Digital Technology Trends

by Howie Fenton, DTP Ink

In This Issue

Digital Technology Trends author resigns from GATF

After 6 years as Senior Technical consultant of Digital Technologies at GATF, I have resigned. I hate to do this because I love GATF and everything that it represents. It is the only independent, objective voice that performs research, testing, consulting and training. But since 9/11 my consulting and training is down 30% and I was becoming a burden not an asset for GATF.

In many ways nothing will change. I will reopen my consulting and training company (DTP Ink), continue to work for GATF as one of the Solutions on Site consultants and continue this newsletter. The few changes will be that I will pursue new editorial and educational affiliations. Also, there are a bunch of books inside of me that I need to get down on paper. With any luck at all, I will loose my 1K (100,000 mile a year) status with United Airlines and spend more on research and writing.

Update GraphicConverter 4.4

As someone that works with images all the time, it is always important to find and use better, less memory intensive and faster tools. One of my most useful tools is GraphicConverter, a shareware program that does many of the same things that Photoshop does for a lot less money. I also find GraphicConverter more automated.

It is easy to run batches of files and change file format, or resolution. It also has a neat browser function that lets you see previews and move files. It shows you the duplicate files when you try to copy them so that you can tell which are the most recent version. GraphicConverter has recently been updated to version 4.4.

http://www.apple.com/downloads/macosx/imaging_3d/graphicconverter.html

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⏩ Inkjet Saving Software

One of the ironies of the inexpensive inkjet printers is that the devices can be cheap, but over the course of a year the consumables, like ink and paper, can significant cost. There are a few strategies you can use to decrease the costs. You can buy third-party cartridges (not much cheaper) or use do-it-yourself refills (cheaper, but messier). Finally a new option has emerged.

A new software option called InkSaver, from Strydent Software, offers another solution. It's a software program that allows the user to set the amount of ink used in printing. According to an article in USA Today, using the 25% ink-reduction setting, text looked sharp and presentable while colors lost some saturation and pictures become grainier. At the 50%, text looked OK. At 75% reduction, text looks washed out and colors are very pale, but still better than "draft" mode on most printers. Unfortunately, at this time it is only available for the PC.

http://www.inksaver.com/
http://www.usatoday.com/life/cyber/tech/review/2002/6/21/spotlight.htm

⏩ Printers predict growth of digital printing but not e-commerce

Forty sheetfed printers were asked to share their projections for the future in an instant poll conducted during the keynote session of the annual GATF/NAPL Sheetfed Pressroom Conference held in Chicago earlier this month. The majority of respondents projected digital printing will continue to make inroads, with more than a quarter predicting digital will account for 30% of total revenues in 2020, and another 22% predicting this segment will contribute 50% or more of sales. Average run length will continue to decrease, those polled said, with 21% forecasting average run lengths of 1,000 or less by 2020.

www.gain.org/servlet/gateway/redirect.html?url=http://205.128.3.23/newslink.cfm?vendorid=211&id=6899

While the above prediction is consistent with market research projections, the poll also asked printers about how print is sold. A large majority of printers polled (86%) said that e-commerce will not replace face-to-face selling as the primary method of selling printing in 2020. These results are different from market research, which suggests a significant growth from e-commerce based sales.

This creates some interesting questions. Is the market research wrong? Are printers reluctant to embrace e-commerce solutions? Is it possible that customers will demand e-commerce and printers resist it?

Point Counterpoint – USB 2 Vs Firewire 1394b

PC makers in recent months have begun installing a high-speed version of the Universal Serial Bus, dubbed USB 2.0 High-Speed. By the holiday sales season, the major PC makers will have incorporated USB 2.0 which can move data up to 480mbps, compared with the slow 12 mbps handled by USB 1.1. This will provide stiff competition for first generation FireWire (IEEE 1394a Serial Bus Standard) data transmission.

FireWire or IEEE 1394 is a digital transmission standard that was developed at Apple Computer in 1986 for data transmission. It was originally conceived to replace the prevailing serial, parallel and SCSI standards. In January, 1999, Apple formally abandoned SCSI and adopted FireWire as the standard method of attaching data hungry peripherals, such as hard drives, printers, and digital I and full-motion video cameras to the Macintosh G3.

FireWire has gained in popularity in the past two years much of it due to the promise of its potential speed of 400 MBps and theoretical speed of 800 MBps, but many drives, especially early ones, never exceeded 13 MBps.

With USB 2.0 on the market, FireWire temporarily loses its title as the speed king. FireWire backers are not resting on their early speed lead; a new version of the technology (IEEE 1394b) is on the horizon that will transmit data at 800mbps--enough to transfer the contents of an entire CD in just seconds.

Most important, FireWire is a more costly option. The USB 2.0, chipset integration and software support essentially make USB 2.0 free. By comparison, adding FireWire to a PC requires using an additional chip. FireWire add-in cards typically sell for between $40 and $50. PC makers spend about $10 to build it into a PC. A $10 increase in manufacturing costs typically translates into a $50 boost in retail prices.

Gateway and Dell, will use USB 2.0 as the standard method for connecting devices to its desktop PCs and over time eliminate a number of specialized ports--such as the PC's keyboard, mouse and printer. According to rumors The new FireWire will be shown at MacWorld in July.

Knocking the Ports

Personally I could not be happier about these announcements. I am very disappointed in the current implementations in both USB and Firewire. I find USB dreadfully slow for printing and I hate the fact that I have to pay more to get Ethernet capability on printers.

My opinion about Firewire is not much more positive. There were all of these promises about speed increases by replacing SCSI with Firewire, which did not really happen. Sure, Firewire is faster then SCSI-I but not SCSI-2 or 3.

In addition, I had a Maxtor Firewire drive fail and now both my Maxtor and the VST experience - 412 error problems while coping files, then quit – which is worse than SCSI voodoo magic because no one can explain or repair it. But I know it is an Apple Finder – Firewire problem because there are no issues when copying to SCSI or ATA drives and I can use a wonderful little utility called UtilityDog (v 1.4 – http://www.ProbabilityOne.com) and copy all day long to both of them with no errors.

Many early adopters also reported problems because early FireWire drives were slow and problematic for those who needed speed. Many Final Cut Pro pioneers discovered the *Dropped* Frames problem. In fact rumor has it that management at Apple advised against using FireWire drives for DV editing at these early times

Some of the blame goes to bad drivers. Updates like Apple's FireWire 2.7 helped. Even so, the fastest FireWire drives peaked at 13 MBps, theoretically enough to avoid dropped frames, but far shy of FireWire's top speeds. The biggest problem is that pure FireWire hard drives simply don't exist. Instead, you get an ATA hard drive hidden inside a FireWire enclosure. The ATA-FireWire bridge (Initio chip) causes the bottleneck.

However, the Oxford Semiconductor 911 ATA-FireWire bridge improves transfer rates to a real-world 29 MBps to 34 MBps, and it lets you use multiple channels and RAID options, which can push data-transfer rates to 75 MBps and higher.

The take home stories are that SCSI-2 and 3 remain faster than Firewire 1394a drives. In general, SCSI will outperform IDE (ATA) drives for two reasons: SCSI allows asynchronous communications -- in other words, the drive doesn't hog the bus while it is fetching data -- and SCSI, especially the fast, wide and ultra varieties, tends to allow greater throughput -- a bigger data pipeline.

If you use or buy a Firewire drive make sure you are using as Apple's FireWire 2.7 driver and if you buy a Firewire drive get one with the Oxford Semiconductor 911 bridge. According to MacWorld if your considering large drives (80-120Gb) the Western Digital mechanism is fast but the IBM Deskstar is 25% faster for some certain tasks (i.e. Photoshop). Also be aware that new faster versions of USB and Firewire (1394b) are in the works.

http://www.macworld.com/2001/09/buzz/product.html
http://www.macworld.com/2002/07/reviews/firewire.html
http://zdnet.com.com/2100-1105-938006.html

⏩ Enfocus news: Michael Jahn joins & Ghent PDF "Quality Standard"

Michael Jahn, a long time respected colleague of mine, has left Agfa and joined Enfocus Software as Certified PDF Evangelist. Michael is an interesting and passionate person. He is well known for some of the most famous (or infamous) ”heated discussions” on the ListServs (pdf, cttp) and if you attend shows you may have seen him making presentations on panels.

As a moderator, I learned long ago that if you knew Michael was going to be at a show you should invite him to present because if you don’t he will make his opinion heard from the audience. He has raised important issues about PDF reliability and printerability. Of one thing I am, sure Michael is one of those rare people who keep our industry lively and interesting; I wish him the best of luck

Ghent

Representatives of Seven European Graphic Arts Industry Associations gathered in Ghent, Belgium on 21 June 2002 to develop and maintain Certified PDF Quality Standards for the Publishing and Print Production Industry. They were from Belgium, The Netherlands, France and Switzerland and the initiative has been named the Ghent PDF Workgroup.

The founding Members agree to collaborate on the standards, while maintaining independent authority to adopt and promote the quality standards advanced by the Workgroup. They included:

- Medibel which unites Belgian companies active in the world of advertising, such as advertising agencies, lithographers, publishers and printers.
- Febelgra - the Federation of the Belgian Graphics Industry.
- Cebuco is the marketing services organization of Dutch Newspapers
- DAL TC - the Dutch commission governing digital supply of data files.
- KVGO - the Royal Dutch Association for the Printing and Allied Industries
- Sicogif - the French National Association of Graphical Communication and
- Printing Industries VSD - (Swiss Printing Industries Federation) represents the interests of its members in the prepress, printing, and carton printing

New PDF Quality Standard?

After reading the press release I contacted Michael and asked him how this related to the activity in the standards committees. His response follows.

> “Well, the short answer is that yes, you are correct - this is not some effort that will be submitted to ANSI or ISO - that is not the intent at this time. I guess the messaging is that it is a "Quality Standard" - more like a "good house keeping" seal or a United Laboratories logo

Obviously, the concept of "Enfocus Certified PDF" is quite popular with many Enfocus users, production clubs, printers and (therefore) the members of associations in Europe - so, it follows that the associations step in line supporting this concept. – perhaps one day, like AppleTalk turned to EtherTalk turned to TCP/IP, Certified PDF "like" technologies will evolve and then we might have a thing that behaves like Enfocus Certified PDF but is specified by something like CGATS. "

"The Ghent PDF Workgroup is really a group of associations like the PIA, GATF, IPA or DDAP having a meeting. – mostly these are associations in Europe, although IPA and DDAP were represented at the latest meeting.... The basic idea is this... like DDAP came up with a Universal PPD and Universal Acrobat Distiller Job Options Setting ... imagine there were 20 DDAP like initiatives in the US, each very similar, but slightly different. That is a lot of overlap.

"This is more than an Enfocus User Group meeting - this is a group of powerful trade associations who want to share ideas and ask Enfocus to build things that they feel they need that might go beyond what a focused group like DDAP provides - as you know, DDAP is mainly in the Publication vertical - many of these associations are in other verticals (Newspaper, commercial printing, etc...) "

"It was decided to strive towards PDF/X-1a compliance for the 2003 PDF quality standards to be developed by the workgroup over the following months, pending successful testing of a small number of technical issues. In other words, the PDF Profiles defined by the workgroup would be more 'demanding' than the PDF/X-1a baseline, depending on the targeted output process, so that files produced according to the quality guidelines would be valid PDF/X files as well. "

http://www.enfocus.com/news/index.php

⏩ Case Study: Color Managed Inkjet - Not Matching Press

This month I worked with a printer in Oregon who was having trouble matching their Large Format Epson with their press. They had some of the top toys including the automatic spectrophotometer, Imation and Gretag software and BestColor RIP. In analyzing the workflow I discovered the transmissive densitometer used to check the film was off, making the film used to create the Matchprint off (the final target). In addition, when testing the target, the yellow could not achieve satisfactory density, even after calibration. Worst of all the linearization procedure was so cumbersome and time-consuming (requiring 45 minutes) that the staff refused to do it.

After creating a new Matchprint with linear film, replacing the yellow inkjet canister and creating a one shot calibration procedure using individual curves (requiring 10 minutes) the proof matched better and the staff were no longer resistant to linearizing the device every morning. The take home story: practical process control is critical for color management success.

http://www.gammag.com/cgi/searcharch.cgi?view=14.xml&keyword=process+control&start=0&temp=

⏩ New 12-Step Plan for Adopting a CTP Workflow

In a previous issue I included the GATF's 12-Step Plan that Hal Hinderliter and I created 2 years ago. While updating the CTP workshop I teach at RIT, I reviewed that original plan and started to update it. Since it can no longer be called the GATF12 Step … lets call it Howie Fenton's 12 Step CTP Implementation Plan. Although still under review and revision - here is a preview.

1. Begin the researching phase with CTPP products, technologies and plates (CTPP listserves, shows, and manufacturers)
2. Consider and Perform a Risk Assessment i.e. What part of product lifecycle are you in and when will next generation by available?
3. Perform a Workflow analysis. Identify and fix bottlenecks that CTP won't fix (bottlenecks in estimating, CSR, preflight, etc)
4. Implement QC, process control & CMS. Get instruments, print targets, measure results and start controlling the process and building ICC profiles
5. Get preflight tools, create fast preflight procedures for both application & PDF files
6. Master all steps in PostScript and / or PDF workflow (i.e. color correction, trapping, imposition, file repair)
7. Get 1 or 2 digital proofers (contract, larger format inkjet plotter) test imposition and trapping, build and test ICC profiles, create transition strategy to digital proofs
8. Review network, file server, print queue, OPI, telecommunication & archiving equipment and procedures
9. Review and change infrastructure: physical plant changes, HVAC, electrical, disposal
10. Perform final price and contract negotiations (add performance criteria if applicable)
11. Buy platesetter, install, test targets and establish process control tolerances and procedures
12. Analyze the effectiveness of your digital workflow. Identify the work-around solutions created as short term fixes and create longer-term solutions

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In the Works

- Point Counterpoint – Viability of DI Presses
- Point Counterpoint – Success of Remote Proofing
- Letter to the Editor: Platemaking vs Imagesetting

Schedule

Are there questions or issues you are wrestling with - lets schedule a visit - here is a travel schedule for this month.

Date	City	Purpose
7/8-12	Guadalajara, Mexico	Prepress Audit (Private)
7/15-17	Grand Rapids, MI	PDF Training (Private)
7/22-26	Medford, OR	Color management Training (Private)

Adding or Removing Names

To be added **to the list simple email HowieAtPre@aol.com and write "add to list" in the subject line**

To be removed **email HowieAtPre@aol.com, write "remove from list" in the subject. Note: if using a different address then the address the newsletter is sent list that address.**

Questions about the alphabet soup of digital prepress…

- **CTP (computer to plate)**
- **QC (Quality Control) or process control,**
- **PDF (Portable Document Format)**
- **CMS (Color Management Systems),**

drop me a note: HowieAtPre@aol.com