



# FLAAR Reports

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Digital Imaging, Report on Printers, RIPs, Paper, and Inks

## PMA Tradeshow 2002 Photo Marketing Association Digital Cameras, Wide Format Inkjet Printers, and Scanners



BetterLight booth



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FLAAR editors Nicholas Hellmuth, Wendy Like, Sheila Irving, Maru Mayen, Gerardo Jaramillo, Jose Pablo Suchité and Flor Setina attended PMA to gather information about digital cameras, scanners, inkjet media, and wide format inkjet printers.

FLAAR editors Nicholas Hellmuth, Dulce Vargas and Gabriela Arango attended Graphics of the Americas to gather data for our readers a few weeks earlier. The FLAAR Web sites now have over 168,000 readers a year so we work hard at learning about what hardware and software might be useful for your business, home, or hobby if you print at home or as a second business.

We found some nice products at PMA.

Self-illuminating backlit panel

If, like us, you don't have space for a bulky backlit illumination system, try the self-illuminating panels from Tura. We have seen them two years in a row at PMA. For information try [info@turausa.com](mailto:info@turausa.com).

### General comments on products

Many people rate a printer's popularity based on how many different booths show that printer. So if 50 booths have a Mutoh, people would tend to assume that 50 different displaying companies all felt that Mutoh was the absolute best printer, but in reality this is not the way it works. The majority of the printers in the various booths are loaned by the manufacturer. So whichever manufacturer has the largest budget and the most energetic loan-manager, that is the company whose printers will be all over the tradeshow. Actually, in most instances the printers are not even plugged in and are seldom printing. Think back on what you saw. In most cases the image was just hanging from a non-working printer. In some cases the images are actually just taped to the printer. In some booths it looked like the printer was never even turned on.

Since neither Mutoh nor Mimaki engage in this ploy, that's one reason you did not see a single Mimaki and only about one Mutoh anywhere at PMA (though some resellers have the brands they happen to sell).

### Epson

So, whatever printers you saw all over PMA, now you know why you noticed whichever brand it was. At Print '01 the HP loan-manager was the most effective though Epson did a good show also. At PMA Epson had the upper hand. Although I did not count them, the general feedback was that visitors saw more Epson printers than any other brand. Epson is very clever in this respect.

Epson print quality is very nice. FLAAR has a model 7500 and is awaiting a Stylus Pro 5500 next week. It is widely acknowledged Epson has the nicest dithering (dot placement) pattern of any inkjet printer on the market today.



Thus, there is little need for exaggerating "electrifying print speeds." Epson has the habit of advertising as tops precisely the features it often is not up to par with other printers. The Epson printers themselves

are fine, albeit slow, so the advertising of non-existent speed only draws attention to this weakness (though Kodak's advertising claims are even worse).

Longevity claims vary from the unrealistic to the meaningless. No one (not even Epson) seriously expects their ink to last 200 years. Indeed, it is generally recognized that the media itself may self-destruct before the ink even has time to fade. Thus, Epson's claim of 200-year longevity is misleading, especially since the testing facility (Wilhelm) suddenly reduced their claims by an entire century. In other words, not even the testing institute accepts Epson's advertising hype. Due to the legal implications, Epson adds some small print: "Epson does not guarantee longevity of prints. For maximum print life, display all prints under glass or lamination." Translation: pollutants in the atmosphere may, or will, cause the ink and/or media to fail unless you seal your prints in special UV glass or lamination.

However, Epson definitely knows how to attract photographers and artists to admire their printers. The Epson booth was probably the most visited wide format inkjet printer locus at PMA. If you do not need "electrifying print speeds" then the Epson 10000 may be a reasonable choice for you if you prefer the features of a piezo printer over those of a thermal printer. If you would like a primer on piezo vs. thermal, just ask for the FLAAR report on this subject.

### ColorSpan

ColorSpan showed its big color images. ColorSpan has the widest output at 72 inches, and the brightest color of any regular inkjet printer short of the grand format. Their dye inks on ColorSpan media really pop. The Mach 12 was on display, but as with any printer, you have to set it to multi-pass photo mode to eliminate banding. So far virtually no printer is capable of single pass printing without leaving the telltale banding tracks of the single printhead pass.



Mach 12 can achieve 400 sq feet an hour at two pass quality. You would anticipate some banding at this speed. Probably not noticeable at 12 feet viewing distance. If you need to print for closer viewing where banding is not desired, just tell the RIP to do photo mode, and voila, no more banding. Printer slows down and quality goes up to museum quality output.

FLAAR has the ColorSpan Displaymaker XII: no banding in photo mode. We get enviable results with this printer. Plus, it's easy enough to use that even the students can operate it here at Bowling Green State University (BGSU).

### Encad

The output from the Encad looked nice other than continual banding. In the last previous eight trade-shows there was virtually no banding on any Encad printer, except when they attempted to run it at the faster speeds. Generally, Encad has the best rating for lack of banding defects so it was surprising to see this banding at PMA. The attendant did not know what was causing this problem.

Encad has been successful with their hybrid flatbed/roll-fed printer. This can accept thick stiff media fed as a flatbed, as well as traditionally roll-fed inkjet media. Kodak has now taken Encad over completely so it appears as if Encad will continue to exist at least as a subsidiary of Kodak.

## Hewlett-Packard

Hewlett-Packard (HP) had more action in their booth than at other tradeshows since they added their new Indigo division next door. HP also had a portrait photo studio that attracted visitors. Unfortunately, the images in its booth display were uninspiring. For example, the booth should have showcased the impressive color gamut of its UV pigmented inks. The booth's images should have pictured examples of tradeshow displays that stopped you in your tracks. It would have helped to show modern art, as well as stunning photographs.



Epson, Encad, Roland, and ColorSpan systematically use eye-catching images to attract show-goers. HP, in distinction, puts mainly corporate slogans and inspirational text all over its signs, so you don't see stunning photo images that reveal the capabilities of the printer. The art faculty and art students at BGSU use our HP 5000 to produce eye-catching images. At the other FLAAR facility, the architecture students produce museum-quality photographs with our HP 800ps. The HP 1055 is actually the printer that produced the artwork on our walls. So if the booth manager would let the art and architecture department of any large state university decorate their booth, or if the RIP vendors were encouraged to bring in their photo collections, then the HP booth would rock. But the HP booth does document a professional, stable, and successful company.

## Kodak

Kodak finally decided to show their new 5260 printer to the public. However, they were the only company on the tradeshow floor who refused to give any images out unless they were laminated (and they had no laminator in the booth). This leads to the question of whether the media and/or ink can hold up without immediate lamination. In other words, there must be some reason why Kodak never gives out an actual print from their printer. At every press conference the images are totally sealed by laminate. The need for lamination also eliminates this as a fine art printer, but giclee was never an intended market for this printer anyways. What is it about the nano-porous media that can't hold up to not being laminated?



The next question is whether all photographers will wish to laminate their prints. This raises a serious matter of whether this printer is suitable for a photo lab or photo studio. When the museum on the UFM campus did an exhibit they specifically asked that the images not be laminated. A laminated image may look glamorous, but may also look showy and a bit fake.

Also, the Kodak printer is evidently still not ready to be shipped. The barker on the stand claimed "440 were sold in Asia and Europe so that's why none are available in the USA." He did not realize that FLAAR checked in England, Germany, Taiwan, Korea, and Japan. On the date when we checked we found out that virtually no units other than beta test units were in operation. The impression was that of the few units that were actually sold, some were returned as unsatisfactory. Industry insiders suggested that the mythical number of phantom sold units (which was originally only 200 machines but mysteriously has grown to 440) means that distributors "bought" that many. This in turn means that orders were placed but no way means that 440 photo labs or print shops have these printers in action.

For a list of the reasons why this printer has not previously been shown to the public, and why the printer has been withheld from the market, is presented in the special FLAAR report on the Kodak 5260, available at no cost.

### LightJet

LightJet introduced a 76.5-inch laser imaging model, the LightJet 500XL. Now you can get continuous tone in grand format size. Just remember, you also need a processing unit, because even though the exposure with RGB laser light beams is digital, the photo paper is still traditional photo paper. Since a digital laser light imager requires about 300 dpi per unit of measure, you will need an immense file to handle a print this size in a LightJet or Durst Lambda.

Oce has taken over Cymbolic Sciences and all wide format printers from Gretag.

### Roland

Roland's SolJet did not emit noxious fumes from its relatively benign solvent inks. Vinyl itself stinks and even mild solvent inks are smelly, but in the Roland booth the overall vinyl + solvent ink situation was bearable since there was plenty of ventilation. Otherwise, still no new Roland printer with the new Epson printheads. Only Mimaki and the Epson 10000 use the newest heads.

### Tiara

The Tiara solvent ink printer from Lyson ink company had a worse odor. Perhaps less than an industrial solvent ink system, but still the Tiara is not something you would stick in your own office (due to odor, including subsequent outgassing from the media).

### Vutek

Vutek now makes so many models it's hard to know which is which. Several of their models are photo-realistic for distanced viewing. The entire range of Vutek printers made a good impression.

Banding, an unresolved issue with wide format inkjet printers

I did not detect any banding on the Roland printers in one visit to their booth. However, we have received disturbing reports from a photographer who states he lost considerable portions of his business due to failure of being warned about banding, metamerism, and other color problems by Roland incorporated. We are investigating.



We have also received reports from another end user who had severe problems with their Roland's banding towards the end of a long print (the head gets clogged during the hour(s) it takes to accomplish such a long print. Yet other users, in other situations, report they never have banding problems. So it may depend on the machine, the media, humidity, and other factors. However, banding has grown to be a notable issue with inkjet printers in general.

#### 1 Note from FLAAR

There is no independent evaluation service for grand format printers. FLAAR at BGSU is interested in this field and we may consider providing evaluation services in the future.

Maybe it was humid in the tradeshow center, but Encad's NovaJet 880 printer was banding as well as the ColorSpan Mach 12 (at its higher speeds; at slower speed it reached better quality). One Epson 10000 was banding with pigmented ink (at a reseller's booth, PMA). The Epson at the Epson USA booth was not banding. We did not have time to look at any of the other Epson 10000 printers. The Epson 10000 printer from Parrot Digigraphic was producing wonderful output at PMA tradeshow.

The worst banding at the entire show was the Kodak 5260 printer. It also had thin white streaks in addition to the normal piezo banding. One pass simply does not cover the surface of the media.

### **Inkjet media**

Piezo and thermal printers differ in many respects. There is no guarantee that media for one will work on the other printer technology. So beware. Test, and if the media does not function, demand your money back, but only if the company claimed it was dual-platform media.

Dye and pigmented inks vary even more than piezo vs. thermal printheads. So media that works for dye inks may be a mess with pigmented inks. It is unlikely that any media company would claim their media works well on both kinds of inks.

### **Brightcube**

Brightcube is an up and coming company. They bought out Xtreme Gamut company, closed down their ink business, and now concentrate on media for top photo quality.

### **Ilford**

Ilford is a century-long source of excellent photo paper. Now Ilford is working hard to survive in the digital era. Since Ilford sells Encad printers, Epson 10000 printer, Nur solvent-ink printers, and one Vutek printer, they have media for a really wide range of machines.

### **LexJet**

LexJet is a reseller of a wide variety of aftermarket media for wide format inkjet printers. The people in the booth seem friendly and their Web site has factual information in addition to the expected commercial content.

### **Mitsubishi**

Mitsubishi exhibits at many of the tradeshows. We have never tried any of their Diamond Jet media for desktop printers, but will need to do so shortly. Mitsubishi also makes media for wide format inkjet printers.

### **Neschen Accutech**

Neschen Accutech offers media primarily for grand format. But their cotton, acetate, Trevira, and polyester are also available for thermal printhead machines such as ColorSpan, Encad, and HP 5000. Their catalog sheet does not indicate whether their media is for dye or pigmented inks (media is rarely good for both kinds of ink). The absence of Canon from the list suggests that pigmented ink may be intended since Canon has no pigmented ink option.

## **Tetanal**

Tetanal is a company that continues to offer inkjet media for desktop-sized printers.

## **Epson**

Epson's output on backlit media was the best of any piezo printer. Output at other tradeshows of Mutoh piezo printers was especially weak. I have seen sign shop owners who indicated the Roland did poorly with piezo backlit. An operator of an Arizona brand printer said output from his piezo heads required two prints, placed cheek to jowl, in order to look acceptable (try lining them up to match without have the viewer get dizzy).

But the Epson backlit that looked so nice in their booth is with the new Epson 10000 printheads. The Mutoh and Roland are with previous generation Epson printheads. Perhaps that's the difference. Or maybe Epson has some special media or other trick to make the backlit look acceptable when other piezo printers fail consistently. We would have to see the prints actually produced to document this possible exception to the generally accepted recognition that piezo printheads and/or whoever's ink is in the Mutoh and Roland are not adequate for backlit display.

Still, for the best backlit of all you need a LightJet or Lambda. Laser imaging is still the all time top quality because of its continuous tone. If you can't afford those pricey laser imagers, then thermal printhead machines are excellent. Encad's dotted grain structure is a possible disadvantage since the lighting shows off the highlights, which is where the dots are most visible. When we visit sign shops and ask around the consensus, it is generally HP 5000 that is considered the best inkjet for backlit, using Rexam backlit material.

## **Inkjet textiles**

### **Lyson**

Lyson is now offering reactive inks for natural fibers as well as acid inks for nylon and other fabrics.

### **Tura**

Tura (Germany and USA) offered satin polyester, polyester mesh, white cotton, and cotton chamois for wide format inkjet printers.

## **Dye sublimation heat transfer**

### **Lyson**

This leading international inkjet ink company now offers dye sublimation inks for the Epson 1520, 3000, 5000, 7000, 9000, Roland, Mimaki, and Mutoh printers. Lyson also sells heat transfer paper, however, you need to obtain a heat transfer unit from another source to do the actual transfer.

Lyson also offers a variety of inks for direct printing on textiles. In some cases the resultant textiles would need to be steamed to fix and to pop the colors.

## **Printer demise**

In addition to the 168,000 end users a year who read the FLAAR reports, we also get about 30,000 readers from the inkjet, scanner, and digital camera industry. From them, and from just keeping our ears open at tradeshows, we pick up a lot of useful information.



Gretag Belise never really got off the ground. We heard unofficial rumors that end-users considered the printer was not functioning acceptably. It never looked adequate in FLAAR inspections either. Had the same piezo printheads as the Epson 9000; banding defects across the prints may have been an issue as well. Although I do not know if this printer model has been officially phased out, the market place has already evidently done this on its own. Otherwise, the Gretag printers are great. Even the former Anagraph printer is much improved now that it is no longer the Gerber Orion.

### **35 mm SLR digital cameras**

35 mm Single Lens Reflex (SLR) digital cameras allow the user to interchange lenses. So you can use all the Canon lenses on a Canon digital camera, all the Nikon lenses on a Nikon camera, and so on. Downside is the 1.3 or 1.5 telephoto factor, so if you use a 35 mm lens you actually get roughly a 50 mm image. So that sort of nullifies the fun and joy of having all those lenses.

#### **Canon**

Canon EOS-D60, 6+ megapixels, but has a CMOS sensor. It has a traditional lens reduction ratio as all other SLRs except the upcoming Contax. I would have to use the EOS D60 myself before I could be convinced of any current generation CMOS sensor. All previous CMOS sensors have had trouble seeing detail in dark areas. The only reason CMOS is used is because they cost much less than a CCD of the same size.

With 35 mm SLR digital cameras you have to decide whether you want a lot of pixels (5 to 6) or whether you want fast shooting to capture sports, wildlife, or other movement such as dancing. You don't really get both options with any one single digital camera. Thus, Nikon makes the D1x for general photography and the D1H for sports. Canon's counterpart is their EOS-1D, 4 megapixels for sports. However, it produced overabundant digital grunge on a product shot in a studio.

#### **Contax**

Kyocera Contax provided a demo of their N Digital camera. However, it was hard to tell whether it was fully functional or not. I was not sure the Sigma with Foveon X3 chip was functioning either. The Nikon D100 is shown on the Nikon USA site as "provisional specs." So it seemed that a lot of products were being shown in beta stage. Dicomed did this with their BigShot in 1996. It sort of never really got to market and Dicomed eventually went bankrupt as a partial result. Of course that won't happen to Kyocera, Sigma, or Nikon. However, it did seem premature to show most of these cameras.

I also noticed that there is no megabyte file size given for either the Nikon or for the Contax N Digital. Surely their prototypes function enough to allow them to open a file in Photoshop and measure its weight so to speak in MB. In theory, that could be done mathematically from the specs at hand. I have noticed, however, that Nikon claims 15 MB for the CoolPix 5000 but I only got a 14 MB file when I actually used it.

It will be interesting to see how the Contax fares against the Nikon D100. A lot will depend on which reaches the marketplace first.

#### **Fuji**

Fuji is being more honest in its advertising than last year's potentially misleading pixel "count." Previously, they cleverly counted pixels that did not show up in the actual print. Due to being caught at that, today Fuji is using primarily the true pixel count rather than the exaggerated pixel count, though they still do mention the pseudo "recorded pixels". The problem with the pseudo pixels is that about 33% of these exaggerated pixels are discarded either by the camera or subsequently by Adobe Photoshop.

The new Fuji FinePix S2 Pro offers 6 million effective pixels. That pits this against the new Nikon 100. Another advantage is "raw" mode, which gives the photographer the original raw file before the camera's own software mucks it up. Raw files are the vogue in high-end scanners such as the Creo (Scitex) EverSmart Supreme.

### **Kodak**

Kodak makes two nice SLR 35 mm models. The 720x, which I presume is for motion such as in sports, has 2 megapixels since otherwise the camera could not cycle between sequential shots fast enough. Competition for this is the Nikon D1x and one of the Canon or Olympus cameras, which is specially designed for rapid shooting. Always remember, no one single digital camera does everything.

The DCS 760 offers 6 megapixels for about \$8,000. So the Nikon D100, also 6 megapixels at an estimated \$3,000, will be a further digital shock for Kodak. It's especially tough for Kodak since they make their own sensors, so should have the price of the CCD relatively fair. How in the world can Nikon get a chip into a camera at the price they are selling the Nikon D100 for? This is the classical manner of preempting the market, dump and conquer. Then you raise the price after the competition has been bankrupted out of the market.

### **Nikon**

Nikon D100 was a real surprise. It has more pixels than the CoolPix 5000, and more pixels than even the Nikon D1x and D1H. However, nowhere in any press release was the actual file size revealed. Rumor is that the Nikon D100 will be priced at roughly \$3000.

### **Medium format digital backs**

Two years ago, virtually all medium format digital backs featured Philips CCD sensors. Today, almost all the digital backs include a 16 megapixel Kodak chip. Keep in mind that the raw number of pixels is by no means a guarantee of a superior image. The extra resolution brings along with it a host of problems from low depth of field to potential for digital noise. Kodak has no cooling that I know of; Jenoptic offers possibly the most cooling.

### **Fuji**

Fuji showed its Luma II, the least known of the scan backs. Fuji makes great hardware but it remains to be seen if it can supply software to match the likes of SilverFast. Reportedly the original Luma was made by the remains of Sienna Imaging company, which had the distinction of including the remains of Dicomed. The original Luma produced 18 MB (the \$999 Nikon CoolPix 5000 today produces a 14 MB file). I don't have the specs yet on the Luma II.

### **Jenoptic**

Jenoptic, at [www.eyelike.com](http://www.eyelike.com), showed some new backs, but we were so busy elsewhere at the trade-show that we will have to wait until Photokina to look at them more closely.

Jenoptic provides 1-shot up to 4-shot and then 16-shot. The Sinar back does similarly. With 16 shots these cameras approach the resolution of a tri-linear scanning back. The advantage of a 1 to 16 shot back is that you can do portraits with the 1-shot mode and table-top studio photography for wide format with the 16 shot mode.

## PhaseOne

PhaseOne makes only a one shot back. Nice camera but nothing new since PhotoExpo East last November. However, the trade magazines are already hawking the model H5; the images have a 18 MB file size, but there are absolutely no specs on their Web site nor in the ads (that is to entice you to contact them in person). I did not see any beta models or even any brochures on the H5 at PMA.

PhaseOne does not make a micro or a macro, or even a multi-shot camera.

## Kaiser Fototechnik

Kaiser Fototechnik sells their Scando Dyn A+ scan back. I discuss that in the regular FLAAR report on medium format backs (why it is not a good idea to go for atypical brand names that are not from a major player in the digital world).

## Kodak

Kodak makes only a one-shot, but totally untethered. This is the only completely portable medium format camera. Just need a battery pack (fanny pack). Other digital cameras have portability packs but bring along your chiropractor to get your muscles and bones back in shape after lugging these "portability" options along for even half a day. The "new" Kodak DCS pro back was merely new attachment models for Contax or Mamiya cameras, not actually a new digital imaging product.

The Kodak Pro Back Plus is a 16 megapixel system (48 MB file size). The same chip is in the Imacon 4020, PhaseOne H20, and other new models. Most of the medium format digital companies use the identical chip. What varies is the method of cooling and the software.

Unfortunately, no independent institute has compared and contrasted all these cameras. Sounds like a good project for FLAAR in the future.

## EyeScan

EyeScan from Kamera & System Technik GmbH, Germany, is a seamless and continuous digital panorama system. It's not really medium format but the output is comparable in quality. We describe this and the other lesser and comparable products in an additional FLAAR report. Most of these companies are also listed on various Web pages of the FLAAR information network. The digital pano system from BetterLight is much higher resolution and is a component system. EyeScan is a dedicated turnkey solution.

## Cameras to hold medium format digital backs

Rollei X-Act and Linhof 679 are the two potential cameras if you need tilts and swings for your medium format back. Neither of the Hasselblad cameras with pseudo-movements is adequate. Indeed, the Hasselblad Arc Body and FlexBody seem to have failed in the marketplace, largely because Zeiss lenses were not made for supporting camera movements. I believe both Hasselblad attempts at making a tilt and swing system have been discontinued.



## Point-and-shoot digital cameras, 3 to 5 megapixels

### Panasonic and Leica

Panasonic has now entered the race for digital cameras. Agfa got so clobbered that it left the market last year, so Panasonic is brave. They have partnered with Leica. Leica sells a Leica logo outside with Panasonic inside as the Leica Digilux 1; Panasonic sells what is presumably the same camera with a Panasonic (Lumix) exterior and Leica lenses.

It will be tough for a non-camera maker to stay up with Fuji and Nikon, though Sony has done quite well. Of course these companies have experience with video and TV cameras, but that is a whole different market.

Since the Leica Digilux offers only 4 megapixels, it will lose the megapixel race from the starting gate. Yes, it is true that megapixels are only one part of the story, but neither Panasonic nor Leica is a software company, so neither can claim to offer much that would be impressive in that arena either. I see no reason to recommend any camera just because it has a name brand. Nikon is also a name brand of international renown. So the only question is whether a Leica lens on a 4 megapixel camera can match or beat a Nikon lens on a 5 megapixel camera. Where Leica can offer an advantage is to use a software such as SilverFast (from LaserSoft Imaging).

The main advantages of Nikon, Canon, and Olympus digital cameras are all the accessories and other goodies that these camera companies already offer. Nikon has four accessory (converter) lenses for their CoolPix cameras, for example: fisheye, wide angle, and two tele-converter. You probably won't get those with Leica, Sony, or Fuji (I have not checked, however).

Same with flash accessories: Nikon, Canon for sure, and probably Olympus and Minolta offer plenty of options to get your flash away from the awful on-camera unit.

### Tri-linear scanning backs (for large format cameras)

#### Anagramm and Kigamo

German scanning back companies Anagramm and Kigamo did not exhibit at PMA, or if they did, not under their own name.

#### PhaseOne

PhaseOne had a tiny booth but showed no tri-linear scanning backs. After coming in behind Better-Light two years in a row PhaseOne did not enter any images at all, not even in the medium format competition.



## BetterLight

BetterLight won the quality award for tri-linear scanning backs for the third year in a row. If the size of a company's booth is any measure of their success, BetterLight did quite well. It also had more technicians and sales people in their booth than most sellers of medium format backs.

To my knowledge, BetterLight is the only company to introduce new tri-linear models and software enhancements in the last several months. These are the 2x series. FLAAR currently has the original BetterLight, OEMed under the Dicommed name back in 1996. It still works just fine, but the newer BetterLight Super6K is superior in every aspect of hardware and especially in software. Now the 2x series are out and we hope to upgrade before summer.

For a typical BetterLight scanning back, take their model Super 6K, it is a 216 megapixel camera. That's right, two hundred sixteen megapixels. Entry-level for BetterLight (Model 40000) is 56 megapixels.

BetterLight was showing its Pano/WideView rotating tripod head. This system can do digital panoramas and turntable rollouts of cylindrical objects. FLAAR is currently continuing its beta testing of this innovative system at our museum facilities in Guatemala.

### Cameras to hold tri-linear scanning backs

#### Linhof

Not many 4 x 5 camera manufacturers had displays. Linhof was in the HP Marketing booth (no relationship to Hewlett-Packard). Although the Linhof 679 is excellent for medium format scan backs, the Linhof 4 x 5 cameras are either L-shaped (such as the Technikardan), or otherwise not stable enough in the locking mechanisms. Thus, Linhof is as un-recommended for large format as it is highly recommended for medium format.

Neither Sinar, Toyo (Mamiya), Cambo (Calumet) nor Arca-Swiss exhibited. This is a first for Calumet being absent, an indication of hard times for this venerable camera company.

### Memory cards

Panasonic now makes 512 MB memory cards for digital cameras.

On the subject of memory, SmartDisk makes a 40 GB "FireLite" FireWire system to hold data. I hope it lasts longer than my firewire drive from VST.

### Miscellaneous camera equipment

#### Schneider

Schneider did not have its own booth (or I did not notice them). But Schneider has come out with a 38 mm Super Angulon lens. This means you get a 120-degree angle of view (without rotating the camera) with minimal distortion if the camera is held level. This is not a fish-eye lens that distorts in a circular fashion. We have their 47 mm and like it very much. The 38 mm would be great for small rooms inside 8<sup>th</sup> century Mayan palaces in Palenque, Tikal, or Chichen Itza.

## Rodenstock

Rodenstock lenses are distributed by HP Marketing. The Rodenstock catalogs have excellent illustrations on digital camera technology, such as CCDs. Rodenstock and Schneider are the Mercedes and BMW of large format camera lenses. The brochure you need to get is their "Digital Photography and its demands on the taking lens" dated 8.2000, by Walter E. Schoen.

## Photographic lighting

### Photogenic

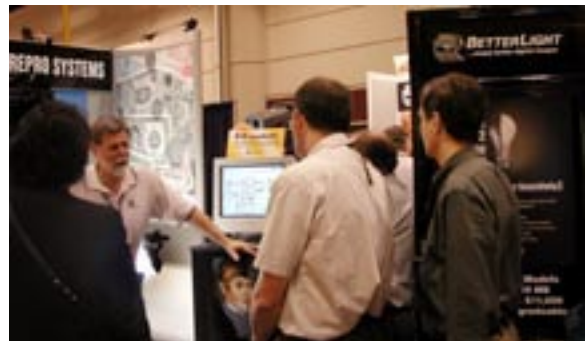
Several manufacturers of studio lighting exhibited at PMA. The largest booth was of Photogenic. As have other lighting companies, Photogenic has developed strobes that can handle the special needs of multi-shot (medium format) backs. A multi-shot camera shoots 2, 3, or 4 shots in a sequence. This requires either constant HMI or tungsten lighting or a strobe that flashes absolutely identical power each time. Earlier strobes never had to be this precise between shots.

Since no flash or strobes can be used with tri-linear scanning backs, Photogenic is coming out with fluorescent lighting for digital backs. Fluorescent lighting has the additional advantage in that it is cooler than tungsten and far less costly than HMI.

### BetterLight

BetterLight has tended to feature lighting from NorthLight Products. Their NorthLight SunSpots are especially cool versions of tungsten technology.

At this PMA a new iteration of tungsten lighting was shown in the BetterLight booth, namely Buhlite Location Kit. By lowering the color temperature a bit, these lights are evidently cooler for the photographer and for the object being lit. A clever system of mirrors seems to be responsible for the high light power yet low heat. Although I have never used these lights myself, since we have primarily Lowel Lights, the Buhl lights look really great.



## Scanners

### Imacon

Imacon showed a new model scanner, their Flextight 848. The main reason FLAAR does not feature Imacon scanners is because they claim their machines are like a drum scanner. We feel that is potentially misleading. Also astronomers report they are unable to get any two scans that are overlapping. Evidently, every time the scanner pulls an image into its maws it is a bit different position. That does not excite us over the precision of the system. Several people have reported the Imacon system may occasionally grab a slide and get it stuck inside. And finally, you can sort of scan only one image at a time. Not a good choice if you need to scan an entire archive.

The other question is whether a Nikon 4000 or Nikon 8000 would be a valid option instead of the Imacon. However, it takes the Nikon several passes to achieve their quality (that's why they can quote an illusionary dMax unachievable by a one-pass scan).

However, we do not see any comparable deficiencies with the Imacon digital camera backs. Imacon bought ColorCrisp and now markets these digital backs under the Imacon brand name.

### Polaroid

Polaroid is trying hard to stay afloat in the digital world. Polaroid's scanners are made by Microtek, and indeed, Microtek sells a virtually identical box. If you can get SilverFast scanner software then you can expect a good scan. Otherwise, personally, I would prefer a Nikon (with SilverFast always).

### Creo

Creo, formerly Creo-Scitex, exhibited its line of EverSmart scanners. Their EverSmart Supreme has about the best software available in a high-end flatbed.

### FujiFilm

FujiFilm has several divisions, and two make excellent scanners. But because there is no one single unitary product line, I was not always able to distinguish one from the other. So I got a listing at PMA: Quatro is for graphic arts market, Fine Scan 5000 is intended for photo labs, the venerable Lanovia C-550 is for commercial print shops, their entry-level FineScan 2750 is both for photo and for graphic arts market, the 2750 would cover the Umax 3000 (which is very slow), and the Creo Jazz or its near twin the Microtek equivalent (same except in nameplate and software). We estimate the Fuji FineScan would beat the Umax, but we would need to test them simultaneously to know for sure. Several people have written us, pointing out weak points in that particular Umax model.



### Heidelberg

I did not see any Heidelberg scanners.

### Aztek

Aztek had a booth. They relabel Howek and other scanners with their own special Aztek software. Three years ago we conducted a test with both a Howtek and an Aztek version, and were not impressed. We had a scan with an ICG drum scanner at DRUPA tradeshow. Wow, there is a real drum scan that we enlarged to 72 x 72 inches on a ColorSpan printer.



## Color management

### X-Rite and GretagMacBeth

X-Rite and GretagMacBeth are the two biggest names in color measuring tools. X-Rite has now teamed up with Monaco Systems to provide color management solutions. The new product is X-Rite Color Ensemble Solutions.

GretagMacbeth showed their EYEOne color management system. Looks good.



### Pantone

Pantone ColorVision showed their Spyder suites of tools for monitor calibration. Pantone is one of the leading names in color in traditional printing.

### Pictographics

Pictographics International Corporation showed their iCorrect in several modules such as iCorrect EditLab. This is a color correction software.

Pictographics started with buying ColorSynergy from Candela, but now the focus of Pictographics is on their new iCorrect software rather than output calibration. We hope they continue with their inCamera Professional since it is available both for Windows and Mac.

### Spectrocam

Spectrocam color management tool was shown. This is from a Netherlands company named Spectrostar. This instrument is one of the few that has survived and/or not been bought up by the Big Two (GretagMacbeth and X-Rite). The Spectrocam appears to be an economical option instead of the more costly units from the Gretag or X-Rite. However, the industry standard and the industry leaders are clearly Gretag and X-Rite.

## RIPs for wide format inkjet printers

### BEST Color

There were few RIP vendor booths other than BEST Color. BEST had, as usual, a very large and fully staffed booth. BEST makes proofing RIP but is coming out with modules for photographers and another for fine art giclee printing.

### ColorByte

ColorByte RIP was present under OEM name at other booths. FLAAR is considering trying this out. We have heard good things about it but don't have any personal experience whatsoever. We do know PosterJet personally and hence recommend that since it works for us quite nicely.



### 2Note from FLAAR

FLAAR covers color management with a useful bibliography on color management and a fascicle in the digital photography course on color management, keeping in mind that the course itself is not including this topic due to its complexity and preference that color management be a hands-on training within your own work environment.



## Books

Several publishers exhibited, but the main booth with how-to books was of Watson-Guption Publications "Amphoto Books."

We still could not find an adequate textbook on digital photography, but more of the expected books with the message "digital photography = Adobe Photoshop or playing with Photoshop to get neat effects." "Creative Digital Photography" by Michael Busselle seems to be in that genre as does "A Simple Guide to Digital Photography" by Bill Corbett.

Potentially, more useful is Tom Ang's "Dictionary of Photography and Digital Imaging." However, with few illustrations, it's not as much help as the Agfa books. It is too bad the Agfa book on digital photography is out of print.

## Software

### Adobe

Photoshop version 7 is now announced by Adobe. If you desire Photoshop to work with Mac OS X, this is what you need. Otherwise, version 6 works quite well if you have a PC.

### Nik

Nik multimedia had a large booth. Nik makes a variety of excellent add-on software products for Photoshop. Their best products are nik sharpener and a grayscale transformation in their nik Color Efex Photo DesignSet. E-mail [infous@nikmultimedia.com](mailto:infous@nikmultimedia.com).



## Suggested awards for best products at PMA

It is traditional at many tradeshows for products to be judged and rated to some degree. Main difference in FLAAR awards is that we are not paid. FLAAR is non-profit and located at two universities.

But non-profit does not mean we do not need money to cover our operating costs, indeed quite a number of digital imaging companies are our sponsors, but since FLAAR is not a trade magazine you can't simply buy an award. Actually, you don't have to be a sponsor to have your product considered. Awards are based on the actual capabilities of the product, not on exaggerated claims.

We were appalled when the Seybold HotPick last year was given to a printer that was effectively incapable of printing. Indeed, the printer did not even appear at the tradeshow. Worse than that, the award text looked suspiciously like the PR release of the manufacturer of the vapor-ware product.

## Best improvement of an inkjet printer

Vutek print quality looked very nice. These Vutek printers can handle economical uncoated vinyl at close to photographic quality.

FLAAR does not have any Vutek printer in-house so we are unable to judge the differences among the multitude of Vutek models, but the best of their models can do a nice job.

Notice we call this award, "best improvement." It would be potentially misleading to name any one printer "best quality," or "best in show" because each printer may be excellent in one aspect but weak or even unacceptable in other aspects.

### Most potential for a digital camera

Again, the difference between a paid infomercial and reality; FLAAR does not accept corporate PR. So all the hype over the various new digital cameras and their elusive (often imaginary) "capabilities" falls on deaf ears with us.

The Foveon chip in Sigma was non-functioning, or at least there was no camera available for us to try out. But at least the nice people in the Sigma booth took the FLAAR students in for a private showing.

The Contax N Digital full-screen chip was also non-shipping, but this camera shows sufficient capabilities that we tentatively suggest it deserves the award for potentially the best 35 mm SLR camera for year 2002.

There was no way to test cameras at PMA itself (too many people; booth personnel were swamped). So we could not test any equipment on the spot. However, two whose specs looked good were the 6 megapixel cameras, Fuji S2 and Nikon D100.

In medium format digital scan backs not much new since Philips has not yet come out with an improved chip. So everyone has moved to the Kodak chip for its 48 MB file size. Thus, I would guess that the new Fuji Luma II uses that new chip. We have no way to give any award since we don't have personal experience with these cameras.

BetterLight appears to be maintaining their lead in tri-linear scanning backs. PhaseOne did not even show one at their booth. I did not have time to get to the JOBO booth. Neither Kigamo nor Anagramm showed anything at all, or at least none that I noticed.

### Best inkjet media

We would have to have samples to print on before we actually activate this award, but this is the second year in a row that we have admired the textile media of Tura. We also like their self-illuminating backlit system.

### Best monitor

No competition for the best monitor. The Totoku monitors that wowed us at Print '01 did the same at PMA. However, my impression is that these are only prototypes. Their quality is unsurpassed. As soon as this product is actually available we will provide updates.



### Best accessories

Hoodman also makes clever accessories for digital cameras. Hoodman products definitely deserve an award for Best Accessories. We picked up a set to test out. [www.hoodmanUSA.com](http://www.hoodmanUSA.com) shows all their products.

Digital camera battery, from [www.digitalcamerabattery.com](http://www.digitalcamerabattery.com), looks like a great accessory. We will eventually test it to report how it actually functions.

### Best tradeshow party

Epson wins this award consistently. The Epson party at Seybold San Francisco 2001 had the top Adobe Photoshop gurus as guests and absolutely the best blues singer I have ever heard in a private concert. The Epson party at PMA had no music or entertainment this time, but the all-time best food.

Another distinction of the Epson parties is that they have an outstanding photo display of prints from the Epson 10000. So everywhere you look at the party, another beautiful photo done on an Epson printer. No wonder so many people buy Epson printers.

**Glossary**

Most terms are in the FLAAR glossary of digital photography and large format inkjet printing (available to all students who sign up for FLAAR+BGSU or FLAAR courses at UFM). However, here is a term that we wish to add or expand.

Medium format. In an old fashioned camera, medium format means 6 x 6 cm (2 1/4 inches). This means 120 film, 220 film, or sometimes 70 mm film (even though that is 6 x 7 cm). Actual picture size can be 6 cm high by anything long; medium format is only square because Hasselblad is locked into that impractical square format. But for digital cameras, the sensor inside a medium format back is smaller than a 35 mm negative. The first reason they package such a mini-sensor in such a large back is because the sensor requires a lot of electronics around it. So “medium format” is not only a misnomer, it is potentially misleading. The chip in some medium format cameras is not really any larger than similar chips for 35 mm. The second reason manufacturers of digital backs use a medium format size for the back is because so many professional photographers already own a Hasselblad.



**Left and middle:** Members of the FLAAR staff. **Right:** Michael Collette (left) and John Lorusso of Parrot DigiGraphic explaining the BetterLight system to the FLAAR’s Digital Photography course participants.

<a href="http://www.wide-format-printers.org">www.wide-format-printers.org</a>	<a href="http://www.fineartgicleeprinters.org">www.fineartgicleeprinters.org</a>	<b>CLICK HERE TO VIEW EACH FLAAR NETWORK SITE</b>
<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.cameras-scanners-flaar.org">www.cameras-scanners-flaar.org</a>	<a href="http://www.large-format-printers.org">www.large-format-printers.org</a>
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