

# Can you use Wide Format Scanners To Digitize Paintings for Giclee?

Part VI
What Equipment to Use to Photograph or Scan
Paintings, Maps, Drawings, Posters
So you can print this art as Giclee



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Caption for cover page: Contex wide format scan

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#### **Abstract**

This report covers wide-format scanners. These kinds of scanners are made by Contex and resold under other brand names. For example, the various HP wide format scanners are made by Contex. There are a few other manufacturers, including in India and elsewhere. Contex scanners are made (or at least designed) in Denmark. XES used to sell wide format scanners; this division collapsed about December 2002. The remaining products were absorbed by Xerox itself.

Wide format scanners are the same size and shape as a wide format printer. Except these machines scan; they don't print. The material to be scanned is fed through on rollers; so these are sheet-fed systems. These are not giant flatbed scanners such as the unusual one of Screen and some other European manufacturers (most flatbed scanners go just up to tabloid size, about 12 x 18 inches). The only place I have seen giant flatbed scanners was at DRUPA trade show, May 2004, in Germany.

A trade magazine that arrived in January 2005 featured a full-page advertisement suggesting that you can produce giclee by feeding an oil painting through a wide format scanner.

We did not know how to react: disbelief, amusement, or pity.

Two weeks later I was reading another trade magazine. A PR release from Western Graphtec listed "Fine Art" and "photography" as two uses. It looks like an epidemic.

But if you are a quick-print place, and this is the only kind of scanner you have, we can understand the desire to provide services for artists.

If you need to scan posters, banners, maps, drawings (especially if you are an architect, engineer, art historian, geographer, surveyor, or archaeologist) then a wide format scanner is a handy item to have. These FLAAR Fast Facts provide model names and links to manufacturers of wide format scanners, sheet fed scanners, roll fed scanners, and other large format scanning solutions.

#### **FLAAR Information is based on Reader Requests**

Each title in the 110+ FLAAR Reports system is the result of people asking for help in figuring out which make and model of that product class to buy. Over 40,000 people a month read FLAAR reports on scanners (on <a href="https://www.tameras-scanners-flaar.org">www.tameras-scanners-flaar.org</a>, and on scanner pages within the various FLAAR sites on wide format printers such as <a href="https://www.wide-format-printers.org">www.wide-format-printers.org</a>. So during the course of a year almost half a million people are exposed to FLAAR discussions of scanners. That is more than almost all trade magazines put together. This sum is more than everyone who attends a major trade show.

Many of the people who read the FLAAR reports ask us for specific recommendations for what printer, scanner, digital camera, or other products they should purchase. In prior years we covered primarily desktop scanners, but people kept asking for reports also on wide format scanners. So here is the report, updated during January 2005.

Usually people simply buy the product which they notice that FLAAR is using. Readers realize that FLAAR would never have a product they knew did not function. But our previous offices were so filled with nine large format printers that we did not have space also for a wide format scanner. But now we moved to much larger facilities, so we have acquired a wide format scanner to feature in our own facilities. With our extra new space we are now up to about 21 wide format printers, a slight increase in the nine we had a few years ago.



#### Usefulness of a wide format scanner

At both universities where FLAAR is situated wide format sheet-fed scanners would be appropriate machines to have. At both universities FLAAR is directly adjacent to the department of architecture. At Francisco Marroquin University the archaeology museum on campus is another facility which is the kind of place that would need a wide format scanner (especially to scan archaeological maps of sites and ancient cities).

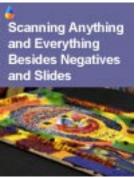
HP kindly provided their model 4200 wide format scanner. We installed this at BGSU and the architects used it; we also scanned our archaeological site maps (of 8<sup>th</sup> century Maya ruins of Yaxha and Nakum in Guatemala). We then shipped this wide format scanner to Guatemala. FLAAR has a separate report on this wide format scanner for CAD and GIS. The present report is generic, but with comments on the use of this kind of scanner for giclee.

#### Giant flatbed scanners

The market for wide format scanners is growing as everyone finally realizes that the future is digital storage and digital printing. Most of the large format scanners discussed here are sheet fed or roll fed scanners but this report also includes all known giant flatbed scanners.

This report covers any scanner which can handle an image larger than the tabloid size of desktop prepress scanners such as Fuji Lanovia, Creo(Scitex) EverSmart series, Heidelberg Nexscan, etc. Those scanners cover approximately 12 x 18 inches and are discussed in various *FLAAR Reports* on scanners for prepress or fine art giclée.





Purup-Eskofot appears to produce an oversize flatbed scanner, the Esko Scan, covering an impressive 34 x 36 inches. However you can beat that with a Cruse reprographic stand flatbed scanner, 36 x 48 inches. FLAAR has a Cruse scanner at Bowling Green State University. Other models can handle larger sizes. A new Cruse scanner with moveable platform can scan drawings or objects up to several meters long.



HP 4200 wide-format sheet fed scanner.



Fuji Lanovia Quattro, a good flatbed scanner at tabloid size.
Unfortunately Fuji, Agfa, Heidelberg, and most other multi-national
pre-press companies stopped making flatbed scanners. Creo is about
the only international company that still makes a complete range of
pre-press flatbed scanners of this quality.



One model of Cruse scanner has lights that move in unison with the scanner head; another model of the Cruse has the transport table move in unison with the scanning mechanism.

Screen appears to produce a giant-sized flatbed scanner, their "Screen GenaScan" for A1 size originals (circa 24 x 36 inches). We saw this at DRUPA 2004, in Germany, but did not notice this scanner on their <a href="www.ScreenUSA.com">www.ScreenUSA.com</a> website. Maybe this scanner is sold only in Japan and Europe?

CST uses a Zund platform to make a large flatbed scanner. We saw this at DRUPA 2004, but it is almost invisible on the Internet. CST stands for Colour Scanner Technology GmbH, in Krefeld, Germany, a center for high-tech digital imaging companies.

ACTion has a 24 x 36 inch flatbed scanner, which they label as the Colortrac FB24120.

The difference between a giant flatbed scanner and a wide-format scanner, is that with a giant flatbed scanner:

- Your object itself never has to move on a giant flatbed (only the scanner head moves)
- Your object is never touched by any roller; never has to pass through a feeding device.
- As long as the scanner itself is functioning, the entire object will be flawlessly scanned.

#### With a wide-format scanner

- The object has to be a material that will feed through the feeding mechanism
- It can't be too large
- It can't be too slippery
- Some fabrics won't feed evenly
- You never know when a part of the object may skip, or the scanner may stutter, causing a line or an imperfection.

#### The Source of our Interest in Large Scanners

We first became interested in large format scanners because of the need to acquire photographic images of indigenous Maya textiles. Dry rot, earthquake, fire, civil unrest, moths and other insects are busy at work destroying the national patrimony of many countries whose indigenous peoples produced material with native decorations. Whether bark paper (Mexico) to painted material to woven textiles such as Mexico and Guatemala. it will be a boon to scholarship (and national pride) if the national museums of these countries could digitize the designs and weaving patterns before the textiles fall apart. About 10 years ago the director of Guatemala's Museo Nacional de Arqueologia e Etnologia asked FLAAR to work out a solution of how to record their collection of thousands of their textile garments, headdresses, and other woven material.





Sreen and CST scanners exhibited at DRUPA 2004 trade show





A scanned image of a painting from a Contex wide-format scanner being printed on an HP DesignJet 5500 wide-format printer. We recognize that a scanned image will print beautifully (assuming the image did not skip or stutter going through the scanner). The question is more about whether artists and curators will allow their originals to be feed through any machine.



Sheet fed scanners from Contex can handle widths up to 40 inches and documents up to half an inch thick (posters, posterboard, etc). This is good if you have materials or archival things which are mounted on board or are inherently thick. The potential of handling thick items would also be of interest in scanning subjects (whether paper or material such as textiles) which you may want to insert in a "carrier," such as transparent material on one side and a protective material on the other side (to get something through the scanner that might otherwise skip n the rollers (such as the threads of a textile stalling, bunching up, and then being pushed through somewhat out of place).

Some scanners come with a protective envelope to allow delicate objects to be fed through the machine. But even if you use transparent Mylar, you are getting a photo of the object as seen through the Mylar. Most of the carriers that come with the scanners may not be large enough to handle a painting anyway.

Our main test studio is at the Museo Popol Vuh which is across the parking lot from the largest museum of indigenous textiles in this hemisphere, the Museo Ixchel (of native Maya weavings, especially Maya costumes). A few buildings away is the department of architecture of Guatemala's leading university. Overall, between architectural drawings and colorful textiles, here is an optimum situation to show how a wide format printer can provide solutions to a wide variety of markets.

But many objects are too fragile to fit through the rollers and feeding mechanism of a sheet-fed scanner. In this case you need a copy stand scanner such as Cruse. This is the scanner we installed at Bowling Green State University. The other alternative is a copy stand: see the separate FLAAR Report on copy stand photography for producing giclee.

If you wish to learn more about a Cruse flatbed reprographic copy stand scanner, consult with their main distributor, Mike Lind <a href="mailto:mailt



#### Resolution

Resolution is listed by manufacturers as dpi, but of course no input device has dots, so you can't have dots per inch. What the scanner accomplishes is samples per inch which is usually translated as pixels per inch.

To reproduce an image with a ColorSpan, Encad, or HP DesignJet wide format printer you need only about 150 pixels per inch input to accomplish 600 dpi output. Hence a scan at 800 dpi is overkill unless you need to enlarge an image to monumental proportions. If you use a piezo printer, these may need a bit more resolution, but 200 to 300 is plenty. Just because your printer "prints" at 2880 dpi is not reason to feed it 2880 dpi. We discuss this in various FLAAR Reports and courses.



#### **Color Space and Color Management Systems**

sRGB is a sort of entry level, lowest common denominator for the Internet. Try to make sure your software can provide a more professional color space such as that of Adobe 1998.

If your scanner can apply ICC color profiles, that would be an advantage (but people have done okay for years before ICC color profiles even existed).



#### Connectivity

Personally we prefer SCSI connections because they are the fastest. Yes, despite hype by Steve Jobs of Apple Computer, USB and FireWire are not as fast as the latest generation of SCSI. USB and FireWire are merely convenient, but not very fast when compared with SCSI. FireWire seems to be faster than USB.

However if you use SCSI you need to add a SCSI card of the proper generation to your computer (relatively economical and easy to install nowadays). But you need to learn NEVER to plug a SCSI device in while either the device or the computer is turned on. Plus you need to have a terminator (a \$5 plug) and you need to learn the rules of maintaining a SCSI daisy chain. It's all easy but there is a bit of jargon and a few basic rules which your dealer can explain to you.



SCSI adaptor shown on the back of a Mac "Wallstreet" laptop. No recent Mac has SCSI, but you can add a card. SCSI is faster than USB and faster than most FireWire, but has a few operating quirks, such as requiring a terminator plug.

#### **Suitability to Handling Paintings**

Most museum curators would never, ever, allow a painting, or drawing, from their museum, go through the feeding mechanism of even the most benign wide format scanner.

I fed my 35-year old original hand drawings of the site plan of Yaxha and Nakum through the HP 4200, and was not too nervous.

But I would want to test feeding a painting through before I recommended this process for giclee production. You have several potential problems.

- How do you know whether the scanner has stuttered, or lost traction or otherwise skipped a pixel row?
- How can you assure the owner that the scanner will not gobble up their priceless original?
- Many artists and museum curators will not remove the frame: they require the object to be digitized with the frame still on!



This is the original map of the Maya ruins of 8th-9th century Nakum; portions were mapped by a Harvard expedition about the 1890's. Nicholas Hellmuth led a mapping expedition here in the 1970's to record temples and palaces that were not found previously due to the thick jungle covering the ruins. We did not flinch in feeding this rare original into the HP 4200 scanner.



These are the two halves of the complete map of the 1st-9th century city-state of Yaxha, El Peten, Guatemala. Nicholas Hellmuth led a mapping expedition here for five years in the 1970's. With the help of the HP 4200 scanner it is now possible to have a digital record of the original map.



Wide format scanners have one advantage, namely that the corners of the painting should be in the same focus as the center of the painting. So I would not totally rule out wide format scanners for giclee. Just that I am not sure I would advertise these scanners by showing a person holding an original oil painting and then showing the resultant giclee print.

At trade shows Contex does display nice results: they use HP printers and the images are of fully professional quality (we use the same HP printers at two FLAAR offices to print giclee). But to scan original paintings we use a tri-linear scanning camera on a copy stand (at Francisco Marroquin University) or we use the Cruse scannerdigital camera, at BGSU. People send us paintings from all over the US for us to scan.

The other advantage of the use of a camera is that you can do side lighting. With a scanner you get only lights at one angle and intensity.

At some point we ought to acquire a Contex wide format scanner and test them. This is the only appropriate way to judge, objectively, if a wide format scanner is acceptable to use with a painting. But it really depends on the artist: will the artist allow their work to be fed through a machine.

#### **Manufacturers and Products**

#### Wide format sheet-fed scanner companies

Five years ago when I first began to learn about wide format scanners there were about seven companies who made these products. Then three of them merged to become ACTion Imaging.

The other large company was Contex. After they bought Vidar they became even larger. But let's look at the companies one by one. There are other manufacturers, especially in Korea, China, and Taiwan. We don't list a company unless we see them at a major US trade show, or unless we otherwise hear about them.

#### **ACTion Imaging Solutions**

ACTion was formed by the merger/buyout of ANAtech, Colortrac, and Tangent scanner companies several years ago (hence ACT...). I have seen exhibits from this company at occasional trade shows both in Europe and in the USA.

They offer 36" Colortrac 3680, 42" Colortrac 4280, 48" Colortrac 4860, and 54" Colortrac 5480. For more information on wide format scanners you can contact: ACTion Imaging Solutions US at Tel +1 303 973 6722, Fax +1 303 973 7092, info@action-imaging.com.



### ColorScanner III

#### **ANAtech**

Eagle series; purchased by Contrac; now part of ACTion Imaging Solutions

#### Colortrac

380Cx Wide Format, now joined with ANAtech and Tangent; to become ACTion Imaging Solutions





#### Contex A/S

Contex is probably the largest wide format scanner company, especially after they bought Vidar. Contex scanners are also sold in the USA by Ideal and in Europe by Hewlett-Packard. Contex are also teamed with Hewlett-Packard wide format inkjet printers, such as the new combo unit, a Contex scanner mounted on top of an HP 800ps.

It is useful to know the Contex scanners can handle originals up to 1/2 inch thick. That means you can scan originals even if they are mounted on foamcore or gatorboard. Furthermore, Contex scanners offer a scan to print copy system, so you can print with your HP DesignJet or other wide format inkjet printer.

#### Current Contex models include

- 25" Chameleon, which appears to be an entry-level desktop sheet-fed scanner.
- 25" and 36" Cougar
- 40" Chroma
- 50" Magnum
- The 40" Crystal and 50" Panorama are monochrome scanners.

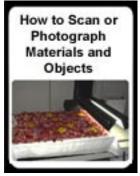
Personally I recommend the color scanners over B&W scanners since sooner or later you will want to scan something in full color, especially since you can so easily reproduce wide format scans at mural sizes with today's wide format inkjet printers such as the 42" HP DesignJet 800ps, 24" HP 130, or the 60" HP DesignJet 5500ps.

Contact at Contex for both North and South America is Henrik Vestermark, telephone 1 (877) 2CONTEX (1 877 226-6839). We have seen two different fax numbers, 1 (909) 466-4206 and 1 (909) 466-3606, <a href="mailto:sales@contex.com">sales@contex.com</a>.

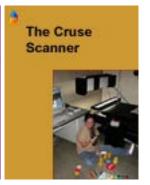
#### **Cruse GmbH**

Large reprographic stand (overhead) scanners whose flatbed can hold architectural drawings with a vacuum board. There may be some delicate drawings that you don't want to feed through the rollers and grabbing mechanism of a sheet-fed system. In this case you need a Cruse. FLAAR has a Cruse because we need large images at museum quality. A Cruse can produce a single digital photograph at a 390 MB true optical RGB file size.

If you wish to learn more about a Cruse flatbed reprographic copy stand scanner, consult with their main distributor, Mike Lind <a href="mailto:mailt







FLAAR has several Reports available specifically on the Cruse camera for producing fine art giclee.



Here is a Cruse scanner in operation at Siggraph 2003, scanning some 3-dimensional objects, in this case Guatemalan handicrafts made from hand-woven textiles. You can call this either a scanner or a digital camera: the CCD is similar either way. I consider the Cruse to be a digital camera, but it uses a tri-linear scanning CCD, not a CCD in Bayer Pattern that is in a medium format or 35mm digital camera.





HP DesignJet 800ps

#### **Graphtec**

Western Graphtec is the US arm of Graphtec of Japan. They offer two wide format scanners, their models CS1000 (monochrome) and CS2000 (color).

#### **Hewlett-Packard**

HP began by offering a combo unit, HP Designjet copier cc800ps, a Contex scanner associated with an HP DesignJet 800ps.

Then HP came out with an updated version, HP DesignJet 815mfp. This appears to be an HP 800ps combined with an HP DesignJet scanner 4200.

You can also purchase the HP DesignJet scanner 4200 separately. For further details contact Jonathan Knecht, <a href="mailto:colorguru@colordna.com">colorguru@colordna.com</a>, a registered HP dealer in the CAD and GIS markets.



Ideal wide format scanner

#### Ideal

Seems to resell Contex scanners.

#### J R L

JRL DCS 2000. JRL seems to resell KIP products. We don't have a single KIP or JRL product so can't comment further. Don't see them at many trade shows either.

#### **KIP**

KIP America 2000 series 2050, 2080, 2120, wide format scanners. KIP is a traditionalist company which has been making or selling wide format long before technology went digital.

#### Océ

CS4040 is logically a 40" scanner; CS4050 handles up to 50". 800 dpi is rather high resolution for these sizes.

#### **Tangent Imaging Systems**

Purchased by Colortrac; together with ANAtech is part of ACTion Imaging Solutions



#### **Vidar Systems**

TruScan Spectra; TruScan Titan Atlas, up to 42" wide. TruScan Designer is 26".

Vidar manager suggested their scanning method is more accurate than that of Contex or ACTion. The latter two use mirrors. Vidar accomplishes a direct scan of the image. Perhaps this is one reason Contex bought Vidar early in 2002. Vidar scanners must have been good because they certainly were not cheaply priced.

Vidar offered both a wide format scanner as well as a scanto-print system. I do not know whether Contex picked up the Vidar technology or replaced it with their own.



Vidar scanner

#### **Vivid Image Technology**

This company used to make large format scan-to-print controllers. But in the last several years Vivid Image has moved in other directions so I do not know to what degree they have continued their scan-to-print solutions. Their website is <a href="https://www.VividImage.com">www.VividImage.com</a>.

#### WideCom

Their various models of wide format scanner include SLC936C, SLC1036C, SLC954C, SLC972C

#### **Xerox Engineering Systems (XES)**

XES seems to be the only company that uses a CMOS sensor instead if a CCD. I am inherently skeptical of a CMOS sensor based on my experience with digital noise from CMOS sensors in digital cameras. In cameras a CCD produces a cleaner image. CMOS is only used by camera manufacturers because it is cheaper.

Sometime during late 2002 and early 2003 XES has suddenly dropped their wide format inkjet printer division entirely but still offered their wide format scanners. XES collapsed as a separate company; the remnants were reabsorbed by the main Xerox company.

XES is conspicuous by its absence in most reviews of wide format scanners. Perhaps this is because they exhibit at few trade shows, or that people don't know where to find them on the Internet? Plus there are the 50,000 readers of FLAAR web site reports each month who don't see any XES products of any kind in either of the two university evaluation facilities. It is difficult for us to write about a product we can't see anywhere.

The XES wide format scanners had the trade name Synergix. The wide format printers which survived the collapse of the inkjet line appear to be comparable to a wide path laser machine. These printers also carry the name Synergix and use dry toner; these are for line drawings (not photos) and not inkjet nor related in any manner to inkjet. Xerox naturally knows something about lasers and copiers.



#### Scanner Software for wide format scanners

Contex offers JETimage which includes some nice features. As we acquire more information on the varying software and scan-to-print options available we will update this report in future months.

#### **Updates**

If you are interested in scanning to wide format from a traditional flatbed scanner, check back with us after the year 2005 trade shows. FLAAR tries to update the FLAAR Reports after each trade show season. Both Contex, HP and other leading manufacturers will be exhibiting during 2005.

#### Other products

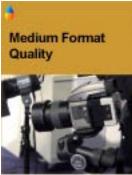
We will also be looking at other products in field related to wide format scanners such as Buzzsaw, recently purchased by Autodesk.

#### Other reports on the Theme of "What equipment is needed to begin producing giclee?"

Everyone who is thinking about entering the world of giclee asks about what printer to buy. Only about 1% ask a question that is more crucial than the printer, and is the aspect you need to resolve long before you start working about dpi, RIPs, ICC profiles, and everything else you will soon come into contact with. The crucial question is, "what equipment can get an oil painting or a watercolor painting ready for recreating this painting as a giclee print?"

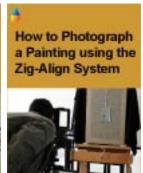
- Part I covers basic entry level cameras to record paintings for subsequent giclee printing.
- Part II covers medium format cameras (that is this present report).
- Part III covers large format cameras.
- Part IV covers copy stands (for all sizes of camera)
- Part V covers the Zig-Align system for giclee photography with large format cameras.
- Part VI covers wide format scanners (which we do not recommend, but we added this report since fullpage ads in trade magazines are showing this kind of scanner being used to produce giclee. We feel that people should be warned of the downsides).
- Part VII covers the dedicated (turnkey) Cruse reprographic camera, the professional system for a giclee atelier.













#### **Concluding Remarks on Using Wide Format Scanners for Giclee**

If you already have a Contex or HP wide format scanner, you can use this to scan posters, maps, drawings, and other works of art that are on flat sheets. However if the sheet is torn, delicate, or otherwise might snag when going through the feeder mechanism of a sheet-fed scanner, you better look for a giant flatbed, or a Cruse reprographic stand.

If you have to scan maps, posters, and other large sheets of paper, then a wide-format sheet-fed scanner is a logical choice. But if you intend to produce high-end giclee prints for sale on a regular commercial basis, you need a professional solution made specifically for photographing paintings. A wide format scanner is not made specifically to handle original paintings

If you own the art, it is entirely your decision where you put your painting. It may move through a scanner just fine. The feeding mechanism may be entirely an imaginary "danger." But I have asked several people in the giclee business, and both answered that no museum curator they knew, and few artists, would allow their paintings through any machine that physically touched the surface of their art. Something has to touch the material being sent through the scanner, otherwise the material would not feed through nor be photographable.

However we will gladly accept any wide format scanner from any scanner manufacturer or distributor and test this equipment by sending original paintings through it (assuming we can find painters who will allow this; if not we will ask the art students on campus to provide us some guinea pigs to feed through). Actually the students and art faculty produce art on kraft paper and other thin material. This is a more likely candidate for feeding through a scanner than a canvas painting with a crust of oil-painting that might indeed to chipped off, crushed, or otherwise affected by the rollers or other parts of the feeding mechanism.

#### **Reader Interest**

That's what gets us to produce certain titles... reader interest. If readers keep asking for reports, the secretaries keep reminding the writers to do the research in order to produce what is needed.

#### **Contacts for further Information**

The key person to contact would be the manager at the largest sheet-fed scanner company in America, Robert A. Gonzales, telephone 1 (877) 2CONTEX (1 877 226-6839). We have seen two different fax numbers, 1 (909) 466-4206 and 1 (909) 466-3606, e-mail <a href="mailto:rag@contex.com">rag@contex.com</a> or <a href="mailto:sales@contex.com">sales@contex.com</a>.

Wide format HP scanners should be available from ColorDNA, tel 888 BIG-COLR.

If you are ready to obtain a professional level camera, scanner, printer, RIP, and color management tools and training, consider contacting a company that is dedicated to all aspects of fine art giclee. We have found the people at Parrot Digigraphic are dedicated to fine art photography, giclee printing, and all the hardware and software needed for these endeavors; you can contact them directly yourself, <a href="mailto:imaging@parrotcolor.com">imaging@parrotcolor.com</a>.

Mike Lind is familiar with how to digitize drawings, maps, paintings, and solid objects too. Mike knows the giclee and décor business. You can reach Mike Lind at malind@msn.com



#### References

#### CHANCE, Terri

2002 Scanning the Wide Horizon: Special Report: Wide-format Scanners. Digital Graphics, Feb. 2002, pp. 36-43.

#### **Digital Graphics**

2003 Capturing a Wider Image: Scanner Update. Digital Graphics magazine, February 2003, pp. 38-43.

#### Sources and Resources on the Internet

#### www.contexscan.com/glossary/default.htm

A helpful glossary of wide format scanning. As usual, no illustrations.

#### **Advisory**

We are quite content with the specific scanners and printers we have in the two FLAAR facilities at the two universities. We would obviously never ask for a scanner or 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 scanner or 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.

Therefore this report does not warranty any product for any quality or performance or fitness for any specific task, since we do not know the situation in which you intend to use the hardware or software. Nor is there any warranty or guarantee that the output of these products will produce salable goods, since we do not know what kind of ink or media you intend to use, nor the needs of your clients.

Just remember that every machine 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 scanner 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 scanner that was a disaster for someone else may work flawlessly for you and be a real money maker for your company.

In some cases a product may work better on a Macintosh than on a PC. In other cases it may function well with one operating system yet have bugs and crash on the same platform but with a different operating system.

Thus be sure to test a scanner 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.

How well a product will 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.



Although we have founds several models of flatbed scanners and reprographic copy stand scanners to work very well in our facilities, we do not yet have a sheet fed scanner.

Most of the readers of the FLAAR Reports look to see what scanners we use in our own facilities (in this case Creo desktop and Cruse reprographic stand scanner). Readers realize that we will have selected the equipment that we like based on years of experience and research. Indeed we have met people at trade shows who told us they use the FLAAR web site reports as the shopping list for their corporate purchases.

Yes, it is rather self-evident that we would never ask a manufacturer to send a product which we knew in advance from our studies was no good. But there are other scanners of the sheet fed variety which are great but we simply do not have them in our facilities yet.

So again the suggestion: be sure to ask around in other print shops, with IT people in other corporations, at your local university or community college. Go to trade shows....but don't use the booth...ask questions of people in the elevator, in line at the restaurant, anywhere to escape the smothering hype you get in the booth.

Taking reality into consideration, neither the author nor FLAAR nor either university is liable for liability, loss or damage caused either directly or indirectly by the suggestions in this report nor by hardware, software, or techniques described herein.



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