair from Dev Zero G

At any trade show there are a few vendors that leave you wondering, "Why didn't anyone think of this before?" At Drupa, England's Dev Zero G (www.devzerog.com) was a leader in this category.

The simplest of its offerings (and maybe the most remarkable for its elegance) is Uploader. Simply put, it allows those who maintain FTP sites to send a small applet (created with Uploader Creator software) to those who upload files to them. This appears on the user's desktop as an icon. To upload a file, the user drags it onto the icon. Period. Done.

This alarmingly bright idea works on Windows NT/2000/XP/2003 and Apple Macintosh OS X and OS 9. Price: $1,000.

PrintSure is a preflighting and file-transfer portal that takes the same simpler-is-better approach. The host runs a server on which preflighting profiles are stored, as well as file-storage and routing facilities. Clients get their own preflighting software that runs on their desktops. Using Dev Zero G's preflighting technology, this software is a remarkably svelte 360K and runs in a browser window. Once again, it's a matter of drag and drop to initiate the proceedings, and if preflighting finds no problems, the certified PDF is sent to the server. The price tag for a single pre-installed server is $5,000.

nVerge is a server-to-server file transfer system with no hub; all servers are considered peers. File transfers are accomplished on an address-book basis, with users sending files to names rather than folders or complex file addresses. Everything is done through a browser, and all sends and receipts are acknowledged by e-mail (there's no denying you got that file; the software tattles on you, right down to the second it landed on your server). To balance the loads on networks with limited bandwidth, users can specify times at which they will accept files to avoid bottlenecks. The system can even detect redundant transfers of the same file to reduce unnecessary traffic. The cost of this very clever system is $5,000 per pre-installed server.

Both PrintSure and nVerge server software will also run on Apple XServe servers running OS X.

### Sneak Preview: Enfocus InstantPDF 3.0

Trying to secure a firm toehold in the PDF workflow systems that were everywhere at Drupa, Enfocus announced a substantially beefed-up version of its InstantPDF software for generating versions of PDF files based on customized settings for various output needs. The software, still in alpha testing, is expected to ship later this year.

One of the key differences in InstantPDF 3.0 is the use of Enfocus' own PDF library, which cuts it free from Adobe's apron strings. Plug-ins to feed the program will be available for Adobe InDesign CS, Acrobat and Reader, as well as QuarkXPress 6. The InstantPDF plug-in creates a new entry in the File menu titled "Save as Certified PDF," triggering the start of an automated sequence of steps leading to a final printed or archived file. InstantPDF will be also able to drive direct export of PDF files Apple's Mac OS X.

Users manage output by creating what Enfocus somewhat confusingly calls "queues," which are actually collections of settings and actions that define how a PDF will be created and what will be done with it. For example, a queue could not only contain settings like those found in Acrobat Distiller, but also those that direct other actions on the file, such as preflighting and auto-correction, as well as defining where the file should be sent (or how, in the case of e-mail or FTP delivery). Queues conforming to specific output profiles can be downloaded from Enfocus' Certified-
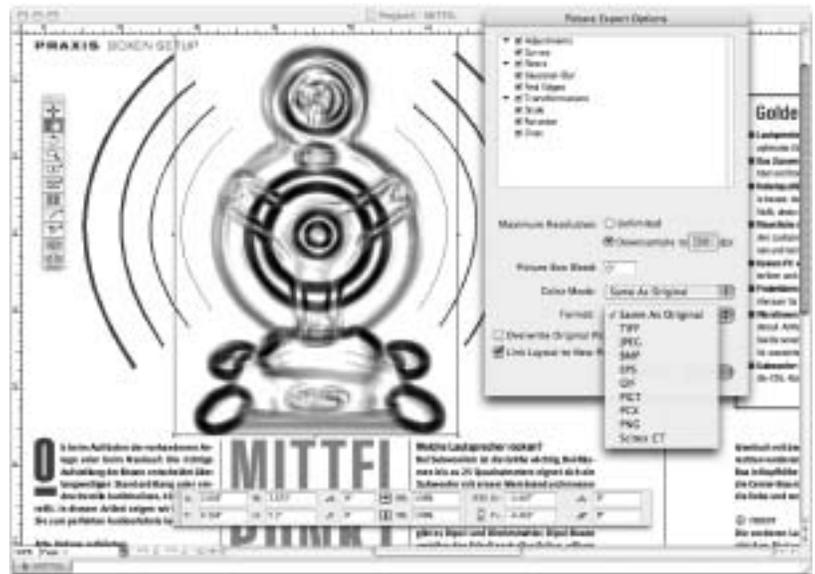


PDF.net, for output in say, SWOP- or Fogra-compliant form or to conform to the demands of a specific publisher, service bureau or client.

A control window provides access to the queues, as well as to jobs being handled by the software, showing a log of how each job has fared. Here, for example, you can see a preflighting report with a list of both warnings and errors for a particular job.

The program has two queue editors, one for day-to-day users and another with far more controls for system managers. Users can be locked out of certain aspects of queue editing to ensure the integrity of the workflows and settings.

After the PDF has been created, a review function displays the file along with its preflighting record. Here, the user can approve the job and allow it pass through the workflow or have corrections made to the original file and create another PDF.

InstantPDF illustrates two major trends in electronic prepress: automated PDF handling on the one hand and certification that jobs meet predefined norms on the other. These functions seem destined to become generic as standards bring various approaches to digital-printing workflows into closer harmony. By being among the first through the door, Enfocus hopes to entrench itself in what is destined to be an invisible and ubiquitous component buried inside larger systems. Its aspiration seems to be that workflow systems of the future will be labeled "Enfocus Inside."

According to Enfocus, the price of the new stand-alone InstantPDF 3.0 will be about the same as today's plug-in version ($250), but the prices for multiseat licenses will be "more interesting."

### Faster, Better Scanning from Imacon

With the revolutionary days of image scanning behind us, Imacon's (www.imacon.dk) new offering at Drupa, the Flextight 949, demonstrates the kind of incremental improvements now being made in this market.

Having edited an image with QuarkVista, the user can choose to export those changes to a new file linked to the page or apply them to the original image itself. The changes can also simply be used to alter the appearance of the image during output, with no changes to linked or original files.

Like the rest of the Flextight line, the 949 uses a curved scanning bed for transparencies that allows it to imitate the scanning techniques of a drum scanner. The big change in the 949 is a much brighter lamp that allows it to scan at twice the speed of its predecessor, the Flextight 848. (An 8,000-dpi scan of a 35-mm slide takes only 2.5 minutes, for example; a 4-by-5-inch transparency at 2,000 dpi takes about two minutes.) The brighter, more diffuse light source also helps elim-

*The concept of document storage and handling based on a single digital master was a good idea whose single flaw was that no one could make it work.*

inate most traces of scratches and dust reflections from the original (Imacon's FlexTouch software can tidy up the rest). It scans at a maximum resolution of 8,000 dpi (non-interpollated).

The scanner, which can handle slides as well as transparencies, has an optional batch feeder that can handle up to 10 transparencies or up to 60 slides for bulk processing.

The 949 ships with Imacon's FlexColor software, which has a good range of image-editing and vcolor adjustment tools. Notable are its presets for automatically adjusting the colors in a scan according to the brand of film used to create the transparency or slide, as films from various vendors have different, predictable color biases and degrees of saturation. The newest version, 4.0, should be available by the time you read this.

### Northmann: Digital Master Redux

Once upon a time, the concept of document storage and handling based on a single "digital master" was all the rage. It was a good idea whose single flaw was that no one could make it work. Danish company Northmann has taken up the gauntlet and appears to have found a workable solution in Northmann Professional 6.0, which was shown for the first time at Drupa.

The key to its success is the marriage of a hardy, flexible database system and a powerful rendering engine that allows digital master images in RGB format to be held and rendered quickly as needed, on the fly. For a designer who needs to resize a high-resolution image on the page, for example, it's actually faster to dump the existing image and order up a new version from Northmann's Media Server than to perform the transform at the desktop. Calls to the server for an image can generate a copy meeting local demands in terms of size, scaling, color space, cropping, resolution or file format. The original image remains untouched, and the local workstation is saved a lot of effort. All

color is ICC-profile controlled.

Access to the system can be by direct network link or via a browser/Web connection. Where bandwidth is an issue, the system supports OPI for use of lower-resolution stand-in images on local workstations. The system works with SQL, DB2 and Oracle databases.

When new media files enter the system, they're automatically registered, with keywords and indexes generated, thumbnails and previews created, and clipping paths archived, and all new entrants are immediately made available for local, FTP or Web-based access.

The server consists of four components: The Media Server handles access and traffic control, the File Server is the file repository itself, the Database Server handles customer databases that are generated by the Media Server, and the WEB server provides browser-based access to the Media Server.

On the client side, are three components: The Media Client handles traffic flow, searching, editing, ordering all types of media files, workflow management, and the like; Design Clients uses the Media Server as a source of content for use in their applications, including as QuarkXPress and Adobe InDesign; and Web Clients work much like Media Clients, except their access to the system is browser-based.

The servers run on Windows 2000/20003 machines, while Media Clients and WEB clients require Windows 2000/XP or Apple Macintosh OS 9 or OS X. Design Clients can use Adobe InDesign 2.x or QuarkXPress 6 on Windows 2000/XP or Mac OS 9 or OS X. A plug-in for Microsoft Office is on the way.

Northmann said that so far, about half its clients are corporate accounts (Lego uses it to create some 70,000 images a year) and half are graphic arts companies. A basic system starts at about €14,000.

### QuarkVista Brings On-Page Image Editing to XPress

A new XTension for QuarkXPress called QuarkVista, a non-destructive image-editing tool with which users can perform common image-editing tasks right on an XPress page, also made its debut at Drupa.

The changes are actually the effects of output filters that alter how an image looks on screen or page without changing the original image file. QuarkVista is still in alpha testing, but it's scheduled to be a part of XPress 6.2 when it ships later this summer and will be available as a free download to users of other 6.x versions.

Quark Vista added a new entry, Picture Effects, to the Window menu, covering most of the things you'd ever want to do to a bit-mapped image once it's on the page (as well as some that properly should have been done before). Editing controls include standards such as scaling, rotating, cropping, adjusting color levels and curves, and tweaking brightness and contrast. The dozen or so filters include sharpen and blur, despeckle and the ever-popular solarize. This will save many

time-wasting trips to a separate photo-editing program for both routine and last-minute changes

The changes that Vista makes to a file do not affect the original image file; they simply affect how the image is displayed and printed. The specifics of the changes are saved within the file, although you can save your edits as named presets for use in other documents. The changes made to an image are listed in a floating palette which can be dragged and dropped onto other images in the file to modify them in the same way. Think of them as stylesheets for images.

One very useful aspect of Vista is that it can discard the cropped-away area of images that are larger than the frames that contain them. This can substantially reduce file size and RIPing times. You have the option of applying this change to the linked originals (the one destructive option at your disposal) or simply to the versions of them that appear in Xpress' pages. You can also create a new linked, edited image to take the place of the original image, which remains untouched, but unlinked.

If Adobe's Creative Suite takes off, with its elements acting like old-fashioned integrated software (click on an image in InDesign to launch Photoshop), Quark will be obliged to add more such tools to XPress.

## Quite Imposing, Unplugged

Quite Software (**www.quite.com**) demonstrated at Drupa a standalone version of its popular PDF-based imposition program, Quite Imposing. Formerly avail-

able only as an Acrobat plug-in, the program will make its standalone debut in the fall. Given the number of workflow systems at Drupa that were hot folder-based programs for outputting PDFs, the move is a logical one, as at one stroke the program change allows Quite Imposing to become part of the offerings of dozens of workflow-system integrators.

One of the keys to the strategy is Quite Imposing's support for XML tags, which not only provides JDF compatibility, but also potentially allows it to step into workflows that currently use XML-enabled imposition programs such as DynaStrip and step smoothly into their XML-based working methods. (At Drupa, there was a clear trend to the adoption of DynaStrip in preference over the reigning default imposition program, Preps, largely, vendors said, because of the former's XML and JDF support.)

The program also uses what the company calls "imposition by example," which means using the imposition settings for a particular job and applying them to others. Because the steps used to set up the imposition are written into the PDF file as XML, the PDF file can later be used as a kind of template for other imposition jobs.

The standalone version of Quite Imposing will run on Mac OS X and Windows XP. **TSR**

**About the Author**
James Felici is a long-time contributor to *The Seybold Report* and former managing editor of *Publish Magazine*. His latest book is "The Complete Manual of Typography" (Adobe Press).

# Gravure Advances at Drupa

By Andrew Tribute

**The new gravure systems shown at Drupa offered higher quality in text and line work, and a limited increase in speed for packaging. Direct laser engraving offers higher speed and quality for packaging, but still does not challenge the speed of the fastest diamond engraving systems for publications gravure.**

A number of innovations within the gravure industry were demonstrated at Drupa 2004. Some of them were in the area of new and enhanced technologies for cylinder preparation for gravure printing. This area of printing has been digital for a long time with digital cylinder engraving, but at this Drupa there were major advances in other cylinder preparation technologies, plus enhancements in diamond engraving systems.

There are three different technology approaches in this area. The first is the very well-established diamond head-based engraving systems from Hell Gravure and MDC Max Daetwyler. The second is direct laser engraving of cylinders from Daetwyler, plus a new laser engraving solution from Hell. The third approach is a mix between laser imaging of a mask material, followed by a cylinder etching or reverse electrolysis system to prepare the cylinder. A number of suppliers have offerings here.

The major new developments at Drupa were the Exactus system from Creo and Acigraf, and the new Think Laboratories system that uses Creo imaging. Sheppers, a Daetwyler company, Applied Laser Engineering and Hertzog Graphics also have systems in this area.

## Mask-Based Systems

Mask-based systems utilize both digital and chemical processing approaches and are somewhat comparable to the approach taken today in CTP of flexo plates. In this approach a masking material, or "resist," is first applied to a prepared copper gravure cylinder. This masked cylinder is then imaged in a laser-imaging unit. The imaged mask material is used to define the areas of the cylinder where gravure cells are to be and it protects the area of the cylinder where the cells are not being imaged.

The imaged cylinder then goes through a development process to remove the imaged area of the mask, followed by a process of etching, or reverse electrolytic engraving, to create the physical cells in the cylinder. The final step is to remove the remainder of the mask and clean the cylinder for printing. The cylinder can, if required, then be chrome-plated where very long print runs will be carried out.

Of the available systems, the Creo/Acigraf Exactus system and the Think Laboratories Laserstream FX system both use a Creo SquareSpot imaging head to expose the mask. Because of the high resolution of the imaging head, significantly higher quality in areas of line work and text can be achieved than with diamond engraving. Screening values are also higher, giving improved image quality.

It remains a mix of digital and analog processes, however, with a series of downstream chemical processes after imaging. Another limitation of this process is that it does not allow for individual cell processing to enhance cell shape and depth, and there are doubts whether ink transfer from the cells will be as good as with diamond engraving systems.

The Exactus system links up the established Acigraf analog cylinder preparation system with Creo imaging technology. Creo also supplies the thermal resist masking material based upon a thermal resist developed by a separate company owned by Creo in Israel for direct printed circuit board production. This was an approach that Creo was developing, but which failed to work, and the company is no longer operating in this business. Creo acquired the thermal resist development and adapted it for the gravure process. The resist for the Think Laboratories Laserstream FX system, which is also a thermal resist, was developed by Think.

The main differences between the Exactus and Laserstream FX systems are the thermal resists used and in the downstream process for creating the cells in the cylinders. In the Laserstream system, this is done by a spray etch, which removes the unprotected copper. The Exactus system uses the Acigraf reverse electrolytic engraving process. This is the opposite of the electrolysis process used for plating copper onto a gravure cylinder. Acigraf told us that this process is more controllable than the acid-based spray etching system that Think uses. No doubt Think would disagree with this statement. Both of these chemical processes have to be

accurately controlled to ensure that over- or under-processing does not occur.

This is the second-generation Laserstream system from Think Laboratories. The first system used a visible light imaging approach supplied by Scitex. The company claimed that 100 such systems are in use worldwide, producing some 4,000 cylinders per day.

Both of these systems are targeted at both the packaging and publishing gravure markets. The main difference in these markets is cylinder size. In the case of packaging, cylinders are usually less than 1.3 meters long, but can be up to 1.8 meters wide. In publishing, gravure cylinder widths are greater and today, presses are being sold with widths in excess of 4 meters. When diamond head engraving systems are used in packaging, such systems only use one imaging head because of the need for a single continuous image. In publishing gravure, engraving systems use multiple heads (channels) to provide the level of speed required. The largest such systems use up to 16 channels and work in what is referred to as "ribbon mode," where each channel images an area separated from the next channel by page gutters so there is no linking of image data between channels. One of the difficulties with multi-channel engraving is head-to-head consistency brought about by minor variations in diamond shape and diamond wear.

The Exactus and Laserstream FX systems image at up to 5 square meters per minute, which is about five times faster than a current level single-head engraving system. Hell Gravure has just introduced Extreme Engraving, which increases engraving speed by 50%. The speed comparison with a multichannel engraving system obviously depends upon the number of channels being used.

In his presentation at the Creo press conference at Drupa 2004, Creo CEO Amos Michaelson made somewhat extravagant claims regarding the benefits in speed of the Exactus system. He failed to mention, however, that his speed comparisons were based upon a single-head engraving machine when he talked about publishing applications, a situation which would be very unlikely to apply.

These two new systems certainly upgrade the capabilities of this type of gravure cylinder solution in terms of quality, but have relatively little impact on speed when one looks at the total multistage processes in cylinder production. The Exactus solution involves five separate modules and processes and the Laserstream at least four modules and processes.

## Other Systems

I have concentrated on the Exactus and Laserstream systems since they are both new and bring higher performance and quality to this area of the market. Other suppliers also offer this type of mask-based solution. Sheppers, a company owned by MDC Max Daetwyler AG, has its Digilas system. Hertzog Graphics Engineering, another Swiss company, has its LSx laser exposing system. And Applied Laser Engineering



The Creo/Acigraf Exactus system, showing the different units that are used for all the stages of processing. These include coating, imaging, developing, mask removal and finishing. The cylinder might then also move to a further chroming process.

(ALE) from the U.K. also has a range of systems. These three companies' products are more multifunctional, aimed at producing gravure and flexo cylinders for markets such as ceramic anilox rolls, flexographic sleeves and plates, intaglio engravings and other specialized products.

### Laser Engraving Systems

The DLS (direct laser system) from MDC Max Daetwyler, which first appeared a few years ago, is now gaining market acceptance. Direct laser engraving of cylinders has been a long-term target, but up to now only Daetwyler has succeeded in this area. The problem has been that the copper is such a good conductor that it has been difficult to control any engraving by laser because heat gets dissipated too easily. DLS gets over this by having a zinc coating on top of the copper cylinder surface.

At this point, 12 DLS systems have been installed in the packaging market, all using a single-laser channel approach. Daetwyler has launched a dual-channel unit for the publishing market and has installed the first two such units at Bauer in Köln, Germany. Daetwyler has other orders as yet unannounced.

A single-channel DLS images 35,000 cells per second, and a dual-channel unit images 70,000 cells a second. This two-channel speed equates to 5.8 minutes

*All of these systems will enhance and improve gravure printing, but do little to reduce the costs of cylinder production, which would allow gravure to challenge offset in shorter run lengths.*

per square meter for a 175-line screen. This is approximately the same speed as the Exactus and Laserstream FX systems, but because there are fewer downstream processes, the DLS overall throughput and efficiency appears higher.

A claimed benefit appears to offer greater flexibility than with mask systems, as it allows unique shaping of cells to optimize ink transfer and improve image quality. The relationship between cell diameter and depth is no longer fixed; both can be controlled individually. Daetwyler claimed that this allows for high ink densities to be transferred to the substrate being printed. It also allows high image quality in text and line work alongside high screen values. This purely digital process produces the finished cylinder. The only subsequent processes are cleaning and chrome plating, if required.

Hell Gravure Systems, the company that intro-

duced direct cylinder engraving and has more than 2,000 engraving units installed, previewed its prototype laser engraving system. The company plans a pilot installation in packaging gravure during 2005. Following installations in packaging, Hell will look into extending the system into publications gravure. Unlike the Daetwyler DLS system, which uses a pulsed laser to image copper, the Hell approach uses a very high-power modulated laser to directly image copper or chromed cylinders.

Hell stated that the laser power used creates incredibly high power density on the cylinder surface, thereby exposing the copper to extreme light pressure that causes copper to melt before the heat can be dissipated. This causes the copper to be expelled from the cells in the form of tiny droplets.

Hell also claimed that such an approach, using continuous modulated laser imaging into copper instead of a pulsed laser into zinc, is more controllable and also affords better control of cell shape and depth. The company said that using pulses cannot provide the control of a varying length of exposure. This is still a prototype, however, whereas Daetwyler's product is already installed and working in the field.

Hell Gravure Systems still sees ongoing development and life in its diamond engraving technology. At Drupa 2004, Hell introduced Extreme Engraving, which increases the speed of the engraving head to 12kHz compared with 8kHz in its current system. This means 12,000 engravings or cells per second per head. This enhanced technology can be used in two ways: for further speeding up the process and for enhancing the quality while going at a slower speed.

This operates in line and text work at a higher resolution to increase the quality to give sharper text and finer line definition through the creation of what can be termed minicells within cells. With Extreme Engraving in a multichannel approach, diamond head cylinder engraving will still be the fastest process, whereas either mask or laser-based systems will be fastest for packaging gravure.

All of these systems will enhance and improve gravure printing, but do little to reduce the costs of cylinder production, which would allow gravure to challenge offset in shorter run lengths. I believe Creo's Amos Michaelson greatly oversold this aspect of the business in his Drupa 2004 press event, claiming it made gravure competitive against offset at around 90,000 impressions. Since the savings in time against existing cylinder preparation systems are limited, he seems to have misunderstood how this industry, and even his own system, operates. Creo, incidentally, will be marketing the Exactus system in many areas of the world. Let's hope their salespeople understand the product and process better than its CEO does. **TSR**

# CTP at Drupa 2004:
# Not New Technology, But Better Marketing

By Kurt K. Wolf

**CTP manufacturers failed to wow visitors with new technologies or new trends at Drupa 2004. It turned out to be less a battle of the technologies — thermal vs. violet, UV imager vs. inkjet imager — than an expected evolution of platesetters that vendors are accustomed to manufacturing and distributing.**

Internal drum platesetters have become successful with violet technology, especially since new laser diodes of 30mW allow the imaging of polymer plates, and 60mW and new 100mW violet laser diodes allow them to be used with low-level output, greatly extending the life span of the diodes. External drum platesetter manufacturers extended their range of large-format platesetters to more automated models with larger plate sizes, a step that was necessary to accommodate the new XXL presses from MAN Roland and KBA.

Prices for violet technology are lower in the small format of 2-up and 4-up platesetters, and in the 8-up format, the relative cost and speed of thermal vs. violet platesetters vary from manufacturer to manufacturer. Vendors such as Agfa, which manufactures and distributes both technologies, completed the Xcalibur family with an OEM thermal platesetter in the 4-up sizes from Screen. Violet platesetter manufacturer Esko-Graphics rounded out its PlateDriver line with the 4-up violet Platedriver Compact, an OEM of Highwater's Phyton.

But truly innovative technology was hard to come by at Drupa 2004.

Esko-Graphics Espresso platesetter for UV-sensitive contact plate did not establish a new trend because by the time it becomes available next year, Espresso will be trailing the more than 500 UV-platesetters that basysPrint already has on the market. Nor did Jetplate break any new ground with its inkjet platesetter using Epson Stylus Pro inkjet printer. They are limited by the resolution of inkjet printers, which already have higher resolution than they need for color prints in photograpic quality. That limits the expectation of a better quality for inkjet platesetters in the future. Quality offset printers so far have not decided in large numbers that the present quality is good enough for them.

Digital platemaking has reached a point where thermal and violet platesetters compete on price. To avoid this, plate manufacturers long ago started to bundle platesetters with plates. Creo, for example, spent $30 million purchasing two plate factories. The company has not yet disclosed whether it will subsidize its platesetter business with plates or the new plate

business with platesetters. Creo will have to establish among customers that its new, bundled Creo plates are up to the standards of Lotem or Trendsetter platesetters. Unlike plate manufacturers, prospective customers have no experience using Creo's plates. The quality and consistency of all elements in the production chain of an offset printer count for more than the low prices and other promises promoted at shows like Drupa in determining the value of a vendor.

## Agfa

Agfa has two platesetter families, the violet and the thermal platesetter. The violet family consists of two models: Palladio for four pages and Galileo for eight pages. Both will be delivered in July with a 30 mW violet diode for silver plates and the new photopolymer plate N91v, the German list price remains unchanged at €84,000. North America's list price is $86,995 for a semi-automatic Palladio

At Drupa, Agfa presented a manual loading, lower-cost "Palladio M" system that produces 17 plates per hour, which can be upgraded with an online plate processor. This unit has no plate cassette and con-

The most exciting innovation was Esko-Graphics' 4-up flatbed imager Espresso, which uses a special UV-head that moves like a scanner across the conventional UV-sensitive plate, exposing the data in a stream of information.

sequently needs to be installed in a yellow safelight environment. Shipment will start in Germany in July with the new 30mW violet laser diode. The European list price is €64,000.

The thermal family consists of the Xcalibur models, which are available for 8, 16 and 24 pages. All of these models use the Grating Light Valve technology and have become more productive thanks to a stronger laser, more laser channels, higher drum revolutions, and a faster loading/unloading cycle and carry the addition of XXT. The Xcalibur 45 XXT (8-up) images up to 40 plates per hour, Xcalibur 50 XXT 21 plates per hour, Xcalibur 60 XXT 19.5 plates per hour Xcalibur 70 XXT 17 plates an hour and Xcalibur 80 XXT 16 plates per hour.

For the thermal 4-up size, Agfa showed its new Acento platesetter. Like the violet Palladio, it is an OEM product from Screen, which offers it as PlateRite 4000. Acento E is available with 16 thermal 830 nm diodes and produces up to 10 plates. Acento S, with 32 diodes, produces up to 20 plates. Acento is available with three different plate-loading cassettes. Acento L-300 offers three cassettes with up to 300 plates, and Acento L-100 has one cassette with up to 100 plates, both with automated slip sheet removal. Acento L-50, with manual slip-sheet removal, takes up to 50 plates.

Agfa introduced two new models of the Advantage violet platesetter family for newspapers and commercial web offset: Advantage CL and Advantage CLS. Advantage produces up to 120 newspaper pages per hour, Advantage CL produces up to 160 pages an hour and Advantage CLS up to 229 pages per hour.

Agfa reportedly sold at Drupa 36 violet-laser platesetter for the newspaper family Polaris, and Advantage sold 121 violet-laser units of Palladio and Galileo for commercial offset and packaging. More than 73 Xcalibur 45s were ordered from the thermal family, as well as 22 Xcalibur VLF units. Thirty-eight new Acentos, also were ordered.

## basysPrint

The German manufacturer of UV-Setter has changed the name of all of its platesetters, which can image standard ultraviolet offset contact plates. About 50 different plates are available, meaning that a printer doesn't have to change the plate type when selecting basysPrint's platesetter. FOGRA has certified that the resolution of such plates imaged on an UV-Setter is better than those of digital plates.

The new naming convention has a starting number for the size, a center number for the generation of imaging heads (presently three), and a third number for the number of imaging heads and the degree of automation:

| | |
|---|---|
| UV-Setter Series 5 | for 4-up sizes |
| UV-Setter Series 7 | for 8-up sizes |
| UV-Setter Series 11 | for 16-up sizes |
| UV-Setter Series N | for newspaper sizes |

Consequently, the UV-Setter 731e is an 8-up platesetter with one imaging head and a manual loading/unloading system. It can produce from eight to 12 plates per hour (depending on the amount of data on a plate) and is available for €129,000.

Topping the seven platesetter line in the 8-up size is the UV-Setter 736, with two imaging heads and a fully automated plate-handling system. It can store up to 150 plates in three different plate sizes and three to five cassettes. With two imaging heads, it produces up to 20 8-up plates. BasysPrint said it has sold more than 300 8-up UV-Setters worldwide and has more than 500 units of all sizes installed.

The new UV-Setter N546 (previously 57Z) features a newly designed exposure head, Digital Screen Imaging, DSI2. The head no longer exposes minipictures with a Texas Instruments micromirror, but moves along the plate and exposes a line of minipictures. Since it does not stop during the exposure of one imaging line, it can go up to twice as fast. This new-generation head is represented by the number 4 in the UV-Setter N546. It can produce between 100 and 150 plates per hour, depending on plate type. The DSI2 technology will be integrated into other UV-Setters in the future.

In the VLF size, the company demonstrated at Drupa its UV-Setter 1132/1134, with an imaging size of 143 by 210 cm, and introduced two new platesetters: the UV-Setter 1532 for imaging plates up to 148 by 210 cm and UV-Setter 1632 for the imaging size 158 by 327 cm.

## Creo Inc.

Creo continued to show only thermal platesetters, but had some interesting offerings for small- to medium-size printers.

In the 4-up size, Creo demonstrated its top model for automation, the Lotem 400 Quantum, next to the semi-automatic Trendsetter 400 II Quantum. Creo

showed an entry-level model, the Lotem 400, as well as the Lotem 400 Chemical Free, a version to image a new, processless Creo aluminum plate called Clarus PL. This plate does not require developing, rinsing or gumming, and can run up to 50,000 prints. Clarus PL was demonstrated on a Trendsetter 800 Quantum, but Creo would not say when it would be available.

For the 8-up size, Creo showed the Lotem 800 II Quantum and the Trendsetter 800 II Quantum. Creo introduced a ContinuousLoad option, a new loading table that allows you to load a new plate while the old one is still being imaged, for all Trendsetter 400 and 800 models. After imaging, the plate will automatically be transported to the processor.

In the VLF size, Creo introduced the new Magnus VLF family, a fully automated platesetter system that can image plates from 39.4 by 50.8 cm up to 160 by 210 cm. Creo claims it is the fastest fully automated platesetter system on the market because it can image 15 Kodak DITP plates an hour at a size of 151 by 205 cm with a resolution of 2,400 dpi. (This seems not to be true, since the fully automated Agfa Xcalibur 80 can image 17 DITP plates, or 16 Thermostar P970, and the Sceen PlateRite Ultima 32000Z 22 plates at the same resolution). Smaller plates can be imaged simultanuously, producing 30 8-up plates per hour. Magnus VLF will not replace the Trendsetter VLF family, but prices have been lowered for this semi-automated system.

### Dainippon Screen

Screen showed its PlateRite Micra with a 60mW violet laser diode for photopolymer plates. Screen introduced the 2-up platesetter in April 2003 with a 50mW laser diode, limiting it to violet silver plates. PlateRite Micra can image violet plates from 25 by 33cm up to 51.6 by 58 cm at a speed of 23 plates per hour.

Creo also showed the FlatRite 2055Vi platesetter with a new, 60mW violet laser diode. It has a fully automated and integrated register punch and produces up to 20 4-up plates per hour.

The Screen PlateRite Ultima 32000 images plates from 4-up to 32-up, from a minimum plate size of 65 by 55 cm up to 212.4 by 127.6 cm. The external drum platesetter images with one GLV exposure head up to 30 8-up plates per hour. A version with two GLV heads, named Ultima 32000Z, simultaneously images up to 46 plates an hour.

The new Screen PlateRite 16000 is ideal for a printer with 4-, 8- and 16-page offset presses and images with one GLV head up to a size of 147 by 1165 cm. It can image up to 23 plates per hour in the 144.8 by 114.3 cm size, depending on plate sensitivity.

In Germany, Screen distributes its platesetters exclusively through Fujifilm Germany.

### ECRM

ECRM introduced six new models over the past two years and showed them all at Drupa 2004.

The Mako 2 CTP is a semi-automated platesetter that can optionally be connected to the plate processor. The ECRM Mako 4matic is the automated version of the Mako 4 CTP and produces more than 20 violet plates per hour at 2,540 dpi for 4-up offset presses such as the Heidelberg Speedmaster. The capstan imager exposes plates from 38.5 by 38.5 cm to 63.5 by 92.7 cm and has a slip sheet removal. It is priced at $94,500.

The new Mako 8 CTP semi-automatic images 15 plates per hour at 2,400 dpi up to a size of 105 by 82.4 cm. It is priced at $89,000.

Drupa 2004 marked the debut of the ECRM NEWSmatic CTP, which produces up to 80 broadsheet or 45 panorama plates per hour. It is available as semi- or fully automated version. The fully automated version has a slip-sheet removal and a price tag of $94,500.

Kodak Polychrome Graphics is the exclusive distributor of ECRM in the U.S., and Fujifilm Europe distributes the Mako 2 and 4. Direct distributors in most European countries sell the complete line.

### Esko-Graphics

Esko-Graphics offers the Platedriver family for 4, 6 and 8 pages in semi-automatic and fully automatic mode and has added the 4-up Platedriver Compact (OEM Highwater Python). It also showed the DPX 4 and DPX 2 platesetters for polyester plates.

The most exciting innovation was the 4-up flatbed imager Espresso, which uses a special UV-head that moves like a scanner across the conventional UV-sensitive plate, exposing the data in a stream of information. This is the same type of movement that basysPrint has developed for its UV-Setter N546. BasysPrint said it would investigate for possible patent infringement.

Espresso can image up to the 80-line-per-cm screen and will go into beta trials in fourth quarter of this year, with earliest delivery in first quarter of 2005. The

Mantagraphics new Ultresetter 530 takes up the plates in an open internal drum, and the imaging light rotates in the center. Maximum plate size is 53 by 50.5 cm, and three imaging heads with He-Ne laser and violet laser diodes in 5mW and 30mW are available.

Heidelberg showed the new platesetter family Suprasetter, a completely new design with a new imaging head. The laser technology was developed by Heidelberg and the exposure module is a small box that easily will fit into platesetters or printing presses.

company set a tentative price of €99.000, which it will finalize by the end of the year.

### Escher-Grad

The Canadian manufacturer of in-drum violet platesetters showed four models, all equipped with a 30mW violet laser diode, which allows them to image silver or photopolymer plates. The models are Cobalt4, Cobalt8, Cobalt24 and v32 (indicating the number of pages that can be imaged at the largest plate size of the platesetter). The Cobalt4, with automatic plate loading, can image 18 plates an hour and is available for less than 100,000, Cobalt8 produces 15 plates per hour and has a price tag of about €125,000.

### Fujifilm Europe

Based on the successful internal drum platesetter Luxel V-9600 CTP in the 8-up size, which Fujifilm claims have been sold with 600 units in 37 countries, Fujifilm introduced the 4-up platesetter Luxel V-6 CTP at Drupa. With internal punch, a 120-plate single cassette autoloader, eight resolution options, and the choice of manual, semi- or fully-automatic production, the midsize platesetter offers a wide range of modularity. The violet laser diode with 30mW power produces up to 20 plates per hour (76.5 by 68.6 cm) at 2,438 dpi.

While Fujifilm produces the internal drum platesetters, its external drum platesetters are OEM models from Screen. The 8-up thermal platesetter Luxel T-9000, with a plate size of 116 by 94 cm and the 830nm IP diode, is now offered with the 512-channel GLV imaging system and is called Luxel T-9800 CTP. For the first time, Fujifilm is offering a VLF platesetter, the Ultima CTP Platesetter, which is the OEM version of the Screen PlateRite Ultima 32000. It images plates from 4-up to 32-up, from a minimum plate size of 65 by 55 cm up to 212.4 by 127.6 cm. The external drum platesetter images with one GLV exposure head up to

30 8-up plates per hour. A version with two GLV heads simultaneously images up to 46 plates an hour.

### Heidelberg Prepress

Heidelberg showed its new platesetter family, Suprasetter, a completely new design with a new imaging head. Heidelberg developed the laser technology, and the exposure module is a small box that easily will fit into platesetters or printing presses. The imaging head emits an infrared laser with 830 nm, consisting of 64 individual laser channels. The platesetters will be available as Suprasetter 74 and 105 for the B2 and B1 size. Suprasetter 74 can take up two or four imaging heads, the Suprasetter 105 model two, three or six modules.

Customers can select the number of heads, and additional heads are field-upgradeable. Both models are available with manual, semi-automatic or fully automatic plate handling. Suprasetter 105 E (two heads) will produce 14 plates per hour, 105 S (three heads) produces 19 plates, and 105 H (six heads) reaches 30 plates per hour. The Suprasetter family will likely replace the Topsetter family. Suprasetters are about 20 percent cheaper than Topsetters because Heidelberg no longer has to pay for licenses and the production of the imaging head is much less expensive.

Next to the Suprasetter, Heidelberg showed a printing unit of the Speedmaster 75 DI press, which uses the new imaging head. It will make the SM 74 DI much more attractive and will find its way into the Speedmaster 105 family as well.

The Prosetter family for violet plates, the Prosetter 52, Prosetter 74 and Prosetter 102, were shown with a new 30mW violet laser diode.

### Highwater Design

Highwater introduced the 4-up internal drum platesetter Python in May 2003 with a 5mW violet laser diode, and it has been installed at 90 sites. At Drupa, Highwater showed Python with a new 60mW violet laser diode, which allows it to image silver or polymer plates at high speed with a 4-up plate of 74.5 by 61.5 cm in under two minutes. Python has a manual loading and deloading system, which means it has to stand in yellow safelight. As an option, a conveyor can be attached for online processing in semi-automatic mode. Python comes with a Harlequin Torrent Rip and sells for around €65,000.

Python will be distributed by MAN Roland in Germany, by Grapholine in the U.S. and worldwide under OEM from Esko-Graphics as Platedriver Compact.

### Jetplate Systems

The company previously known as Pisces, which was taken over at the end of 2003, showed under its new name, JetPlate Systems, two inkjet plate systems for small offset printers.

The inexpensive 2-up JetPlate 4000 System consists of the JetPlate 4000 platemaker, Jetproof 4000,

plate processor, RIP, computer and some accessories. The system images conventional UV-sensitive, negative aluminum plates up to 44.5 by 63.5 cm with an Epson Stylus Pro 4000 printer. The plates are imaged with PlateMarker fluid in a resolution up to 2,280 dpi (in one direction) and then processed in the JetPlate processor. Priced at €25,000, it is inexpensive, and the printed samples surprised many visitors.

The JetPlate 7600 System is a similar 4-up system, using the Epson Stylus Pro 76000 with the same resolution and imaging plates up to a printing size of 61 by 74 cm. It's not much more expensive, with a price tag of €33,000.

### Kodak Polychrome Systems

KPG, the plate manufacturer and the inventor of thermal plate technology, lost its partner when Creo acquired two plate factories and started to bundle its own plates with its platesetter. In the U.S. market, where KPG has an exclusive distribution agreement with ECRM for its platesetter (for visible light plates), KPG announced on May 3 a cooperative agreement with Screen under which it will distribute following platesetters: PlateRite 4100 and 4300 (4-up); PlateRite 8600, 8000 II and 8100 (8-up); and the PlateRite Ultima platesetters. Since Screen does not include newspaper platesetters, KPG's own platesetter ThermalNews fits well into this program.

### Krause Biagosch

Krause Biagosch showed a new 100mW laser diode that can be used in all Krause platesetters to image silver and photopolymer plates. The unit has a life expectancy of 10,000 hours and replacing the diode, if necessary, will cost €9,900.

The main newspaper model, Krause LS Jet, priced at €299,000 can produce more than 300 plates (Berlin format) per hour.

The LS Jet Semi (€59,900) is a new entry model for newspapers that need 60 to 150 plates per hour. One new feature is the automatic plate adjustment. The operator just drops the plate on the loading table and the plate is automatically aligned and angled before it moves into the platesetter.

For the commercial market, Krause showed the LS Edition 110, an in-drum platesetter for violet diodes or ND:YAG (532 n) laser and plates up to 820 by 105 cm, producing up to 22 plates per hour at 2,540 dpi and up to 40 plates an hour at 1,016 dpi. By pricing the LS Edition 110 at €129,900, Krause is trying to get more sales from commercial offset printer.

### LithoTech GmbH

The German manufacturer of Andromeda external drum platesetter, LithoTech GmbH, was taken over in early 2003 by Torsten Schmidt, and his son Boris Schmidt was appointed managing director. Manufacturing is still in Hannover-Langenhagen, but administration and marketing is in Appen (near Hamburg). The name Andromeda has been eliminated and the platesetters are now named Lithotech L 540 for the 2-up model, Lithotech L750 for the 4-up model and Lithotech L110 for the 8-up model. All three are available with green- or violet laser diodes, or 830nm thermal heads. They are all are offered as manual-, semi- or fully automatic models and range in price from €63,000 to €109,000 in the violet version, while the thermal versions range from €79,000 to €119,000.

### Lüscher AG

Lüscher showed its range of thermal platesetters with its unique in-drum plate bed and an internal drum exposing head. The Xpose! Platesetter family for 4-, 8-, 16- and 24-up plate size was completed by the Xpose! 190, a 32-page platesetter at 160 by 210 cm to accomodate the KBA Rapida 205. For 8-up plates, the unit can expose two plates simultaneously, as it showed in a world record demonstration in June 2003. Xpose! 190 is available for €398,000, including front end.

In an interesting combination, Lüscher married it with the FlexPose! 75, an Xpose! imager for offset plates up to 90 x 68 cm, which can also ablate digital flexo plates with a black thermal layer. After Drupa, Lüscher will decide whether this model will go into production, since at the end of March, Lüscher purchased the British company Zed Instrument, a leader in direct flexo engraving.

Lüscher said it has sold a total of 46 pieces of equipment, including 34 Xpose! platesetters.

### Mantagraphics GmbH

Mantagraphics was founded in spring 2003 as a management buyout when Heidelberg closed its platesetter factory in Kiel. Under the management of Manfred Tannrath, the 15 employees responsible for development, manufacturing and servicing the Heidelberg

Strobbe Graphics showed the PSA 33 MV, an 8-up model with 10 online plate cassettes, a 60mW violet laser diode and a productivity of up to 25 plates per hour.
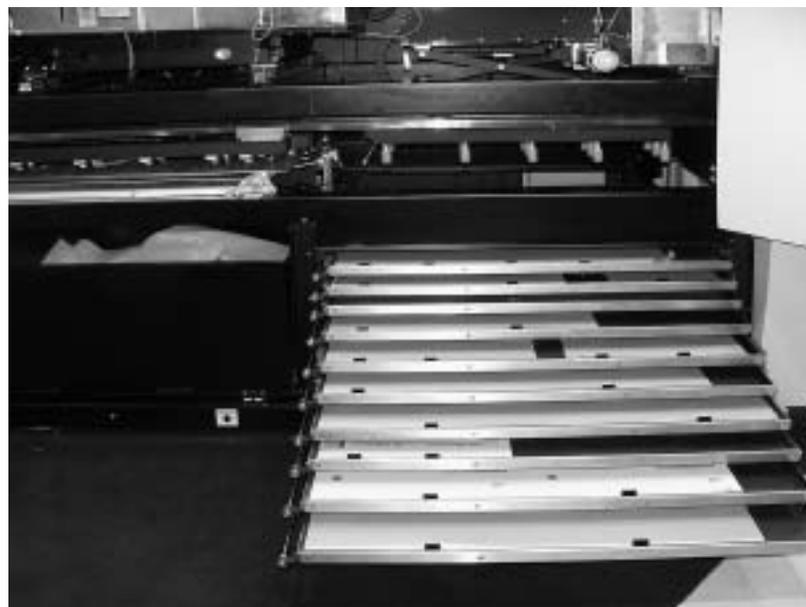
The Screen PlateRite Ultima 32000 images plates from 4-up to 32-up, with one GLV exposure head up to 30 8-up plates per hour. With two GLV heads, it is named Ultima 32000Z and images simultaneously up to 46 plates 8-up plates per hour or 22 212.4-by-127.6-cm plates per hour.

platesetter formed the new company. Mantagraphics got off to quick start by purchasing the rights to the HD Quicksetter, an imagesetter that was sold worldwide to more than 500 sites outside of Germany. Under the new name Ultresetter 460, the system (€30,000) can expose film or polyester plates from a roll 46 cm wide. Three models are available for film, polyester plates and a combination of both.

A newly designed Ultresetter 530 takes up the plates in an open internal drum, and the imaging light rotates in the center. The design looks like the Lüscher Xpose!, but here the plate bed moves under a fixed exposing head. Maximum plate size is 53 by 50.5 cm, and three imaging heads with He-Ne laser and violet laser diodes in 5mW and 30mW are available. All models produce up to 24 plates per hour and are available for €46.000.

A third model is the 4-up external drum platesetter Ultresetter 750, available with 5mW and 30mW violet laser diode for plate sizes up to 55 by 70 cm.

### Mitsubishi Paper Mills

The manufacturer of the polyester Silver Digiplate demonstrated on a five-color Ryobi 750 with varnishing station the excellent print quality that is possible with polyester plates. The 175-lpi halftone pictures looked excellent and the plates have been imaged in the DPX 4 platesetter from Esko-Graphics. DPX 4 is a 4-up platesetter that can hold two rolls of polyester

plates in different sizes, allowing it to image 2-up and 4-up plates fully automatically in the same platesetter. The production of four plates takes only nine minutes at a resolution of 2,540 dpi. The complete unit costs about €75,000.

Two platesetters were shown for smaller presses, such as A3-presses up to Speedmaster 52. The DPX system (€65,000) is a fully automatic in-drum platesetter for the 2-up size, with resolutions from 900 to 3,600 dpi. A set of four plates takes only 12 minutes at 2,540 dpi.

The Mitsubishi SDP-Eco 1630 II, a capstan imager with an integrated processor, can produce paper and polyester plates. Paper plates can run up to 10,000 impressions, polyester plates up to 20,000. The maximum plate size is 45.4 by 58 cm, and a set of four plates can be produced in less than six minutes. At a price of €38.000, the SDP-Eco 1630 II is a good buy.

### Presstek

The inventor of direct imaging printing and processsless plates has developed a new, low-cost laser imaging head called SureFire for 2-up and 4-up internal platesetters. A.B. Dick showed it integrated into its Vector TX52, using the new Freedom processless plate, with a price below $60,000.

The external drum platesetters Dimension 200, 400 and 800 benefit from the newly designed Profire Exel and have been sold over the past four years at close to 500 sites.

### Strobbe Graphics

Strobbe Graphics, the manufacturer of Polaris and Advantage newspaper platesetters, sold by Agfa, offers a range of five flatbed platesetters for commercial offset and form printers with FD-YAG or 60mW violet laser diodes. The Strobbe PS 24 (69 by 914 cm) and PS 36 (85 by 104 cm) are manual loading units, while the PSA 24-3 (69 by 91.4cm), the PSA 33MV (85 by 105 cm) and the PSA 46-3 (91.4 by 117 cm) are fully automated platesetters. On display was the PSA 33 MV, an 8-up model with 10 online plate cassettes, a 60mW violet laser diode and a productivity of up to 25 plates per hour. **TSR**

# Inkjet Flatbed and Super Large Format Printers Star at Drupa 2004

By Andrew Tribute

**Large format inkjet printing really came of age at Drupa 2000, with many new systems from a range of suppliers. At Drupa 2004, we witnessed the arrival of a range of new suppliers, mainly from China. The likely result will be a major price battle.**

The category of large-format, flatbed inkjet printers didn't exist at the previous Drupa, but this year a number of suppliers emerged. (Actually, one sort of product was demonstrated at Drupa 2000 from an inventor named Urs Etlin, who showed a concept unit working with Zund. This used electronics from Inca Digital and a Wild plotter from Zund. It was never seen again as Zund withdrew the plotter, and Etlin left the industry. There was a prototype on the Xaar stand that became the basis of the Inca Digital unit launched in 2001.)

The flatbed market — where large sheets of board or other solid materials for markets, such as point of sale and displays, are printed — began on Easter 2001, when Inca Digital launched its Eagle printer. If I recall, Inca was followed by Durst, and later by the likes of Vutek, Scitex Vision, Nur, 3M and Océ. At present, I believe, Inca has the largest market share with 100 units (no doubt someone will tell me I am wrong). Lots of units were on display at Drupa 2004.

The initial unit size covered a print area up to 1.8 meters wide by 3.1 meters deep. Durst was the first to increase the imaging width up to 2.3 meters, followed by Inca. Lüscher upped the format size to 3.5 by 3.1 meters, which is the largest available, although I am not sure if any company currently supplies boards in that size.

### Speed Thrills

The emphasis now is on speed, as quality is sufficient for the purpose, and newer machines, such as Inca's Columbia, have accelerated the speed of imaging. Some units print in four colors, while others print in six or up to eight colors, depending upon the requirements of the market. Again, the latest Inca Columbia Turbo appears to be the fastest in terms of real demonstrable speed: up to 160 square meters per hour. I timed a 1.8-meter-by-3.1-meter print at two minutes, 20 seconds.

Speed, which continues to be the differentiator at the top of the market, is measured in square meters per hour. But speed is contingent upon the resolution being used and the number of colors being printed. At the entry level, the prime differentiator is price, and until the Chinese arrive, Océ's Arizona products are the cheapest.

Lüscher's JetPrint unit is the newest entrant into the market. As we mentioned, this sets a new largest-format category, with a width of 3.5 meter and a standard length of just over 3 meters. The unit has eight colors, whereas some others only have four or six. Lüscher is considering an alternative approach in switching to six colors, plus having two white inks, one at each end of the ink jet head array. This would be for applications where white ink has to be printed before the colors.

As the head prints in both directions, it requires white ink as the first ink in both passes. This unit claims a speed of 100 square meters an hour at 400 dpi, although at Drupa it obviously was not achieving this speed. It was apparent that some quality issues must be resolved before shipments start in July.

### Printers Handle Multiple Substrates

One development we observed at Drupa was machines that could combine both roll-to-roll printing and



The new Inca Digital Spider unit.

The Océ Arizona
T220UV.

flatbed printing of boards and sheets. Machines such as the Vutek PressVu 180 and 200 and the Océ Arizona 60UV target smaller trade shops that want just one machine to do both types of work rather than dedicated high-performance units for specific applications. 3M's 2500UV printer for Scotchprint Graphics is also a combined roll-to-roll, flatbed and textile printer, but it's targeted at high-performance users.

Inca Digital demonstrated a further development in this area: a smaller-format, higher-quality unit outputting a claimed true photographic quality. The Spyder unit, which offers a size of 60 by 40 inches (1.52 by 1.016 m), is aimed at specialist photofinishers, point of sale and digital printing operations. It prints on substrates up to 30 mm (1.2 inches) thick at a speed up to 50 $m^2$ per hour.

### Large-Format Products

That brings me to super large format products that print a roll of paper up to 5 meters wide. I've almost given up assessing these, since it is now a mass market, with several Chinese vendors now competing for market share. The top of the market is differentiated by speed, functionality, downstream processing and special material handling. Low prices differentiate the other end of the market.

It's becoming easier to get into inkjet printing. The principal elements, apart from a paper or board-handling system, are the inkjet heads. Nearly every system uses heads from either Spectra or Xaar. These two companies are competing on specs, and both have announced a new series of heads for the future.

Other suppliers also are offering heads, albeit with scant market acceptance. We continue to watch with interest the Aprion head from Scitex Vision. Despite Scitex's huge investment, this head is still only used in one product, the CORjet. One wonders if it will ever compete against the two major OEM drop-on-demand

inkjet head producers. The other key piezo drop-on-demand inkjet head company is Epson, whose heads are used in a few wide-format printers, including Mutoh and Roland, besides Epson's own printers. As yet, no Epson heads have been used in any super-wide format or flatbed inkjet printers.

Another market area that might be developing is the print production of corrugated board as a final production press, eliminating other processes such as flexography or offset. This was first seen last Drupa from Aprion (now part of Scitex Vision). That product has evolved into the CORjet packaging press, which prints sheets up to 1.6 by 3.2 meters (63 by 126 inches) and up to 10 mm (0.4 inches) in thickness at a speed of up to 150 $m^2$ per hour. This is a complete production press with a board loader and unloader and an integrated dryer unit for finished board. It's the only printer that uses the high-speed, 600-dpi piezo drop-on-demand heads from Aprion.

The only other system moving into this production press area is the concept unit being shown jointly by Inca Digital and Sun Chemical. The FastJet is a single-pass print engine (all the other products mentioned in this article are multiple-pass engines, where the print heads print multiple ink layers to build up quality and resolution). It uses an array of Spectra heads to print Sun Chemical UV curable inks at a resolution of 300 dpi over a width of 520 mm (20.47 inches) and a length of up to 1,200 mm (47 inches), on board with a thickness of up to 7 mm. The speed of the unit is 100 linear meters per minute, which gives it an operating speed of 3,000 $m^2$ per hour.

Inca and Sun Chemical plan to introduce this product to the corrugated board converting market in 2005 as a complete small-carton printing unit capable of printing full-quality graphics with variable information in a single pass. Key markets are companies involved in secondary packaging of fast-moving consumer goods, such as wine, but it also might be of interest to companies in the main corrugated board printing and production area for shorter-run printing.

One company likely to benefit from the increase in offerings for flatbed, large-format imaging is not a player in this market. Esko-Graphics owns the Kongsberg organization, which makes digital sample-making and cutting tables. Once an item has been printed onto a solid piece of board or other material, it will likely need to be cut to a defined shape. The Kongsberg tables are the ideal solution to do this, using digital geometric cutting data. Kongsberg is the market leader for such products. At Drupa, it showed an integrated production table for automatically loading printed sheets of board onto the table where scoring and cutting took place. **TSR**

# Printing Redefined

By Frank Romano

**Print will prosper — but the industry must be re-aligned to accomodate proliferating digital technologies and a redefined service sector.**

No printing process seems to disappear completely. Litho replaced letterpress, but letterpress is still around. Digital will not replace litho, but it will take volume away. The following table provides our estimates of reproduction volumes by process:

### Reproduction by Process

|  | Litho | Gravure | Flexo | Copying | Letterpress | Digital |
|---|---|---|---|---|---|---|
| Publication | 40% | 35% | 2% | 5% | 0% | 29% |
| Packaging | 25% | 40% | 78% | 0% | 90% | 5% |
| Promotion | 30% | 1% | 5% | 15% | 0% | 65% |
| Product | 5% | 24% | 15% | 5% | 10% | 1% |
| Other | 0% | 0% | 0% | 75% | 0% | 0% |

Source: 2003 RIT Research, based on tons of paper printed by process, U.S. only.

It is only today that several forces are converging:

- The move to shorter runs by print buyers;
- The move to tighter schedules; and
- The move to target marketing.

We think a major trend will be the growth in hybrid printing: combining gravure and offset litho, offset litho and toner, flexo and inkjet, and more.

## Digital Printing

Most of the revenue from digital printing has come from black-and-white systems. Printing a b&w print from a b&w printer is less expensive than printing a b&w print from a color printer. Newer digital color printing systems charge less of a premium for b&w, often making b&w printing on a color printer as cost effective as b&w printing on a b&w printer. This single trend will spur the growth of digital color printers in the commercial market. Many jobs are b&w with occasional color pages, and cost-effective b&w printing will encourage the use of more color. We think that over time color printers will print everything. When a supplier can charge the same for b&w printing on a color printer as b&w printing on a b&w printer, the market will truly take off.

The fact that digital printers print on smaller sheets with limited imposition alternatives makes them less applicable for documents over 24 pages. We think that signature-based digital printers that are at least 4-up (four 8.5-by-11-inch pages on one side of a large sheet of paper, or eight of those pages on both sides of a large sheet) will allow us to handle larger multi-page docu-ments more effectively. For one-off books, the current page orientation is effective. Digital printers have been sold to these market segments:

### Digital Printers by Purchaser

|  | Overall | B&W | Color |
|---|---|---|---|
| Pre-media and large printing companies | 40% of all shipments | 85% | 15% |
| Medium-size printing companies | 5% of all shipments | 75% | 25% |
| Small printing companies | 5% of all shipments | 65% | 35% |
| Corporate and in-house departments | 50% of all shipments | 70% | 30% |

Source: 2003 RIT Research, based on all printers 33 ppm or greater ever sold in the U.S.

These devices may be sheet-fed or web-fed and most apply toner-based technology, which creates a new page image with every impression. This distinguishes digital color printing from traditional offset printing where every impression must be the same. Although direct imaging (DI) offset presses are called digital presses, they do not have variable data printing capability since they use a static printing plate. Their advantage is making the plates on the press and thus reducing press make-ready. But newer offset lithographic presses are raising the ante with faster make-readies.

DI presses cannot produce one book at a time or personalized direct marketing — two of the major growth markets. By extension, digital color printers also can produce very short runs (less than 500 copies) cost effectively with very quick turnaround (same day or while you wait) because they do not require the setup phase. There are definable application markets:

### Best Applications by Printing Device

|  | DI | Digital Print |
|---|---|---|
| One-at-a-time books | No | Yes |
| Personalized direct marketing | No | Yes |
| Very short runs (under 500 copies) | No | Yes |
| Short runs (501 to 2,000 copies) | Yes | Yes |
| Moderate runs (2,001 to 5,000) | Yes | Some |
| Long and very long runs (5,001 and above) | Yes | No |

Source: 2003 RIT Research

Digital color printers are applicable in the first four markets and overlap with DI presses at level 4. DI presses are applicable in levels 4 and 5 and overlap with conventional offset printing starting at level 5.

Each level has its own market dynamics and, in most cases, products from different levels do not compete against one another. Nor do DI presses represent a market threat. Toner-based printing will dominate over the next decade, with inkjet affecting the wide format, desktop and high-speed document markets.

In most cases, sheet-fed versions do not compete with web-fed versions. However, a plant might want one of each for production and workflow reasons.

Inkjet is the only foreseeable threat to toner-based printing. Over the next two decades, inkjet and other technologies may take 20% of the potential volume of all digital color pages. However, the growth in pages

*Toner-based printing will dominate over the next decade, with inkjet affecting the wide format, desktop and high-speed document markets.*

being printed via digital, as digital takes volume from offset, will still constitute a substantial market.

Copiers with RIPs attached do pose a potential threat. Multiple low-end printers compete with one large high-end printer. Usually, low-end printers are acquired by small firms, corporate departments, or as entry-level machines by medium and large firms that then upgrade to the high end. The major trends are:

1. Sheet-fed printers that print faster, working toward 100-200 ppm.
2. Webfed printers that print faster, working toward 150-300 ppm.

### Death of Prepress?

Through the 1980s and '90s, film was a primary manufacturing medium for printers. All pages eventually wound up as film negatives, which were required to make plates. Pre-media services converted art and type to film and then "stripped" it up (assembled it) into composite form. For printers, film could come from outside sources, which was especially true for publication advertisements. When all film units had been assembled, they were used to expose printing plates.

Computer to plate requires all page content in electronic form. There is no need for film since the laser "exposes" the plate. Since CTP systems were installed at the printing company, many content originators dealt directly with the printer instead of the prepress intermediary. CTP grew slowly from 1993 to 1998, but has exploded over the past few years; thus removing page volume from prepress services. We should note that a very small number of prepress services make offset plates for the designated printing company. Another small group make gravure cylinders for gravure printers.

Now, as digital ad delivery to magazines takes hold and as hard copy proofs become virtual, prepress servic-

es must redefine their businesses as pre-media services.

### Shift to Desktop

The 1980s CEPS systems and scanners cost $1 million or more. Today, their functionality is available on desktop computers and scanners priced under $10,000. Some volume, mostly simple work, migrated to desktop production. This has allowed pre-media buyers and originators to move some level of production inhouse. Creative services (designers, ad agencies, etc.) have applied scanning and digital photography. The net effect is that volume has been eroded as pre-media production moves closer to the point of origin. Not all originators will choose to perform their own pre-media services, but enough will move either some percentage or all of their volume in-house to affect the overall market volume.

### Non-print Alternatives

Printing and pre-media services are attempting to re-invent themselves with digital asset management and cross-media services to develop new revenue sources as some volume of print has migrated to the Internet, PDF and other electronic publishing methods. The printing industry lost about $16 billion in revenue since 1999 as content that would have been in print form moved to the Internet or recorded-disk distribution. Although pre-media services now also perform new media production, the volume and profit has not restored most companies to their pre-new media volumes and profits. Print-based services demanded a premium, which generated higher profits.

### Changing Structure of Demand

"On demand" is a euphemism for digital printing. Digital printing eliminated two impediments to more timely printing production: make-ready and drying. Thus, printing jobs could be produced in shorter runs and with shorter schedules — something quick printers and many commercial printers have been doing for years. We think the volume of digital printing will continue to come from work moved from offset litho to digital.

#### Shift from Offset to Digital

|  | 2002 | 2010 |
|---|---|---|
| Offset transfer | 94% | 62% |
| Variable data | 5% | 20% |
| Transactional | 1% | 8% |
| Web-generated | 0% | 10% |
|  | 100% | 100% |

Source: 2003 RIT Research, based on U.S Printing

There's a misapprehension that the printer must control every every variable data printing job. We expect that the more complex jobs will call for intermediation by the printer, who will generate new profits through database and related services. But many jobs will either be too small or too simple to require such activity. These could be assembled by the creative orig-

inator if the capability were made available and if a standardized method allowed any printer to output the file from any digital printer. We need a blind, reliable approach to transferring such files. This is what PPML/VDX was designed to do. PPML alone is only a partial solution, however.

Digital printing costs more than offset litho to produce, especially as run-length increases. To compensate for this, suppliers used the benefits of just-in-time delivery to eliminate warehousing and transportation costs. This made digital printing more economical. Then came the concept of "distribute and print," which reduced postal and other distribution costs by moving the point of production closer to the point of delivery. But these concepts are also applied with conventional printing, especially DI printing. The secret to the success of digital printing involves runs that approach one.

## Workflow and Beyond

If you were to look at the printing industry product mix by printed product, you would discover that printers of every type now produce print faster than ever at a lower cost. They are applying new and more auto-

mated presses and more sophisticated systems, all of it is linked by new workflows. But one workflow does not fit all. Workflows tend to be oriented by printing process and not by printing product. JDF and CIP4 will play a role, especially when implemented for both traditional and digital processes.

## The Future of Print

Print will prosper, but it will require a re-alignment of the industry. As printing firms consolidate, so will vendors, associations and others. We will all have to relearn the business and adjust to growing ancillary services with printed products sold directly by printing firms. The forces of change are colliding with the forces of the status quo. Progress starts with baby steps and ends with quantum leaps. **TSR**

**About the Author**
Frank Romano is a professor at the Rochester Institute of Technology School of Print Media. He will host a full day of conference sessions on the redefinition of print Monday, August 16 at Seybold San Francisco. For details on Romano's curriculum and panelists, go to **www.seybold365.com/sf2004/conference**.

# In *The Bulletin* Since Last Issue

### Volume 9, Number 34
### May 26

**Newsstand.** Agfa reported strong sales during Drupa; Goss International has taken a major three-site order from the Dogan Yayin Holding; Eastman Kodak Company's Graphic Communications Group completed the Drupa 2004 Exhibition with major customer contracts; MAN Roland introduced its new ColorPilot systems at Drupa; The Ghent PDF Workgroup releases specifications for using PDF/X-1a:2001 PLUS; Pitney Bowes acquired International Mail Express; Adobe Systems and the Association for Cooperative Operations Research and Development are adding additional intelligence to the ACORD insurance forms; Brown Printing will integrate its nationwide operations under DiMS! enterprisewide print management system; Danka Business Systems PLC reported a fourth-quarter net loss of $96.4 million; Digital Color Print has received approval from the NASD to change its trading symbol from MTVI to DCPI; Océ announced that John Heath has been appointed president of Arkwright Inc; Patricia Sorce has been appointed chair of the School of Print Media in RIT's College of Imaging Arts and Sciences; The Procter & Gamble Company introduced Pringles Prints, featuring a unique, fun design printed on every crisp; Webco Printing closed its doors after nearly 20 years, putting about 70 people out of work.

### Volume 9, Number 35
### June 2, 2004

**Newsstand.** Avery Dennison confirmed that officials from the European Commission and relevant national competition authorities visited and obtained documents from the company's pressure-sensitive materials facilities in the Netherlands and Germany; Stora Enso announced that European Commission competition investigators have visited its premises in London, Stockholm and Düsseldorf; Vince Hockett has stepped down as president and CEO of Invesprint; Bentley Graphic Communications bought a six-color MAN Roland 700; Critical Impressions recently installed a Heidelberg five-color Speedmaster SM 52; RR Donnelley's Book Group has developed PubSelect, a turnkey solution that enables publishers to quickly and easily enter the custom publishing market without a costly technology investment; MAN Roland exceeded its sales projections at Drupa 2004; Polaris Direct has installed a new arsenal of Nipson digital presses; Chenequa will merge with Quality Color Graphics.

## Seybold San Francisco Keynotes Feature Execs from RR Donnelly, Adobe and Esko-Graphics

Seybold Seminars returns to Moscone Center this summer with four full days of executive education, hands-on tutorials and a new product pavilion. Conference sessions and tutorials will run August 16 to August 19. The pavilion will be open August 17 to August 19.

Keynote speakers including Mary Lee Schneider, president of prepress technology at R.R. Donnelley; Jim King, principal scientist at Adobe Systems; and Kim Graven-Neilsen, CEO of Esko-Graphics will cover developments in automated workflow and prepress; package manufacturing; desktop metadata tools; and content management strategies.

Frequent contributors to *The Seybold Report* returning to Seybold San Francisco as moderators include Rochester Institute of Technology professor Frank Romano; content management consultants Bill Rosenblatt and Bill Trippe; and color expert Michael Kieran.

Representatives of AGT, Bayer, BBC, Harvard Business School Publishing, HP, Landor Associates, McGraw-Hill, NBC/Universal Studios, Mail-Well, Microsoft, MRM, Penton Media, Procter & Gamble, Saatchi & Saatchi, the *San Francisco Chronicle*, Time Inc., Wunderman and others with present case studies and best practices in the creative, publishing, marketing and content management tracks.

Face-offs between competing design, DAM and workflow technologies are set throughout the program as are Seybold 7s, which introduce vendors during clustered seven-minute demonstrations.

For complete information on Seybold San Francisco, including session descriptions, faculty and how to register, go to **www.seybold365.com**.    **TSR**