International Sign Association Trade Show

Orlando, Florida (April 2002)

New Encad NovaJet 750 of 60”

Abstract

Three members of FLAAR attended the ISA tradeshow in Orlando in April 2002. Various printers were examined including ColorSpan, Mimaki, Mutoh, Kodak, Encad, Epson, Hewlett-Packard, Roland, and Western Graphtec. There they also inspected Wide Format Printers using oil-based inks and Grand Format Printers (Over 72")

In addition they also reviewed several RIPS for wide format inkjet printers. The report supplies the most reliable information on printers that FLAAR has in their possession. The rest of the information is gleaned from tradeshows and user comments.

The report provides a good deal of information about each company as well as its product as a well-run company usually translates to a quality product and quality customer satisfaction.

ColorSpan

ColorSpan is the only printer that I know of which has color management tools and software built into the printer. This is a factor you don't think about when you go out to buy a printer. You look only at the sticker price.

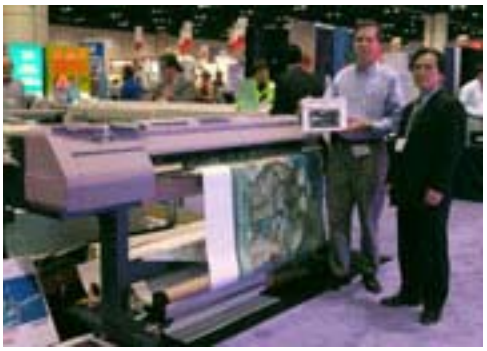
If you have sticker shock, then you go buy another brand that "costs less."

But then you have to spend thousands of dollars to handle color management; thousands on special software, plus up to $ 3,000 for training on how to use color management. Yet with a ColorSpan you get tools and software built into the printer and RIP. You receive two days of training free. Directly at the international headquarters outside Minneapolis. We got to take the training in the middle of a Minnesota blizzard but that did not cool our enthusiasm.

So if you buy any other brand of printer you can pay a fortune for color management tools to read the color test patches. With a ColorSpan most of this is built into the printer.

Either of the 72 inch ColorSpan printers are ideal for printing signs in general and tradeshow graphics in particular. In the FLAAR facilities we print all kinds of output with the ColorSpan DisplayMaker XII. In a few weeks a ColorSpan Mach 12 will be added to our growing family of printers.

Mimaki



Mimaki had a strong presence at ISA, both in equipment and in the key executives and managers from Japan and USA. If you read between the lines in our reviews you will note that we rate a company's staff, their advertising policies, and other factors along with their actual printer performance. Thus it was helpful to have met the President and managers of Mimaki.

Since Mimaki is an engineering company it is no surprise that they can develop a superior system for feeding media of various sizes and consistencies through the rollers. This may be one of several reasons why we don't hear reports of banding on the JV2-II series printers.

The Mimaki JV4 series is the first successful printer to utilize the same advanced inkjet printheads as in the Epson 10000. Mutoh has been trying with their Falcon-II but it is not yet in production. It would be logical to assume that Roland has been working for months on a next-generation model but still has not officially announced any actual printer. Thus Mutoh and Roland are still stuck with the last generation of slower piezo printheads.

Furthermore, Mimaki offers dual sets of six colors (so twice the power of the Epson 10000).

But more, Mimaki printers have an open ink supply. With Epson you can never change inks. No dye sub, no textile inks. With an Epson can't even change from dye to pigmented. Mimaki can also hold the special black ink needed to produce screen positives (for screen printing).

Mimaki is more productive due to its wider sizes: Epson offers only 44 inches. Mimaki offers 54, 63, and 75 inch models.

Mutoh

Where possible FLAAR tries to visit the corporate headquarters of a company. That is the easiest way to see the long-range potential of a company. So far we have been to Barcelona twice (world headquarters of HP wide format inkjet division), once to Minneapolis (ColorSpan headquarters), twice to Krefeld, Germany (headquarters of BESTColor RIP), and to Holland to visit with Aurelon (RIP).

Although we have been to Japan three times, that was before we began reviewing inkjet printers. Thus we do not yet know the Mimaki, Mutoh, Epson, nor Roland home offices. But we did get an opportunity to chat with the Japanese president of Mutoh USA at the ISA tradeshow.

He indicated that the printheads in the Mutoh Falcon II are those of the Epson 10000. Of course the software (including the dithering pattern) and control features will be unique to Mutoh.

It was my impression that last year at Print '01 the printheads were the same as the Roland V8, namely the older generation. However the people in the Agfa booth claimed they did not know (how can a manager not know what printheads are in their machine….). Anyway, whatever Epson printheads the Falcon II (Agfa Grand Sherpa) had for Print '01 in September, the current version of the Falcon II will have the newest Epson 10000 printheads. This is noteworthy. Improves quality and speed with less propensity for banding defects. So overall the new Mutoh printers appear to be getting better.

The word on the street is that Mutoh won't actually be shipping their new printers for another several months. That gives Mimaki another six months grace period, since the Mimaki JV4 has now been shipping already for several months.

Kodak

Kodak exhibited their **5260** in the Encad booth. First day the printer was not running well (stated to have been damaged in shipment…). Next day the printer functioned but was used only at slow speed: 170 sq feet per hour.

This is because the printer is, so far, incapable of producing acceptable quality at 500 sq feet per hour. Actually the new brochures have dropped that unobtainable figure and now claim only 475. However even that figure is unrealistic if you compare with the claims their own ads make (remember, we do not write their ads, but people who read them do ask questions about the claims). The only output which is photo-realistic so far is at its slowest mode, 170 sq feet per hour.

The brochures being handed out list three resolutions, 300 dpi (which one presumes is close to the actual resolution of the head), 600 dpi (which one can guess is multiple passes to achieve higher count), and a little talked about 1200 dpi which requires an “optional upgrade.” I have never heard anyone mention what this optional upgrade entails.

The ads claim unprecedented print speed combined with photo-grade image quality but do not mention that you do not (yet) get photo quality at the top speeds due to banding tracks. Such disjunction is typical of almost all printer ad claims of other brands as well.

Encad

Encad offers a Vibrant-Link RIP. My understanding is that this is rebranded from Scanvec-Amiable, comparable to the on-board RIP you get when you buy a Roland. Within the industry these are often considered a “lite” RIP though are not yet labeled as such when sold. The ps with HP DesignJet would be a comparable lite RIP. You just need to be sure your RIP can rotate horizontal to vertical both a direct print from Adobe Photoshop as well as layout software. Also be sure it can nest multiple images of various sizes to optimize use of the expensive media.

Early versions of EFI Fiery RIP lacked these functions and thereby were judged to be deficient compared with other RIPs which offered a full suite of features. I do not know if the Scanvec-Amiable and/or Encad Vibrant-Link RIP have the essential features.

Downside of any lite RIP is that you may eventually end up paying twice. The RIP is not free (even if included in the price of the printer; you have actually paid between $1,000 and $2,500 for it). Then eventually you realize that you really need a full-featured RIP which costs $3,000. So you pay all over again.

PosterJet RIP avoids this headache since its low cost RIP is full-featured; only feature clipped is running multiple printers.

The Encad **850** looks very nice every time we see it printing textiles at a tradeshow.

The Encad **880** produces attractive output on the new "JetPrint Board" from International Paper. This is a foam board pre-coated with an inkjet receptor layer. I am guessing that the same material may also work in the newer Mimaki JV4, though we do not have either printer.

Encad NovaJet **736** has an alarming advertising claim "at just four 2x3 foot prints per month, you cover your monthly lease payment. After that it's pure profit."

Another company ran into legal trouble with a similar clam and had to drop it. The potentially misleading aspect is all the support equipment and accessories. Not to mention the cost of the ink, media and operator. It is unlikely you can make much profit directly from selling merely three mini-prints a month. That claim verges on the absurd.

Output had gritty looking edges; not sharp and crisp. But at least the Lexmark printheads used by Encad do not tend to band as often as do piezo printheads. That said, we were indeed surprised to see banding on another of the Encad printers at a recent tradeshow. However overall, you seldom see banding on Encad, Canon or Hewlett-Packard output when doing photographs in multi-pass photo mode.

Overall Encad is hanging in there after infusions of money from Kodak. If Lexmark could just develop a better printhead that was also a tad faster, then Encad+Kodak could rise again. Their inks are great (long lasting). You can use Ilford Archiva inks directly in the Ilford version of the Encad. Media is basically comparable to what you can expect elsewhere; it is mostly rebranded from other sources but at least warrantied to be appropriate for the Encad inks. You can also get great media from Ilford specifically prepared for the Encad printer.

But the Lexmark printheads and the software dithering patterns still leave a heavy dot pattern. You get comparable heavy dot pattern with the 600 dpi printheads in the ColorSpan Displaymaker XII but their multiple dye inks overcame that with colors that really pop. Then both ColorSpan and HP went to a near faster generation of printheads. Lexmark has lagged behind possibly because Lexmark inkjet printers are aimed at doing color pie charts and bar charts for businesses.

But if you need to print directly on foamcore, then the Encad NovaJet 880 is a good choice unless you need also to use dye sub and textile inks in which case the Mimaki JV4 is more versatile. This Mimaki can also print on thick and rigid material.

Epson

Epson did not have a company booth. Two or three booths of resellers had an Epson 10000. One of them had light banding problems.

Someone mentioned that Epson had dropped their claim of 200 years lightfastness, but as of April 7, 2002 their web site is still hyping the imaginary 200 year claim.

Hewlett-Packard

HP had a small booth. But several other resellers elsewhere at ISA had much more eye-catching images. The Reece booth, featuring Oce media from Arkwright, had the best images of the whole tradeshow from the HP 5000ps printer.

I saw HP printers at several other resellers who also had attractive images, superior to what was printed or posted on the walls of HP's own corporate booth.

HP continues to expand its range of media, especially in practical prices. If you already have an HP printer the crucial advantage of HP media is that all the ICC profiles are already built into your printer or otherwise available to you. The HP media is designed specifically for the HP ink. If you use aftermarket media, you never know whether it was formulated for Encad ink, Kodak ink, Canon ink, or generic ink.

How does this affect you in real life? We got a frantic letter from someone who had just bought a nice new Hewlett-Packard DesignJet printer. He said he tried everything imaginable to achieve the proper colors. He was so frustrated we telephoned to see how we could help.

But it turned out he was using off-brand media. Unless he invests about $8,000 in color management tools such as a Spectrophotometer, gets color management software (alone just under $4,000), does linearizations, gets ICC color profile software, adds ICC color profile software visualization tools, takes training in color management (forgot to add that to the $8,000 total; the training we took last month cost $3,000).

So yes, you can save a few dollars buying off-brand media on the Internet.

But they are not going to be able to get your colors to match, much less be true. FLAAR has 20,000 readers per month, so we regret it is not feasible for us to provide technical support to anyone. We provide telephone support now only to readers who are signed up for one of the FLAAR + Bowling Green State University training programs, courses, conferences, or seminars. Or you can meet with Dr Hellmuth and ask your questions in person at any IMI conference that he is attending (http://imi.maine.com).

Conclusion: if you are a newbie, get a printer with as many on-board sensors as possible and use the recommended certified media at least the first year until you know enough about color management to be able to handle the "cheaper" media. Remember that "cheap" has many connotations, one being that you pay less but don't get a product that fully functions.

Roland

Roland had a large and popular booth. But not really any new printers at all. Although their printer is capable of impressive output, for some reason they featured a lousy photo of a surfer. The photo was out of focus and badly scanned (or if a digital original, then full of digital noise). It is amazing that a 42 million dollar printer company would show such a junky photo as an example of their printer's output.

Of course if you feed a Roland a really good photo, you will get outstanding print quality, albeit rather slowly due to the Epson piezo printheads of two year's ago generation. Roland has not yet finished any new model with the new faster printheads. If you wish the new printheads, only Mimaki JV4 has them in dual parallel arrangement. Epson itself has just a single set in their model 10000.

Last year several after-market companies jerry-rigged Roland printers to accept solvent inks. The word running around the industry was that the solvents in those inks could dissolve the glue that held the Epson printheads together. After all, those printheads were never intended to come into contact with solvents. Now you know the meaning of dis**solve**. Solvents dissolve things so to speak.

But Roland uses a lite solvent ink in their own SolJet Model SC-500. And naturally Roland warranties their printers. So if you absolutely need solvent ink consider this. The printheads appear to be the older 180 dpi Epson versions, but for most solvent ink applications that is okay. If you need 1440 dpi you can run the printhead back and forth countless times to add up all the drops of ink. But it would probably take hours to do that for a single banner.

Western Graphtec

Graphtec is a Japanese engineering company that makes vinyl cutters. Their company in the USA is named Western Graphtec. They sell an updated, enhanced version of the HP 2000 and 3000cp series. They are enhanced with a multitude of improvements such as dual CMYK ink systems and a cutter. So you can print and cut, just like with a Roland but with the HP thermal printheads you get more speed and less prone to piezo banding (the Roland uses Epson's piezo printheads). We still have an HP 2800cp and it produced outstanding output for its time (which was just three years ago).

You can run this Graphtec printer as dual CMYK or as CMYK dye and also CMYK pigmented just as you can some Encad printers. Difference is that no Encad printer can also cut. The old Encad NovaCut was not very popular and has long ago been retired from the market.

Summary so far

Not really any new printers, yet. The Mutoh are still in beta-stage. The Mimaki is really taking off. Reports indicate that over 2,000 machines of the JV4 have been sold so far. Question on speed, however, would be to compare it with the ColorSpan Mach 12. Thermal printheads are inherently faster than piezo printheads if speed is your need.

If you need to handle dye-sublimation inks, however, piezo printheads have the advantage. Indeed this market is where the Mimaki JV4 has excelled so far.

So each printer has its good features. But if your own print shop has other needs, be sure to check out all the alternatives first.

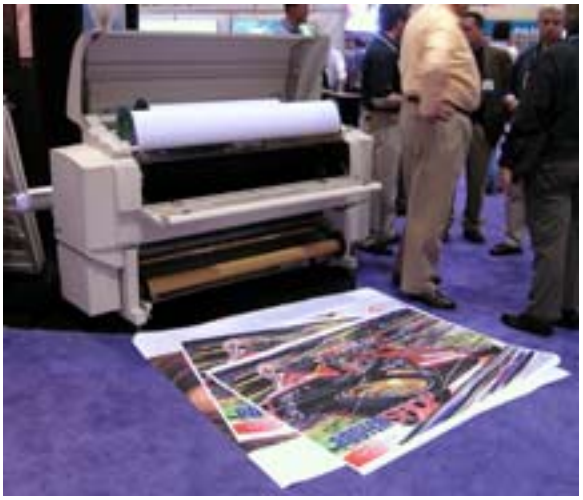
Wide Format Printers using Oil-based Inks

The Seiko I Infotech (SII) printer gets better each year from the atrocious output we first saw at the Xaar booth at DRUPA 2000. It's okay for spot colors but not yet photographic quality if you need to print a POP or backlit for close viewing. We find the XES Colorgrafx X2 slightly better quality. However no oil-based ink with a Xaar head yet meets our acceptance as photo-realistic. I have seen some output from Vutek printers which looks better than most output from any oil-based system.

Besides, the IP-4500 Mk-II printer advertisement claims it is the "World's Fastest" in its class. But they do not define their class? Besides, at 360 dpi, 2 passes, the output is not impressive, so if you compare this poor output with a slower printer, at least the output from the slower printer is beautiful.

At least Seiko honestly admits they are unable to warranty or guarantee the longevity of their prints.

XES, Xerox Engineering Systems



Every printer company claims to have the fastest printer nowadays. It's a disease.

Every printer company simultaneously claims to have the absolute best quality. Why not, their competitor is already claiming the same.

XES is no tortoise, but its output is no beauty pageant queen either.

What this printer does well is instant-dry inks. Truly you can rub the print just after it is printed and no smudging. Sure can't experience that with an thermal printhead image on glossy paper (unless maybe you have the fan and heater on full blast).

But it would seem that a corporate would want more attractive prints for indoor viewing. If my corporate logo were on a print I would demand as minimal quality Encad at 8 passes (note I stress minimal). For exquisite quality I would prefer Roland at 32 passes on their best media (but it would take two hours and you may risk a banding defect just before the print is finished). Actually most corporations go for a thermal printhead (HP, ColorSpan, Encad) rather than oil based and a Xaar piezo printhead.

So, yes, the XES printer has its advantages if you can display the images far enough away so you don't notice they are not as sharp or crisp or as photo-realistic as an Epson, Mimaki, Mutoh, Roland, Canon, ColorSpan Mach 12, HP 5000, or Encad 850.

The other aspect of the XES printer that is a constant surprise is its $34,999 price. Just calculate how many Encad's you could buy for that same cost? You could buy five or six HP DesignJet printers: surely five of these printers simultaneously could outpace one single XES.

Besides, XES asks $9,000 ! for a RIP (that is the price I was quoted for Caldera RIP by the booth attendant). You can get PosterJet or Wasatch for about $2,000. Actually you can get an entire HP DesignJet 5000 for less than the cost of a single RIP for an XES printer.

Onyx PosterShop costs only about $3K normally; for the XES printer it costs $7,000.00. I am suitably impressed that printing signs brings in enough profit to go for those prices.

Yet we have received a letter from one company who had one XES Colorgrafx X2 and was about to buy another since he liked the first one so much (tough to remember which of our readers it was since we have over 9,758 e-mails in the pile in my office).

So if you have $44,000 you can get one 54" XES printer with its RIP. Or you can buy several 72" ColorSpan Mach 12 printers for that price with a Wasatch RIP. If you print for outdoors, the XES is only 3 years with laminating. You get the same three years outdoors with many regular printers if you laminate them too, for a fraction of the cost.

But if you need to print 300 to 400 of one image that will be hung up on a street lamppost, probably few people driving or even walking by will notice that it is not photo realistic at close viewing range (since you can't see the dotty grainy oil-based Xaar kind of output if the banner is high up).

Same with things hung at a sports stadium. Probably few in the crowd would notice what printer did the print. Since FLAAR is dedicated to museum-photography we sort of forget that not all images need to be of that quality. But when a printer advertisement claims "high quality prints" then they need to be compared with true photo quality printers which require a thermal printhead (Canon, HP, Encad, or ColorSpan) or an Epson piezo printhead (Epson, Mimaki, Roland, Mutoh).

Paper, Media, and other Materials for Wide Format Inkjet Printers

IJ Technologies

Since FLAAR has roots in St Louis, we know this St. Louis based company in person. At their booth we saw their DG Duraview day/night backlit media. We use media from IJ Technologies at FLAAR and have good experience with it. Their telephone number is (800) 356-6962.

Ilford Imaging USA makes a wide range of inks and inkjet media. Whoever does the designs of their ads looks like the same person who does them for Encad, though it may be entirely unrelated and coincidental.

BrightCube has some nice media, including media coated on both sides.

Sihl had a brochure which was very easy to follow as to which media worked in what printers. There were many other media vendors. Since we don't have the media from everyone we cannot comment from personal experience. We use HP media and occasionally media from IJ Technologies with our HP printers. We tried some other after-market media and the results were pathetic: low contrast, lousy color, and the prints faded in a few weeks.

Inkjet Textiles and Textile Printers

Several vendors of inkjet textiles exhibited at ISI tradeshow. It's hard to remember which companies were at PMA and which at ISA (or which at both). Both tradeshows were in Orlando a few weeks apart, so I may have some of the companies mismatched by tradeshow. But what is important is to list the pertinent companies.

3P Inkjet Textiles had a stand with samples.

TURA from Germany exhibited inkjet textiles.

DigiFab Systems were producing the brightest most colorful inkjet textiles of the tradeshow. They used an Encad NovaJet 850; I have seen the same printer produce handsome textiles at other tradeshows as well. You can also print textiles with a ColorSpan, HP DesignJet, and Mimaki JV4 printers, among others.

DigiFab also markets a RIP. Printing on textiles does place special demands on a RIP.

Jacquard is a hallowed name in the inkjet textile business. Jacquard was around before many of the other companies even existed. Jacquard makes the steamer which is acknowledged to be one of the best in its price range. The general consensus is that lesser steamers are just not quite good enough.

The booth was capably attended by Neal Stone and Matt Stone. For further information on inkjet textiles, these people know the subject inside out: matt@jacquardproducts.com and/or nearl@jacquardproducts.com.

RIPs for wide format inkjet printers

Artist RIP

Artist RIP from KoreaSoft was shown with a Korean solvent ink printer. But the RIP company itself had no booth. Artist RIP has one of the better instruction manuals.

BEST

Did not have a booth but did display their products at PrintNation (Pittman) booth.

CADlink Technology Corporation

CADlink seems to be growing again. They are sending FLAAR their latest PhotoScript, which I understand not only operates on a Mac but directly from the same computer that has the image files. No need for second computer to run the RIP (yes of course that ties up your main computer, but for novice that has only one computer this is a good way to start). PhotoScript RIP also operates on a PC.

Their instruction manual is excellent. Their RIP includes an introduction to color management.

Contact: Michael Chramtchenko, Product marketing Manager, e-mail mikec@cadlink.com.

ColorGate

No booth for ColorGate but their Managing Director from Germany and their manager for the USA were walking the floor.

ErgoSoft

ErgoSoft is one of two Swiss RIPs that I know of. Praxisoft being the other.

ErgoSoft specializes in working with textile printers. Since FLAAR does not yet have a dedicated textile printer we can't comment further. So far we print textiles such as cotton, polyester and silk with our HP 5000.

Contact Robert Eversole, President, e-mail reversole@ergosoftus.com.

Evolution

Evolution is the RIP featured by DigiFab Systems, a company specializing in inkjet textiles. It is highly unlikely that an entire RIP is developed by a small company; more probable that it is an OEM of another good product, but I do not know the details yet.

Onyx

Onyx is obviously determined to remain #1 under Oce's ownership. They will provide full-suite for evaluation both to FLAAR USA and also to FLAAR Guatemala. BGSU + FLAAR has hired a technical person to evaluate RIPs all summer. He is going to Germany for additional training.

Scanvec-Amiable

Scanvec-Amiable had the largest booth of any RIP company; actually larger than all other RIP companies at the tradeshow put together. Scanvec-Amiable makes the RIP for Roland (branded under a different name but is pure Scanvec-Amiable). Same for Encad. Someone told me that Scanvec-Amiable makes the ps RIP for Hewlett-Packard but I do not have any independent confirmation of that.

Wasatch

Wasatch is adding color management capabilities. This seems to be the trend with many RIPs.

Wasatch, like most other RIP companies, cleverly uses alluring photos to showcase its products. Their choice of photos stopped people in their tracks (Jennifer Lopez, semi-nude will do it every time).

Wasatch is sold by ColorDNA for HP printers and for piezo printers such as Mutoh, Epson, and Mimaki by Improved Technologies. Wasatch also works on countless other inkjet printers but we don't know those other people personally.

Other RIPs

It is not always easy to spot all the RIP vendors since some are in a booth of a reseller that we don't always recognize.

Regular Width but Solvent Ink Printers

The market for solvent ink printers grows. You can print on cheap uncoated vinyl and the images last several years outdoors with no lamination needed.

FLAAR has not yet tested any solvent ink printer in-house due to the fumes from the chemical solvents.

INFINITI uses Xaar heads, 200 dpi as typical for that kind of head. The ad makes logical statements until you reach the claim "400 dpi apparent output is good enough for interiors also, competing with thermal inkjets." If your audience is sophisticated then output of 200 dpi is not comparable even to an old 300 dpi Encad; even a 600 dpi Encad could beat the output of most Xaar printheads with solvent ink on vinyl.

But the main problem with any new brand of printer is "where and when can you get spare parts or service?" One of the leading Japanese water-based printer companies already have an industry-wide record of being 45 days to get a spare part. Imagine your printshop being down for even two weeks!

Thus if you want a solvent ink printer, probably safer to stick with the Oce Arizona 30. This is made in the USA (I actually visited their factory). This printer is now in its third generation (Anagraph, Gerber Orion, and now a new generation as the Oce Arizona 30). Faster Xaar printheads, better quality (less banding).

Lyson (ink company) has teamed up with printer manufacturers to create their joint product, the **Tiara**. The sniff test suggests the solvent inks are a tad less aggressive than those used by Vutek, Scitex-Vision, Oce, or Nur, but they are still definitely solvent based fumes. One advantage of the Tiara would be that Lyson sure knows inks.

Mimaki probably had solvent ink printers previously but they were not well known in the USA. Now Mimaki is expanding. They offer a mild solvent (lite solvent) printer: three years outdoor resistance with no lamination.

Mimaki has a high reputation for engineering. Their new range of printers is extensive, covering textile inks through dye sublimation inks and now mild solvent inks. For further information contact sy@mimakiusa.com.

Mutoh has tried for years to get further into the solvent ink printer market. Their Albatross model was not a big seller. Now they have a redesigned model, their Tucan. But Mutoh also seems to have retrofitted their original Falcon (I) printer with a lite solvent ink (calling it eco-solvent may draw attention to the environmental hazards more than intended).

Roland: several competing Roland printers exist which offer solvent inks. First was a printer created as an after-market add-on. A consortium of companies (not including Roland) took regular Roland printers, added the heater and apparatus to handle solvent inks, and sold this retrofitted unit.

The general industry consensus was that the solvents could potentially dissolve the glue which held the Epson printheads together. After all, these printheads were never designed to withstand solvents. So this is not the fault of Roland nor of Epson. We do not have one of these printers and so you may have one of these printers and find it works forever, but before you buy check with several other people who have the identical printer and ask if they had printhead problems.

Then Roland itself noticed the market need for a solvent ink solution that did not cost the $150,000+ prices of a grand format printer. So now Roland features their own lite solvent machine. I guess this solvent does not attack the glue of the printheads; after all, Roland itself knows what is inside their own printers and has to carry the warranty as well. Of course a lite solvent, if it does not attack the printheads, that also means it will not attack the vinyl as thoroughly either. So lite solvent on vinyl may not last as long outdoors as full-strength solvents on the same vinyl.

We need to spend much more time researching all of this. The phenomenon of retrofitted solvent ink printers and then lite solvents is only about a year old. Prior to that time there was just the Gerber Orion which never sold well and the Mutoh Albatros which went the way of the dodo bird. No wonder no other company was inspired to attempt to enter the market with a solvent ink printer.

Now the **Oce** Arizona 30 works quite well and **Mutoh** has a much improved model also, their Mutoh Toucan.

Grand Format Printers

Grant format printers, also called super wide printers, are anything over about 72 inches. The distinction gets blurred since now Mimaki and others make 75” printers which are not really for the grand format market. And, grand format printer manufacturers make printers which are narrower than 72 inches.

Grand format printers use either solvent inks or UV cured inks.

An innovative printer for dye sub heat transfer onto textiles is the Nur Fabigraph. Contact Mike Shivers, mike@cmyksales.com.

The quality of the output from Vutek printers has gotten better in the last two years. It is approaching true photo quality. True photo-realistic quality implies no splotchy pattern, minimal grain, no banding whatsoever: none.

Nur and Scitex-Vision have also improved their output. But we do not intend to suggest that one brand is better than the other. Output quality is only one factor. What if one brand has a reputation for breaking down soon after installation?

So the best way to figure out which printer to buy is to speak with other owners. Don’t go to the pet printshops that are recommended by the manufacturer. Find an independent print establishment on your own.

Another aspect is availability of technical support and spare parts in your country. It is no help if you prefer brand X but only brand Y has an office in your country.

Several Asian printers were exhibiting. We have no way to document their durability. With any new brand you have to be absolutely sure that tech support and spare parts are readily available already in your country. You do not want to have to wait for something to clear customs, or be shipped from the other side of the globe.

Creon from Azero is one of the new Asian printers that I have not seen at previous tradeshows. Digital Graphics Incorporated from Korea is another.

UV Curable

Hewlett-Packard calls their pigmented ink “UV ink.” No other comparable company uses that term therefore a few people have gotten that confused with UV curable ink. Two totally different kinds of ink. HP ink is normal water-based ink. Nothing to do with UV curing.

To confuse the situation even further, there is UV media. This unusual (and hence costly) media can be used in any Epson piezo printer (Roland, Mutoh, Mimaki, Epson, etc) and in any thermal printer (HP, Encad, ColorSpan, Canon).

After you print on this special media using the normal inks in your normal printer, you then feed the media into a special infrared oven and the rays metamorphize the surface of the media into a tough relatively elastic layer that resists weathering. All this requires special media and the special radiation unit, both from First. It’s a French product and I did not see any US address in their literature.

We do not have the equipment nor the media hence are unable to judge its efficiency. Also the ads are not always very precise which claimed benefits require additional lamination.

To learn about actual UV curing inks, consult the IMI conferences on industrial or grand format inkjet technology, http://imi.maine.com. We highly recommend their reports and conferences.

Dye Sublimation (Wax Ribbon or Resin Ribbon) Printers

We do not cover label printers such as the Gerber Edge. That is outside our sphere of influence.

The **Summa DC3 DuraChrome** printer is also somewhat outside our normal coverage since it’s kind of a non-continuous tone technology. You get a patterned (screen) appearance which is not what a photographer wants to see happen to his images. But for signs to be hung in a supermarket, most of the shoppers would probably never notice. Of course inside the supermarket would be a waste for this expensive material which is made for outdoors.

Surely this class of printer has many supporters so if that is the kind of printer you are looking for, do not let us discourage you.

In distinction the **Matan Sprinter**, Matan Sprinter B and that class of printer is what we really like to see. Here you get photo-realistic images. Although you normally need 300 dpi in your input (in Adobe Photoshop image file box), you can squeak by with just 50 dpi and still get close to continuous tone under some circumstances.

Matan is one of my favorite printers of its class. If it did not cost $60,000 we would love to install one in our evaluation facility.

Contacts for further information

For ColorSpan contact productinfo@colorspan.com

For Epson contact jlorusso@parrotcolor.com.

For IJ Technologies water-resistant inkjet media, telephone (800) 356-6962

For Western Graphtec printers: Elizabeth Brundridge, ebrundridge@graphtecusa.com.

For Oce printers: Sergio Alves, salves@rgi.com (he can put you in touch with the pertinent printer people for the wider range of Oce printers from Encad through Arizona, water based through solvent ink, all sizes including grand format.

We are working at developing additional references so that you can have people whom we know and trust as contacts.

Advisory

We are quite content with the specific printers we have in the two FLAAR facilities at the two universities. We would obviously never ask for a printer that we knew in advance would not be good. But we can't guarantee or certify any make or model because we don't know the conditions under which a printer might be utilized in someone else's facility. Heat, humidity, dust, experience level of your workers (whether they are new or have prior years experience): these are all factors that will differ in your place of business as compared with our two universities.

Actually you may have people with even more experience than we do, since we deliberately use students to approximate newbies. FLAAR is devoted to assisting newcomers learn about digital imaging hardware and software. This is why Nicholas Hellmuth is considered the "Johnny Appleseed" of wide format inkjet printers.

Just remember that every printer has quirks, even the ones we like. However it may be that the specific kind of printing you need to do may never occasion that shortcoming. Or, it may be that your printer was manufactured on a Monday and has defects that are atypical, show up more in the kind of media you use which we may not use as often during our evaluations. Equally possibly a printer that was a disaster for someone else may work flawlessly for you and be a real money maker for your company.

Thus be sure to test a printer under your own specific work conditions before you buy. Check with other people in your area, or in the same kind of print business that you do. Don't rely on references from the reseller or manufacturer (you will get their pet locations which may be unrealistically gushy): find someone on your own.

Although we have found several makes and models to work very well in our facilities, how well they work in your facilities may also depend on your local dealer. Some dealers are excellent; others just sell you a box and can't provide much service after the sale. If you pay low-bid price, you can't realistically expect special maintenance services later on. Indeed some low-bid internet sales sources may have no technical backup whatsoever.