

## ***Comments on recent trade shows attended by FLAAR***

- ***SGIA Trade Show*** (Oct 29-Oct 31,2002)
- ***GraphExpo*** (Oct 6-Oct 9,2002)





***Comments on Wide Format  
Inkjet Printers exhibited at  
SGIA Trade Show (Oct 29-Oct31,2002)***

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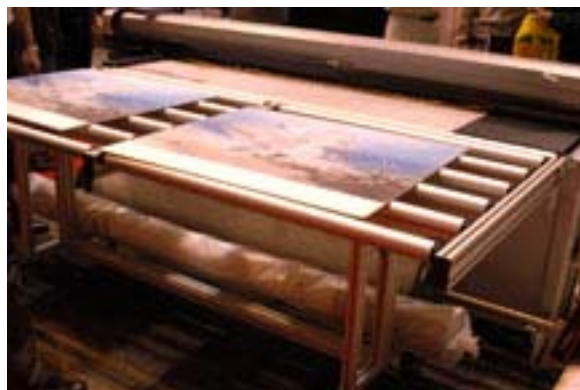
## Introduction

Every year SGIA and PhotoPlus are on overlapping dates two thousand miles apart. So we have to attend one then take a red-eye flight to New York to catch at least the last day of PhotoPlus.

SGIA was not held last year since it was too close after Sept 11<sup>th</sup> disasters. The year 2002 reappearance was quite successful. SGIA had a larger floor space with more booths than Seybold '02.

By Friday attendance had died down somewhat, and I am guessing that on Saturday the outer aisles were a bit empty, but Wednesday and Thursday were busy days. Friday was dedicated to taking photos of the various products.

So all together Nicholas spent three long days at SGIA.



The first day he was together with two technical people from a Fortune 500 company who had hired FLAAR to guide them to all the UV curable booths in order to translate the techno-babble, and occasional excess enthusiasm of the sales reps. FLAAR increasingly does this at tradeshows, works as consultant for people who don't want to buy the wrong printer.

In the case of a UV cured ink printer, it's a \$224,000 mistake if you buy the lowest price model, or over a \$700,000 mistake if the most complex is not the appropriate machine for your company. It is interesting

that every print shop which has hired or used FLAAR as a consultant in the last three months has been interested in learning about UV curable flatbed printers.

## Aqueous Wide Format Inkjet Printers

Anyone who has been reading FLAAR web sites for several years realizes that our initial printers were all thermal printhead technology (our first printer, in 1997, was an Encad). However over the last year we are branching out and now have four piezo printers and one Hertz printhead (continuous inkjet).

The reason for expanding coverage to piezo printheads is that each technology (piezo electric, thermal bubblejet) has distinctive pros and cons. Neither is perfect, yet both have many advantages. The crucial thing is to learn which advantages you need, and which disadvantages you can avoid by choosing one, or the other technology.

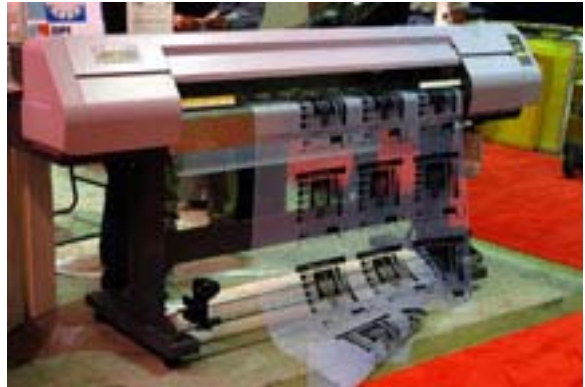
168,000 people a year read the FLAAR reviews specifically to obtain help to figure out which printer to purchase. It is essential that our coverage be fair to both technologies. This is possible when we have enough printers of each printhead design in-house. We now have three Epsons and one Mimaki (both piezo). We have been studying Mutoh at a sign shop near the university to learn more about that brand as well.

### ***Mimaki***

So far the Mimaki JV4 is the most versatile printer yet designed with the Epson 10000 printheads.

- Mimaki can hold acid dye and reactive dye, simultaneously
- Mimaki can hold six color regular dye and six color pigmented, simultaneously
- Mimaki can run dye sub disperse inks
- Mimaki can take thick media (we fed ours foamboard)

Roland Pro II cannot hold or run six dye and six pigmented. It is our understanding that you can load to run only dual dye or dual pigmented. If this is correct, that means you cannot change on the fly. So you are sort of stuck with either a dye printer or a pigmented ink printer. Changing ink on an Epson printer is extremely costly; we do not know the cost of changing ink on a Roland, or Mimaki either for that matter (ours is so new we have not had to change ink yet, since it holds two totally different kinds of ink, one full set of 6-inks on the left, another totally different complete set on the right).



Mimaki showed their new 8 color textile printer, TextileJet Tx2-1600. This printer has a host of new features compared with the earlier 7 color Tx-1600S.



Mimaki also makes two neat flatbed printers, the JF-1218 and JF-0604. These are desktop-sized machines for printing on wood, tiles, leather, corrugated cardboard, or other unique materials.

The Mimaki JV3 solvent ink printer enters a crowded market. But personally I would rather trust a solvent ink printer from a known and respected company rather than some unknown Chinese company who may not stay in business long enough to provide service after the sale. Imagine trying to get spare parts for some no-name printer.

Worse, the no-name solvent ink printers have about zilch resale value.

## Mutoh

Mutoh had a large booth, in a nice central location. Since this Mutoh booth was in the heart of the convention center, and as lots of printers were on display, the booth was well attended.

The Mutoh Falcon II is listed as an 8 color printer but it works only with six colors. So far we have not seen anyone using it as 8 colors. At all the tradeshow such as Photokina the Falcon II has only six inks. The two extra ink chambers are filled with cleaner solvent. We do not know if employing only 8 inks is a software issue, or the RIPs can't yet handle 8 colors, or at the last minute they decided not to continue to a full 8 colors.



It is interesting that Mutoh Europe is allying with Scanvec-Amiable at precisely the time that Roland finally got rid of that alliance. The lite-RIP from Scanvec-Amiable never did achieve a good reputation for itself, which in turn was not a good ad for Roland.

We recommend the several excellent RIPs which have a reputation for quality, namely ColorByte (but we recommend only their PC version so far), PosterShop, and Wasatch.

Mutoh-USA is, fortunately, not allied with any one RIP. Actually Mutoh-America decided to write their own RIP.

## Dryers for Wide Format Inkjet Printers

Two companies offered dryers for inkjet printers. These products are useful if you have problems with prints that never seem to dry. These drying issues are especially notable with thermal printerhead technology on some media.

Benes offers a dryer which dries from the underside of the media.

## Dye Sublimation



Dye sublimation has been in use for several decades. Thus it is illogical for any one company to claim a patent on the process or the ink.

Such a patent claim has caused prices to remain artificially high. This is not nice for consumers.

FLAAR is consumer oriented, hence we support open sources for supplies such as disperse ink for dye sublimation.

Therefore it was very pleasing to see so many dye sub booths at SGIA.

Laser Reproductions allows you to dye sublimate with toner in a laser printer or with disperse inks in an inkjet printer. They offer resin tiles, heat presses for mugs, T-shirts, inks and everything else. We know the people here; they have been in dye sub business for many years. Pleasant, knowledgeable, trustworthy: Carol Gibson, [carol@LaserReproductions.com](mailto:carol@LaserReproductions.com), tel (847) 677-8333.



### Solvent Ink Printers



The Mutoh Toucan is in addition to the older Albatros (1304NX).

The Toucan uses full-strength solvent ink. This means you can use economical vinyl. The Toucan uses Spectra piezo printheads and is for commercial production. Spectra printheads tend to offer better quality than Xaar heads.

The RockHopper uses a hybrid ink. This means you need special coated media. The RockHopper is for smaller shops with only occasional need for outdoor signs. Don't have notes on what head the RockHopper uses.

### Printers using Oil-based Inks

XES did not have their own booth, but their printer was in a booth of a Japanese company which offered a special media for wallpaper.

#### *Seiko I Infotech*

Seiko is to some degree separate from Epson; definitely Seiko printers are totally distinctive.

The Seiko IP-4500 Mk-II and 4010 Mk-II produce notably better quality than the Seiko printers at DRUPA 2000 and tradeshow in 2001. However whoever writes their ad copy includes shameless hype that should be embarrassing. There is no such thing as "unprecedented high speed."

"Superior print quality" is true only if you compare it to the unfortunately unacceptable quality of two years ago. More realistic would be "The recent upgraded Seiko printer provides a fair quality for an oil-based system with Xaar-based piezo printheads."



To see true superior quality, you need only look anywhere else at the tradeshow to anything using an Epson 10000 printhead.

Just remember, as with all other printers, the higher the quality, the slower the printing. You do not get the claimed quality at the claimed speed. At the screeching speed you get a print which may look rather blotchy. The print at acceptable quality (relatively speaking, this is an oil-solvent and Xaar heads), the printer has to slow down notably.

Summary on oil-based printers: prior to the new model the XES was definitely higher quality. Speed comparison was tough to judge since no one has ever attempted an independent speed clocking.

Now though, Seiko is close to XES in output appearance. Again, no one has ever done a side by side comparison. Oil-based printers are a niche market so they don't get much attention.

The ad claims "Wide media choice" which has to be translated: "You get one option per class of media to allow for a range of basic media choices; not many other companies make media for oil-based printers, so not many options for lower-priced after-market media."

### RIPs

Canon Europe favors PosterJet, one of the fastest and easiest to use RIPs around. Canon USA used to favor EFI, one of the more expensive RIPs, with zero upgradeability, and in capable of being used on any other printer. For their new models Canon USA has dropped EFI.

Mutoh Europe signed a deal with Scanvec-Amiable. Yet at that very same time Roland dropped Scanvec-Amiable, probably due to recognition of the user dissatisfaction with that lite product.

Fortunately Mutoh USA is wise enough not to use a lite RIP from Scanvec-Amiable. Instead, Mutoh has produced their own in-house RIP.



Scanvec-Amiable itself had a large booth. People there are friendly and helpful. They have a new version of their RIP out, but it's a challenge to get excited since their earlier versions did not exactly set records for user satisfaction.

Wasatch had a busy booth. This is a RIP we have. Wasatch has a host of special features which we recommend, such as for spot colors, for textiles, and for other applications.

### Paper, Media, Substrates for large format printers

End users frequently ask for assistance in learning what canvas, paper, vinyl, textiles, or other material to utilize. We tend to discuss primarily material for aqueous ink jet, both dye and pigmented, as well as disperse, acid dye, and reactive dye textile inks.



Avery Dennison is known for substrates used for fleet graphics, printed with grand format printers and full-strength solvent inks. But in the last year an entirely new breed of printer with lite-solvents has been making inroads. These printers require their own kind of media: coated for mild solvents. Since these kinds of inks and printers are relatively new, not many companies make media for them yet. Avery Dennison, however, makes media for lite solvent printers, both permanent and removable cast and calendered material.

For regular printers such as Canon, Encad, ColorSpan, HP as well as all the piezo printers from Epson, Mimaki, Mutoh, and Roland, Avery Dennison offers paper, photobase paper, vinyl, floor vinyl, backlit/frontlit, frontlit and banner. Since Avery is so well known for its fleet graphics material on grand format it is not often listed for coated media for traditional printers 24" to 72".

Rexam is now renamed Intelicoat. About the same time as SGIA they bought the remains of Azon. Intelicoat thus remains one of the major inkjet media companies in America, certainly among the top five. The booth has friendly capable people; have visited with them now for years and years at tradeshows across the country.



### Color measurement

It is as though screen printers don't need color management for their spot colors. There were more booths devoted to color management at Seybold or Photokina. PhotoPlus Expo, however, was strikingly devoid of color management. Camera manufacturers don't exactly want to remind buyers of cameras that they need color management when it comes time to print the images.

There were a few color management booths, but not many, and not very large.

#### *Mutoh, color management*



A color management tool of special note that I saw at Photokina I am adding here to the SGIA report, namely Mutoh's Focus color management tool. The large Mutoh booth at SGIA had so many handsome printers that I did not have the opportunity to check and see if the Focus machine was present too.

Consider the Mutoh Focus as a super-form of a Gretag Spectrolino, sort of. This Mutoh apparatus is about the size of a 24" wide format printer, but it sits comfortably on your desktop.





This precision instrument includes an embedded spectrophotometric and densitometric sensor targeted for wide format inkjet printer applications.

The advantage of the size of this Mutoh equipment is so you can utilize a fully adequate set of color patches for your calibration and ICC color profiles.



Mutoh is a respected name in wide format piezo inkjet printers, but virtually no article or report on color management features their color measurement instrument.

Since FLAAR has more readers (168,000) than all three major digital imaging and sign trade magazines put together (roughly  $3 \times 30,000 = 90,000$ , even if any had a readership of 40,000, FLAAR still reaches more people who buy equipment). We feel that people who seek assistance in color management can best be served if they are informed of all the options, including Mutoh.

Different views of SGIA Trade Show





***Notes on Wide Format Printers  
Flatbed Scanners, etc  
from One Day at GraphExpo 2002***

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## Introduction

GraphExpo was not held in year 2001 because Print '01 was held in the same Chicago location instead. So the present report covers GraphExpo '02.

It was possible to be at GraphExpo only a single day, and most of that day was as consultant for a large screen printing company who wanted assistance from FLAAR to understand all their options as they moved into wide format printers. This meant looking at all the wide format printers on the tradeshow floor.

GraphExpo is mainly for traditional offset printers. There was not that much related to wide format inkjet printing when compared with SGIA or even Seybold San Francisco. However Creo had a large booth which meant you could see all their scanners.

## Wide Format Inkjet Printers

### *Canon*

Canon last unveiled a new printer in 2000, the BJ-W9000. It was not until IPEX, CeBIT, and other tradeshows in 2002 that a new printer was presented. They have the tradition of showing new printers long before they are actually for sale.

Thermal printheads such as Canon's bubble-jet are inherently faster than piezo printers with any Epson printhead. A Canon printhead has 7,680 nozzles. Evidently an Epson printhead has only a few hundred nozzles, a result of limitations of piezo's system of pushing the ink out with a flexible membrane.



Thermal printers, in general, may use less ink. Epson printers are rated as devouring expensive ink at a remarkable rate.

So Canon has a chance to survive in the marketplace by featuring their two strong points: relative speed and reasonable running costs.

Unfortunately no pigmented ink yet works in any bubble-jet printhead from Canon. Hence it is premature to recommend a Canon for art reproduction or even for photographs if the intent is to hang them on the wall in rooms with sunlight or strong interior lighting. However if you intend short-term images, then a Canon printer allows you to print quickly.

Canon seeks to implement some aspects of color management into its GARO, Graphic Language with Raster Operation. Since this is unique to Canon, it is not widely understood, and certainly not here at the university since there is not a single Canon printer anywhere in sight.

### *Encad*



The output from the Encad NovaJet 880 flatbed looked outstanding. However especially with any atypical printer such as this flatbed, be absolutely sure that you try your own images out on any printer before you buy one. Do not rely on what you see at a dealer or tradeshow. This is true for any brand, Epson, HP, Roland or any other. The images at tradeshows are tweaked to look spectacular on certain media. If you have a different image, or try to use more economical media, it is unlikely your picture will look like what you hoped for.

Output from the Kodak 5260 looked really beautiful, however it was not printing the time I passed by the booth. However they turned it on subsequently. Everyone now talks openly about the glitches. Evidently considerable parts of the printer had to be redesigned to attempt to remove the banding at high speed. The speed claims shrunk a tad, from claiming 500 sq feet per hour to claiming only 475 sq feet per hour.

It has been rumored that Encad will release a new printer at upcoming SGIA. They definitely need a new model to stay competitive with Canon, Encad, and HP. Most corporations who are buying a printer for the first time are choosing the HP 5000 and now the HP 5500. Most individual pro-sumers, such as individual photographers, are selecting an Epson.

The result is that every major reseller whom we have asked have all said that sales of Encad have diminished substantially since HP introduced the DesignJet 5000 two years ago. It seems that the main people keeping Encad afloat are the faithful print shops who already have multiple Encad NovaJets; some of these tend to buy the next model Encad when they update. But not all, Anheuser-Busch bought 500 Encad's three years ago. But this year they reportedly switched to another brand in order to get newer technology.

### *Epson*



The output from Epson 7600 and 9600 looked very nice. Epson has shipped a wonderful machine for hobby photographers and prosumers, as well as individual artists who like to produce occasional prints of their work.

I am not sure the ill-dated Epson 5500 is being shown any more. Its color gamut has been judged as unsatisfactory by people who have used it (not us, actually we liked the output, but others have stated it's color range was not adequate). The poor yellow was judged to be a cause of low color gamut for the Epson 10000, and the reason that model was phased out and replaced with the 10600.

It is admirable that Epson Inc is listening to the laments of the people who bought earlier products. It is sad that all these buyers had to be beta testers.

At most tradeshows the Epson booth is packed, but GraphExpo was clearly not a venue attended by the Epson kind of buyer. The booth was not as well filled as at PMA, Photokina, Seybold and other tradeshows attended by individual photographers and artists.

### *HP*

HP printers were all over the tradeshow but mainly in booths of companies other than HP itself. The HP booth showed primarily the Indigo line of digital replacements for offset presses. HP had just unveiled their new DesignJet 5500 at Seybold; had shown it also at Photokina, and GraphExpo is dedicated more to traditional printers, as in book printers, printers of mailing pieces, advertising. Besides, the sign, poster, and banner printing tradeshow, SGIA, will be in a few weeks.



### *Other wide format printers*

Nowadays large format printer companies are no longer willing to pay the huge fees to exhibit at a tradeshow. So GraphExpo faced a situation where hardly any wide format printers would have been exhibited. Thus at the last minute GraphExpo organized a common "Wide Format Opportunities Pavilion." It even included products other than printers.

This was a good idea. You could see a wide range of printers in one area.

### *General common sense warning*

Most printer companies devote considerable effort to finding the absolutely most spectacular images to show off the quality of their printer system. Epson is the best at this, but Canon, Encad, and ColorSpan also showcase attractive prints. The HP booths show competent output, just not always as artsy or compositionally impressive as the images featured by other companies.

The moral of all this is to avoid making a buying decision just because a tradeshow image looks fabulous. That won't help your company at all. What counts for you is whether Printer X can reproduce your own images and those of your clients. Neither you, nor your clients, probably has tweaked their images as have the Epson tradeshow booth managers.



I add this caveat to this report since I recently was consulting with a company who needed a flatbed printer. I recommended the Encad NovaJet 880. But the printshop said they sent a sample to their local Encad dealer and the same came back so poorly printed it was unusable.

We hear the same story from people who have had test prints (of their own images) sent to ColorSpan and to HP and to essentially all other manufacturers. But this is because the sales reps usually don't bother to make an effort.

## Laminators

We do not yet cover laminators with as much detail as we do wide format printers. Although it is enjoyable to have nine printers, I am not sure what we could do with nine laminators. We have two so far as it is.

The two big names are Seal and GBC. Next tier is Advanced Greig Laminators, then CODA, LEDCO, and USI at entry level. Only GBC and Greig exhibited at GraphExpo.



GBC announced a co-marketing agreement with HP. In effect you get educational assistance learning which laminates are optimal for which specific HP media. This is helpful; eliminates guesswork (and bad lamination).

## Applications



### *Lenticular Prints*

A simple lenticular print can look impressive.

A complex lenticular print may look tacky.

A whole series of lenticular prints (such as adorned one airport corridor) can make you seasick very quickly.

The lenticular print shop, Big3D.com, had an admittedly impressive 14 foot tall lightbox with a 3-D aquarium image. But the same in their brochure made me dizzy quickly.

### *Double-sided Proofing*

Tekgraf offers the TechSage Spinjet 5000 to allow double-sized printing semi-automatically.

## RIPs for wide format inkjet printers

BEST continues to be the most sophisticated RIP vendor at most tradeshows. Since so many people ask for more information on RIPs, we cover RIPs in detail in the new FLAAR Report-SERIES on RIPs.

## Color Management, primarily for Wide Format Printers

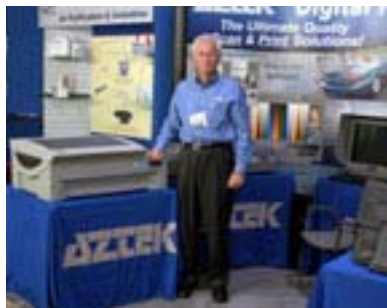
Monaco is the leading color management software company.

Gretag and X-Rite are the leading color management hardware tools companies.

Monaco has had a booth at most tradeshows. We cover their excellent color management software in upcoming reports. Since color management affects all aspects of wide format printers, we will have these reports in the "Bonus" section.

## Flatbed Scanners

Heidelberg got out of scanners totally. They reportedly even abandoned their drum scanners.



AGFA officially abandoned entry level scanners but in reality they seem to gotten out of pre-press scanners as well (XY-15 version of the Fuji Lanovia and their own Agfa 5000).

Several people asked what was going on relative to Umax. We do not have any news on that other than that Umax lost their OEM relationship with Heidelberg when Heidelberg bowed out of reselling rebranded Umax scanners.



Aztek bought Howtek, so one less drum scanner company. Heidelberg is out of the drum scanner business. Most of the other drum scanner companies went belly up in the last two years. Too bad, since you can't beat a really good drum scan.



But you don't want a cheap drum scanner either. An outstanding flatbed can potentially beat a poor low end drum scanner. A lot will also depend on the software.

Aztek now has a new flatbed scanner, their Plateau. Until I test it myself have no way to document its capabilities.

Screen showed their Cezanne flatbed scanner.

### *Fuji Scanners*

Fuji makes great scanners but they seldom show their entire line at any tradeshow. Tekgraf showed an OEM version



**Digital Cameras**



*Sinar Bron*

Sinar Bron was the only professional camera company to exhibit at Graph Expo. We report about Sinar Bron cameras in the Photokina report and in the PhotoPlus expo report.

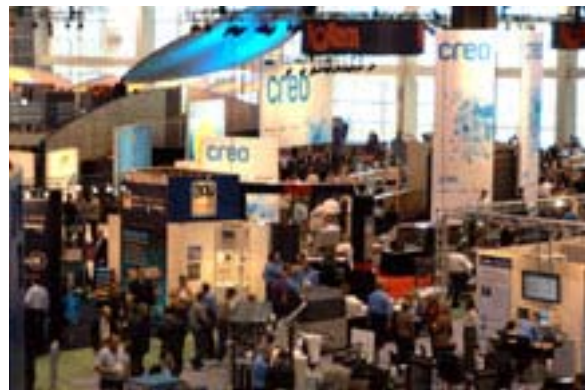
**Books**

Weak on books, as though there was nothing to learn from reading a good instruction book.

Pira International had a booth, but in the short visit, did not notice their booth. Pira publishes books on printing and digital photography, [www.piranet.com](http://www.piranet.com).

**Summary on GraphExpo**

For wide format printers makes more sense to go to SGIA, except you may get more scanners at GraphExpo. If you like heavy offset printing iron and plate burners, then GraphExpo is okay. But if you want a real printing tradeshow, book your travel to DRUPA '04, held every four years.



For cameras makes much more sense to go to PhotoPlus or PMA.

For all around diversity, Graphics of the Americas has something of everything, plus the Latin flair of Miami. ISA also has plenty of wide format printers.

If you wish more information on tradeshows in general (which ones we recommend), our basic report on tradeshows, conferences, seminars, and training programs is available at no cost as a service of our university.



Click to view each FLAAR Network site

<a href="http://www.wide-format-printers.org">www.wide-format-printers.org</a>	<a href="http://www.FineArtGicleePrinters.org">www.FineArtGicleePrinters.org</a>	<a href="http://www.large-format-printers.org">www.large-format-printers.org</a>
<a href="http://www.digital-photography.org">www.digital-photography.org</a>	<a href="http://www.flatbed-scanner-review.org">www.flatbed-scanner-review.org</a>	<a href="http://www.laser-printer-reviews.org">www.laser-printer-reviews.org</a>
<a href="http://www.FLAAR.org">www.FLAAR.org</a>	<a href="http://www.ctpid.ufm.edu.gt">www.ctpid.ufm.edu.gt</a>	<a href="http://www.wide-format-printers.NET">www.wide-format-printers.NET</a>