

FLAAR Report on Printers, RIPs, Paper, and Inks

Who and What is FLAAR?











Who and What is FLAAR

FLAAR REPORTS

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Introduction

FLAAR specializes in research, evaluation, and education relative to photography, scanning, and digital printing. Within these fields we cover primarily high-end professional digital imaging.

How did FLAAR grow to become a leading source of factual information for consumers on large format inkjet printers, media, inks, RIPs and associated scanners?

The digital aspects of our program were initiated by Japan's Ministry of Education during 1996. They awarded the FLAAR director, Dr Nicholas Hellmuth, a position in Japan as Visiting Professor for this period. This entailed a feasibility study of digital imaging hardware and software for the Latin American photography section of Japan's National Museum of Ethnology, Osaka. FLAAR itself is fully American, though the primary research is in Latin America.

That same year FLAAR received another grant of \$100,000 from an American foundation likewise to do a feasibility study of digital imaging, primarily scanning and digital printing. FLAAR established the Digital Imaging Technology Center with the aid of the Japanese and the American funding. Our headquarters recently moved from a community college in Florida where we were for six years to a university in Latin America. We are opening an additional and larger evaluation center at Bowling Green State University of Ohio. This center will test, evaluate, and publicize large format printers, media, RIPs, and associated digital imaging hardware and software. Wide format scanners and digital storage devices are also included in this program.

The web site network began as the reports on the equipment that we have found useful in our own search for the Japanese national museum and for use to cover own digital imaging needs. We figured as long as we had accomplished all the background research to establish what high-end scanners and large format equipment was optimal for our own needs, that we might as well share the results with others. After all, most companies don't have a guarter of a million dollars and four years available to acquire such useful information.



FLAAR is now moving into this new location on campus, having outgrown our other building in the first year.



Inside of the facilities



Nicholas Hellmuth and Milos Krsmanovic prepare to evaluate RIP software



FLAAR staff working with Cruse scanner system

FLAAR-USA

FLAAR is a US corporation registered with the IRS as a non-profit research and educational institution since the 1960's. Incorporated in the State of Rhode Island (while Nicholas Hellmuth was at Brown University receiving his MA degree). The business office is in St Louis (Dr. Hellmuth is still Research Associate at Washington University of St Louis). The principal operating office is on the campus of Bowling Green State University of Ohio (BGSU).

BGSU offers many advantages through the faculty of its College of Technology. Professor Charles Spontelli has his MA degree from Rochester Institute of Technology. His specialty is color management; thus he is an ideal partner for large format inkjet printing, particularly for RIP software and proofing. The Dean of the College of Technology and Department Chairperson are both interested in having the BGSU + FLAAR combination be a leading source of research and training on large format digital imaging. Already FLAAR's presence on campus has attracted sophisticated equipment that not even Rochester Institute of Technology has available.

FLAAR functions as the Large Format Digital Imaging Division with Dr. Hellmuth as its Director, under the Center for Applied Technology.

BGSU provides space for the increasing number of large format inkjet printers that continue to arrive. Currently RIP software and scanners are being evaluated by Milos Krsmanovic. A future program will evaluate inks and media, however, FLAAR does not intend to become entangled in the headaches of ink longevity claims until acceptable testing standards have been established. Instead the inkjet media standards being developed by Nicholas Hellmuth and colleagues address primarily printability and usability.

Color copiers and testing of toner for B+W copiers and laser printers are other endeavors that FLAAR-at-BGSU is expanding into as opportunities arise.

Training is a major goal for FLAAR-at-BGSU. We recognize that when people are trained on a particular platform, scanner, printer, or media, that this will tend to be the hardware, software and consumables that they will recommend when they return to their own companies.

You can now download the syllabus for each of four FLAAR training courses offered in conjunction with the two universities where we share facilities.



ColorSpan Display Maker XII arriving at BGSU campus



Panoramic prints intended for an Exhibit



Web designer getting trained at BGSU



Nicholas Hellmuth inspecting Agfa Grand Sherpa (Mutoh Falcon II) at sign shop

Although FLAAR itself is over 30 years old, we are a recent arrival on the campus at BGSU. The intended audiences are not just BGSU students, but much more the target is worldwide via web-based training. The audience are personnel in museums, in-house graphics departments, prepress, photographers, artists interested in fine art giclée printing, sign shops needing to make the transition from vinyl cutting to wide format inkjet, and screen printers who need to do their screen masters with inkjet printers and/or who wish to supplant their screen printing equipment with inkjet printers.

168,000 people a year come to FLAAR to inquire which make and model of large format printer, scanner, or professional digital camera to purchase. This implies that probably about 100,000 of these people will also upgrade their computer systems to handle the requirements of large format digital imaging. FLAAR routinely prints photos 36" wide by 14 feet long. With our ColorSpan printer, you can print your photographs 72 inches wide by as many yards as you wish to.

Wide format printing requires lots of computer horsepower to image those large scanned or digital photographs. FLAAR's assessments of computers (Mac vs PC), monitors, and associated digital imaging software is already influencing a substantial and growing market. Inkjet printers in general and wide format printers in particular are still a growing market despite the momentary economic stalling.

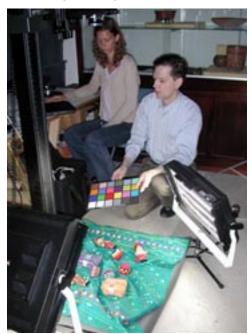
Independent, Innovative, and Comprehensive

Selected companies are sponsors as well as providing equipment, media or inks. Since both piezo and thermal printhead companies are sponsors, however, we have no need to play favorites. Same with all other products: we only recommend the products that are good for providing a solution. There are virtually no corporate PR photos in our reviews. It is rare that a FLAAR discussion of a product will repeat or even utilize company PR. FLAAR's asset is the fact that we do not sell products ourselves.

Our reviews are internationally recognized for their ability to cut through advertising hype. Yet every printer or RIP has some beneficial aspect that might be useful to some particular end user.



FLAAR staff inspecting printers at sign shop. They had a Roland and ColorSpan. Very informative visit.



Nicholas and Tanja Rathjen from Germany evaluating fluorescent vs tungsten lighting



FLAAR staff answering the e-mails which arrive asking for the FLAAR Reports

It is a matter of finding the most useful features and the least disadvantages so that as many end users as possible are content with the products that they buy.

There is no one single printer, no one single RIP that will satisfy all 20,000+ monthly readers of our reports. FLAAR is dedicated to assisting these readers select which of the dozen basic large format printers, which of the score of RIPs, and which of hundreds of kinds of media will best fit into their work flow and provide an optimal solution.

Many people are upset when they see their favorite printer not get the same rave review they saw in a trade magazine. That's because FLAAR does not accept corporate PR nonsense.

Since we have nine printers in-house, since we have received e-mails from thousands of readers who report the pros and cons of printers they already have, and based on our visits to check out wide format printers at work in sign shops, copy shops, photo labs, we know these printers inside out.

It is disappointing to many people to find out we are not paid by the printer manufacturers to write glowing reviews. They are so accustomed to this unfortunate practice elsewhere. Sorry, but FLAAR reviews are actually the result of our own in-house programs. FLAAR is a major photography research institute for the last thirty years. Our entire program began as an in-house search for the best wide format printer for reproducing our own 4x5 and 8x10 chromes. This is why we also include reports on scanners. We have over 50,000 of our own transparencies which we need to scan.

The other surprise to many people is when they ask why we pointed out the failures, faults, and downsides of a printer which won three industry awards: we simply pointed out that the first tradeshow award, the printer did not even appear at the tradeshow because it was unfinished vaporware. At the next two tradeshows (where it also won further "awards") the printer ground to a halt at one tradeshow and at both was unable to produce usable output at the speeds claimed in every single tradeshow ad and award. Turns out the "awards" were based seemingly on the press releases of the company... not on the actual printer, for the simple reason that we have been unable to find a print shop, sign shop, or photo lab that has a finished model of this printer actually at work (other than beta test models). It's not fair to claim features that a printer can not produce in real life.

For the last six months this printer's million dollar ad campaign



HP 1055 ad HP 800ps in FLAAR evaluation lab.



Color test for HP 5000ps



Piezo equipment reviewed at the evaluation center.



Installing one of our RIP's

claims it is the fastest printer with the absolute best quality in the world. Yet the company has been unable to produce the printer itself. Sort of like the CrystalJet, which too won awards during the precise same period when it did not function and could not be manufactured.

So yes, very much so, our reviews are obviously oriented to how the printers that function in a real situation. It's not out fault that some printers are easy to use, don't guzzle overpriced ink, and print on a wide variety of low-cost media. And we did not design the printers that have perpetual banding defects, indeed we could not help noticing a recent admission by the technical people of one major printer manufacturer that essentially their printer models up to summer 2002 not only had systematic proclivity for banding, but the company knew about this inadequate design. Hmmm.

Wonder why this same company never told anyone this in the alluring advertisements? So the company should be more understanding when we reported already for over a year what they knew all along.

So yes, definitely, our reports are infamous for pointing out the features of the printer that, well, don't exactly produce what the company repeatedly claims so loudly in its ads. By the way, we do this even for printers we otherwise love and use ourselves. We also point out every non-functioning attribute of the printers of our main supporters. Have to in order to maintain our standards. Besides, we ourselves experience these occasional glitches and/or learn about them from our innumerable readers.

Actually, if you look closely, some ads claim as the printer's best feature precisely the things the machine is worst at. That's because ad writers know most buyers believe the ad claims because they won't find out the deficiencies of the printer until it is paid for... by then it's usually too late to get your money back.

However when all is said and done, some printers have certain features that are invaluable, that are essential for your specific needs. So even if that same printer can't do a few other things, it may actually still be the printer you should purchase. This is because, just like your spouse, partner, or children... you love them, but they have a few annoying habits. It's just a matter of compromise. But sure helps to know in advance what the pros and cons are.

That is FLAAR, we work hard at learning what printers are best for our printing needs at two universities. We print for the art department, architecture department, plus of course general signs and posters. We prepare our own reports for ourselves so we don't waste money on the wrong RIP, on the wrong inkjet media or inks. These are the *FLAAR Reports* we issue to the world, to assist others to learn from our experiences.



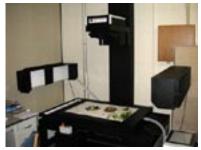
New facilities at Universidad Francisco Marroquin



New computer lab used to teach FLAAR's course on digital photography



Preparing the files before printing on the DisplayMaker XII.



Cruse scanner at FLAAR-BGSU

FLAAR Consulting

FLAAR offers two kinds of consulting. Normally this involves sending Dr Hellmuth to the company which asks for help. But in other instances the company may prefer to visit us either at BGSU or UFM. Although so far most of the consulting has been for Fortune 500 companies, we also consult for normal sized print shops. Since Prof Hellmuth also speaks German and Spanish he often consults in foreign countries as well.

Usually the consulting is when a company wants to know what wide format printer to buy:

One large corporation sought technical expertise for their entire corporate system nationwide.

The average company however, just intends to buy one or two printers. Most frequent request is for a "second opinion," especially for franchises or buyer groups where someone else has already recommended a printer, but they want to be sure before they actually send out their purchase order (sometimes there are 300, 400, 500, or over a thousand outlets for copy shops or sign franchises).

Yet many others who come to FLAAR for assistance seek help to improve their income from a second business or a hobby business (printing photos or paintings as fine art giclée).

Over the coming years FLAAR reports will have increased impact on the buying habits of federal, state, city, and county governments, educational institutions, prepress, sign shops, quick-print shops, photographers/photo labs, fine art giclée studios and corporations (in-house graphics departments).

In other instances the printer manufacturers themselves ask for help in what options and features are needed on their next generation printers. They need this information to be market-specific.

FLAAR goals elsewhere

We anticipate licensing our web site content and reports to other language and cultural areas of the world.

Trade magazines and other industry forums in the USA have approached FLAAR to license our reports.



FLAAR's office at Francisco Marroquin University

If we receive an offer that is of interest we would consider such an alliance as long as the independent nature of our reviews and evaluations is protected. FLAAR is successful because we are not beholden to sponsors and we do not accept advertisements. Because we have no advertisers, then no advertiser can attempt to pressure us to include their PR photos or their PR releases. When a product has capable features, we need to find out about these favorable attributes ourselves in our own evaluation facilities as well as see the equipment providing a solution to actual sign shops, repro shops, quick print shop, prepress company, photo lab, museum, fine art giclée studio, or in-house graphics department.

Potential for Expansion



Museum of Mayan Art on campus

Other universities and community colleges in the US have expressed interest in a relationship with FLAAR. In Guatemala we already have a consortium of several universities, so a similar consortium in the US would be of potential interest. After all, digital imaging encompasses a wide range of input (scanning, digital photography), preparation (the imaging aspect), the output (a wide range of technologies, all constantly changing), and finishing (trimming, lamination, and preservation when necessary). Thus there is potential for an equally wide range of participating museums, community colleges, universities, as well as industry associations.

FLAAR will eventually forge an alliance with a museum, Hochschule, or university in Germany, Austria, Switzerland or The Netherlands since Europe is obviously a major market for digital imaging hardware and software. The fact that Dr. Hellmuth can lecture in German, Spanish and English assists this pattern of worldwide growth.



Museum of Mayan Textile on campus

FLAAR-Latin America

FLAAR began several decades ago as a non-profit research institute dedicated to professional photography of art and architectural history. During the 1970's, 1980's, and 1990's our art photography projects were primarily in museums throughout Mexico, Belize, Honduras, El Salvador, and Guatemala.





Museum Exhibit of Rollout photos we presented at an Archeological Symposium

By 1998 the leading large format digital camera company, BetterLight, asked Nicholas Hellmuth to be beta-tester for its innovative tri-linear scanning camera system for museum photography. As a result, the world's first digital circumferential rollout photography of ancient Mayan funerary vases was initiated by FLAAR at the Popol Vuh Museum in Guatemala on the campus of the Francisco Marroquin University.

As the FLAAR program in digital imaging continued to grow, the Vice-Rector of the university asked FLAAR to set up a more formal program of advanced digital imaging on their campus.

As an enticement the university offered to provide a professional staff as well as ample space in a brand new building.



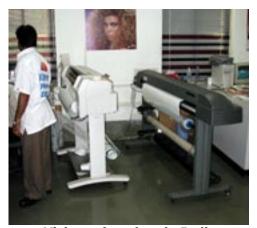
Answering inquiries from around the world



FLAAR editors attending Print 01 Tradeshow



Inspecting Roland at sign shop, Canada



Visit to sign shop in India

So today, although FLAAR is headquartered at Bowling Green State University in Ohio, we have an office at the Francisco Marroquin University in Guatemala. The FLAAR offices and evaluation facility there fulfill multiple functions.

First, most of the web sites of the FLAAR Information Network are designed and maintained at the Francisco Marroquin University. Although 90% of the FLAAR web sites are hosted in the USA or Canada, the graphic designers and web designers are in the FLAAR-Latin America office.

Second, our help center for readers worldwide is maintained at the Francisco Marroquin University. Readers from over 42 countries depend on FLAAR for information on large format scanning, digital photography, and inkjet printing. Four staff members are trained to answer every single email that arrives.

Third, the distribution of the 50 various FLAAR Reports is handled at the university. The reports are written by Dr. Nicholas Hellmuth and other FLAAR editors at trade shows in the USA and Germany, but these reports are designed at the university in Guatemala. All the reports are sent to eager readers in the US and around the world from there.

Fourth, FLAAR evaluates scanners, laser printers and wide format inkjet printers at the same facility. Epson USA sent a model 7500 printer there; Hewlett-Packard sent a DesignJet 1055cm, a DesignJet 800ps and recently a 42" DesignJet 5000ps. Our aging Encad NovaJet Pro 36, provided by Encad six years ago, is still with FLAAR, albeit somewhat overtaken by the higher dpi and faster printers from other companies. Heidelberg (Germany) has sent two scanners. USI just provided a laminator.

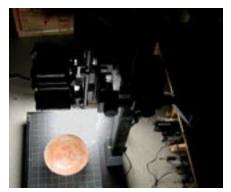
Fifth, the staff here also makes visits to sign shops, repro shops, prepress companies and to other users of digital imaging equipment to gather "actual-factual end-user" experiences to add to the FLAAR Report series. We have inspected Agfa GrandSherpa, ColorSpan, HP, and Roland printers in Mexico and Guatemala. We have done other site inspections in India, Canada, and naturally across the USA. You sure find out what works, and what does not work, when you are in an actual printshop.



FLAAR staff member being trained, ColorSpan university



BGSU review editors attending an informattive meeting



Scanning 8th century Mayan plate in Museo Popol Vuh



Digital image of the Mayan plate

Sixth, FLAAR staff receive training from pertinent companies at their headquarters so we can better understand the people as well as the products. Thus MacDermid ColorSpan provided a scholarship for two FLAAR personnel to receive intensive training on the ColorSpan printers in Minneapolis. Hewlett-Packard has provided training at their worldwide corporate headquarters of large format printing division in Barcelona, Spain. At present we are negotiating with other companies to receive their training.

Seventh, FLAAR is initiating training in digital input (scanning and digital photography). Whereas printing companies strive for optimal output, few brochures admit the reality: if you feed a large format printer a lousy image as input, all you get is a large format reproduction of a bad scan or an inadequate digital photograph. Ironically the best place to see bad images is at trade shows, specifically in the booths of the leading manufacturers of large format inkjet printers.

The digital studios and web-cam system will come on line over the next two years, but already you can see the results of the FLAAR Latin American facility on our web site, www.ctpid.ufm.edu.gt.

Although FLAAR has a facility in Latin America, we serve the USA, Canada, Europe, and the rest of the world from there. The staff of FLAAR-Latin America rotates with the staff of FLAAR-USA so that key personnel get an opportunity to experience the projects on-going at all the main offices.

FLAAR Courses on Digital Photography at Francisco Marroquin University

FLAAR together with the Francisco Marroquin University is already preparing courses on digital photography. We intend eventually to offer courses in high quality scanning.

The university is considering constructing ideal model studios of digital input: a digital portrait studio (single-shot and CMOS studio cameras), a digital reprographic studio (digital copy stand systems), a digital photography studio (tri-linear scanning backs on large format cameras), and a digital scanning studio (flatbed scanners).

We envision these studios side by side associated with a computer lab for students. This same computer lab can also serve as a teaching facility via distance learning worldwide.



FLAAR course on digital photography.

Our product is public education.



Panorama photography on location



FLAAR's director Nicholas Hellmuth at Technova India



Andrea David FLAAR's partner in Germany

As always, the physical location in Latin America is immaterial. With the Internet our virtual studio and all FLAAR information is available 24 hours a day across the USA, across Europe, and around the world. As ground work for this, the university has installed 20 new Dell computers with 19" LCD monitors. Although we normally use Mac platform, most universities are moving to Dell due to more favorable purchase price.

When finished, these studios will be broadcast over the Internet with a web-cam system. This means that all the studio photography lighting tripods, tripod heads, cameras, scan backs, and the computers and monitors which run this equipment will be seen in the 42 countries worldwide where FLAAR Information Network is read.

Presently the following courses are available via UFM. You do not have to be a student to take them; they are intended for anyone who is interested.

- Introductory digital photography (en español)
- Intermediate digital photography for museum curators, art historians, architects, etc. (in English)
- Digital panorama photography, outside, on location (in whatever language you prefer, English, auf Deutsch, en español)

FLAAR-India

FLAAR licenses all its web site content and all 50 reports to TechNova India for distribution in this part of the world. Dr. Hellmuth has visited Mumbai to research wide format inkjet printing usage customs in India.

TechNova India is the leading source for inkjet media as well as materials for traditional offset and other kinds of printing.

India is a rather large potential market, especially for such basics as scanners and the computers with monitors to run them.

FLAAR-Europe

Since leading RIP software is developed in Germany, Belgium, France, or England, since the leading tradeshows such as Photokina, CeBIT, and DRUPA are in Germany, and since the FLAAR director, Dr. Hellmuth, is of German descent, it is logical that FLAAR has a presence in Germany.

Actually, the FLAAR director received his PhD in art history from Karl-Franzens-Universitaet in Graz, Austria, has resided two years in Zurich, Switzerland, and his partner for the last seven years is a German lawyer, Andrea David.



Testing how the Cruse handles scanning textures



Lamination equipment at BGSU



Joe Catalano with Nicholas Hellmuth



Charles Spontelli and Brent Cavanaugh check color proofer

FLAAR does evaluations for Cruse GmbH (reprographic stand scanner), PosterJet, BESTColor RIP software of Krefeld, Germany and other European companies. We have also evaluated desktop flatbed scanners for Heidelberg.

FLAAR owns the web domain names with dot.de (German) domains for large format inkjet printers, for laser printers, and for large format digital cameras. Thus FLAAR reaches markets in Germany, Switzerland, and Austria, indeed the FLAAR director has lived for years in these three countries. Currently these German language web sites are only placeholders; they will expand as soon as we receive appropriate sponsorship.

Who we are?

As to "who we are," we are pictured in person, on all the web sites, in the index, under FLAAR. Nicholas Hellmuth was educated at Harvard, has held three honorary research positions at Yale, received his PhD in art history at Universitaet Graz, (Austria). FLAAR Co-Director Andrea David was an in-house corporate attorney for a large international German company which makes electronic sensors. Currently she is a contract lawyer for the Bonn office of a giant American multi-national company. She has a law degree from a German university.

Readers are understandably curious as to who we are, since our sites have shot up to #1 on the Internet in the field of high-end digital imaging and large format printing.

The cooperative program with BGSU has added intellectual assets to the team:

Joe Catalano is the head of the Center for Applied Technology, College of Technology at BGSU. His MBA is from the University of Chicago with additional MBA programs from Harvard's prestigious Business School.

The professor with whom we work at BGSU, Charles Spontelli, has his MS degree in printing with a specialty in color management from the Rochester Institute of Technology. Additional specialists are being hired to cover inkjet media, RIPs and other aspects of large format printing.

Milos Krsmanovic has professional printing experience before coming to BGSU where he is instructor as well as PhD candidate. He is currently working on a FLAAR project to evaluate RIP hardware and software.



Milos Krsmanovic with packages of RIP's availables for evaluation



Sheila Irving



Arrival of Bogen photography equipment to FLAAR-USA

Sheila Irving graduated from the BGSU undergraduate program in business. She is in charge of the growing staff of seven people at FLAAR who handle surveys and market research. This work allows us better to nudge the printer manufacturers to improve their wide format hardware and software by providing accurate lists of what features of current products need improvement. Naturally we also learn which features of current models work well; this knowledge of the pros and cons of each model is the foundation of our now over 40 FLAAR Reports.

Altogether FLAAR consists of about 15 full time employees. BGSU adds their staff to this number. The combined total makes the largest digital imaging information resource of its kind.

Digital Photography, Scanning...far more than just wide format printing

FLAAR is the first entity to focus attention on the role of input via digital photography as a means for improving the quality of output for wide format printers.

In addition to better inks, more appropriate media, superior drivers or RIP, better inkjet printhead technology and improved dithering pattern, it is essential to offer your printer a good image to start with.

Otherwise, ironically, the better the printer the more carefully the output showcases the defects, imperfections, digital noise, grain, and other downsides of routine input we all feed our wide format printers. So a million dollar printer merely makes your bad input look all the worse.

Several major photographic equipment manufacturers and distributors such as Bogen Photo have joined this FLAAR program to improve input for wide format output. These companies are now working with FLAAR to set up a demo photo studio dedicated to showcasing digital camera equipment and lighting.

More than a quarter of a million photographers will see the new FLAAR studio via the Internet each year.

FLAAR intends to feature, compare, and contrast

- Fluorescent lighting for digital photography
- · Tungsten lighting for digital photography
- · HMI lighting for digital photography
- Strobe lighting for digital photography (for 35mm and medium format)

• Flash lighting for on location (for 35mm SLR digital cameras primarily)

Nicholas Hellmuth's program in digital photography will cover, evaluate, and review

- · Large format tri-linear scanning back systems
- Medium format 1-shot through multi-shot backs
- 35mm SLR digital cameras

Our review policy

Pseudo reviews will praise anything that comes in a PR release, so we don't accept that kind of advertising.

How can you recognize a pseudo review? Well generally its written by a person who may not actually use the product. Or if so, only for long enough to write the article.

If the review cites, quotes, or uses any of the company's own photos, images, or hype, then you can suspect it's a result of the companies PR department masquerading as a review.

If a review fails to list substantive weaknesses, you might wonder who really wrote the material and what their agenda was.

If a review fails to list, mention, and identify nice features of other competing products, then you can suspect that the "review" is a plant by one companyexclusively to tout their own products.

A review by FLAAR is based on careful factual study of the product, and often also of the company behind the product.

When possible we learn about the product from other end users so we can present a wider perspective of experience to the product.

In some cases it's not realistic to have the product in our own facilities (such as a \$300,000 Vutek printer). But we can keep our ears open and report back what we learn. It does not take long to learn why Vutek outsells Nur and other grand format printers: they have a faithful following of people who find that Vutek printers tend to work and produce profits.

Summary

FLAAR is dedicated to public education on photography for museums and universities. As we entered the new millennium it is natural that we entered digital photography. In order to print your photographs, it is logical to develop a keen interest in learning about large format digital imaging. Since the purpose of both the Japanese grant and the American foundation grant that same pivitol year were intended

to result in FLAAR providing information on our transformation from traditional to digital photography and printing, we figured it would be appropriate to publish our experiences on the Internet.

This, in 1996, was the birth of what seven years later is the FLAAR Information Network of a dozen web sites in three languages. Our initial reports were sent out as individual e-mails to people who wrote asking for information. Over the years this kind of assistance has grown to 50 reports in inkjet printers and 30 reports in digital photography. Over the next year we will be expanding our reports on scanners and scanning.



Museum of Mayan Art on UFM campus

Every item of hardware and software is pictured and described on a website within the FLAAR Information Network. Pertinent equipment is featured in one or more of the 50 volumes of FLAAR Reports on large format digital imaging. All together this makes FLAAR the equivalent of the "Consumer Reports" of digital imaging.

Evaluations, reviews, and publications are endeavors that are appropriate at a university. BGSU is especially interested in setting the standards with which equipment can be judged on a fair and repeatable basis.

An average of 168,000 people per year come to a single FLAAR information web site to ask for recommendations on what to buy. This means more people come to a FLAAR web site than come to most company's booth at a trade show. Besides, FLAAR is independent, where possible we actually use the equipment or software we write about. In other instances our editors will contact other end-users to find out how their experiences are with each item of hardware or software. Thus our recommendations are based entirely on how well equipment functions for a real end-user in actual daily workflow in their



Equipment arriving to be evaluated

business. In addition we sift through information gathered at tradeshows across the USA and in Germany.

But our largest source of information is actually from our own readers. We glean tidbits from the now over 12,000 emails who have come to us from sign shops, prepress bureaus, quick print shops, museums, other universities, in-house graphics departments and so on. These actual-factual end-user reports form the backbone of all FLAAR reviews.

Adobe Acrobat PDF software means that FLAAR can send a full-color brochure with comparative evaluations on any product to any individual end-user, company, university, or government

agency across the USA and around the world.

As a result of the obvious care that FLAAR puts into researching its reports, our users are wildly enthusiastic about the FLAAR system of information and consulting.

www.wide-format-printers.org	www.fineartgicleeprinters.org	CLICK HERE TO VIEW EACH FLAAR
www.digital-photography.org	www.flatbed-scanner-review.org	NETWORK SITE
www.laser-printer-reviews.org	www.cameras-scanners-flaar.org	www.large-format-printers.org
www.FLAAR.org	www.ctpid.ufm.edu.gt	www.wide-format-printers.NET

Please realize that all reports are in Adobe Acrobat PDF format. The reader software is free from www.adobe.com/products/acrobat/readstep2.html.

PDF files are intended to be read on your computer monitor. Naturally you can print them if you wish, but if the photographic images within the reports were high enough dpi for a 1200 dpi laser printer it would not be possible to download them. So the images are intended to be at monitor resolution, naturally in full color. FLAAR itself makes the files available only in PDF format because that is the international standard. We have no mechanism to print them out and mail them.

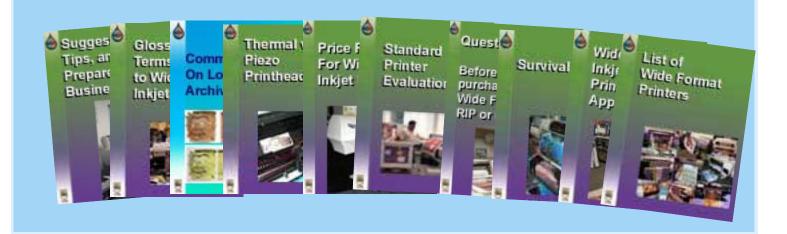
Obviously if you have d□ handle a basic PDF file.

www.wide-format-printers.net

Color Management Series



Survival Series



CAD Series



www.wide-format-printers.net

Media Series



RIP Series



Fine Art Glicee Printer Series



www.wide-format-printers.net

Wide Format Printers for Photo Exhibit Quality Series



UV - Curable Flatbed Inkjet Printers Series



Wide Format Printers for Signs Series



www.wide-format-printers.net

Solvent Ink Printers Series



Print for Pay Series

