PANORAMA

INTERNATIONAL ASSOCIATION OF PANORAMIC PHOTOGRAPHERS
IAPP

The Magazine Of Panoramic Imaging

July 1998
Volume 15, Number 3

Panorama is a publication of the International Association of Panoramic Photographers.
Our offices are located at
the various addresses listed below:

IAPP
PO Box 2816
Boca Raton, FL 33427-2816
561-393-7101/561-361-0494 fax
http://www.panphoto.com

President:
Dennis Trembley
600 Pierre-Caisse St.
Jean-SR-Richelieu
Quebec, Canada J3A 1M1
514-359-9188/514-359-9372 (fax)
panoram@cam.org

President Elect:
Liz Hymans
40 Lagoon Road
Belvedere, CA 94920
415-435-5842
lizpanopix@aol.com

Exec. Secretary/Treasurer:
Addie Lorber
1385-87 Palmetto Park Rd West
Boca Raton, FL 33486
561-361-0031/561-361-0494 (fax)
CustomLab@aol.com

Panorama Publisher:
Warren Wight
http://www.wordsandpictures.com
warren@wordsandpictures.com

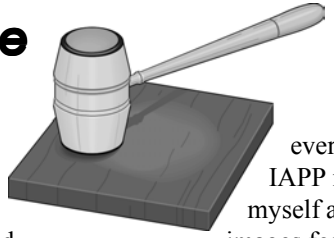
Board Members:
Will Landon, Bellevue, WA
206-746-3143 / 206-746-6985 (fax)
Bob McIntyre, Colorado Springs, CO
719-633-3265 / 719-577-5779 (fax)
Everen Brown,Salt Lake City, UT
801-364-2642 / 801-364-2646 (fax)
Richard Schneider, Bowie, MD
301-262-6719 / 301-713-6921 (fax)

All submissions become the property of IAPP & will not be returned. Submissions may be edited & may or may not be published at the discretion of the editor.

ISSN #1090-994X

Presidents Message

By Denis Tremblay



The Moab Convention was a big success. IAPP continues to grow and move forward with the good work of our past president Fred Yake. With the help of my board of directors, we will work hard to insure IAPP will continue on this route, going farther for you.

In the next few months and for years to come, panoramic photography will continue to change and grow in demand. In the past panoramic photography was primarily for large group shots and landscapes.

With the digital age upon us, there is more demand for panoramic images than ever before. Other IAPP members and myself are shooting images for QuickTime VR (virtual reality), and other Immersive Imaging applications for interactive viewing online via the World Wide Web.

New technologies including the Round Shot enlarger, and lower priced scanners, make it easier to print and convert our very long panoramic prints, negatives and transparencies into a digital format, making it easier for publishers to use and publish panoramic books!

Be ready for the new century 2000. ▬

Attention: IAPP members in New York

By Fred Yake

I have arranged for IAPP to participate with *Photo District News* which holds a large photographic trade show in NY City and LA.

The NY dates for this year are Oct. 29-31. I have arranged with *Photo District News* to provide a meeting room at the trade show where we could hold an IAPP weekend Conference. We can display our panoramas we well as give a special presentation on panoramic photography.

Should any of you members wish to host this conference or have a cooperative effort you must contact Photos District News in the next few days as well as Addie Lorber so you know the guide lines and we can start promoting on the web and in the magazine.

PDN Contact: Laura Windel at 212-536-6204. ▬

Secretary Says
IAPP Looking Back and Forward!

By Addie Lorber

The splendor of the scenery surrounding Moab was a delight to all attending the International Convention. The site was ideal, the, speakers informative and the added planned activities were a plus. Fred and the various committee members worked diligently to make sure a good time was had by all.

It was wonderful to see the number of foreign members attending, coming from Canada, Australia, Thailand, Japan and England. The IAPP also gained new members just by members going out and shooting, piquing the interest of people intrigued by the different cameras.

Congratulations to Richard Fowler for being the recipient of this year's PPA National Award of Merit award. Richard, for 10 years, laid the foundation for the organization we are all building today. Without his nurturing there may not have been an IAPP. I know I speak for everyone when I say no one deserves this honor more than Richard Fowler does.

We saw the passing of the gavel from Fred Yake to Denis Tremblay. Working with Fred these past 18 months I know first hand the hard work and effort he put in to make IAPP an even stronger organization. Under his guidance the IAPP gained its non-profit status, instituted the Richard Fowler Education Foundation, started the Boutique, which has been very successful, and worked along with Warren to improve the look and content of Panorama.

I now look forward to working with Denis. He has already begun working on the next International Convention to he held in Quebec City in 1999. Denis has also laid the groundwork for a weekend meeting in the South of France next spring. He will keep us posted, as information becomes available.

Congratulations to Liz Hymans, our new president-elect, Chairman of the Board Fred Yake and board members Bob McIntyre, Will Landon, Everen Brown, and Richard Schneider. The IAPP has strong leadership and a very active membership. I'm proud to be part of it. ▬

Rule Changes For The Print Competition

By Bob McIntyre - Print Competition Chairman

The board has changed a few rules for the print competition. There will be a new category for group photos and the digital category will be divided into enhance and altered. There are five categories now: straight back, swing lens, rotation, group, and digital.

The maximum length of a print is 48 inches, including the matte. The maximum length for contact prints from a cirkut camera is 60 inches, including the matte. No framed pictures are permitted. No signatures on the prints. Prints with a signature will not be judged but put in the general display. Numbers will identify all prints.

There will be four judges and a Print Chairman. Judges may not enter prints for judging, but may put prints up for general display. The prints will be judged on the second day of the convention.

All photographs must be taken within two years prior to the convention. You may enter one print in each of the categories you qualify for. ▬

From the Board

Officers and Board of Directors

Introducing the newly elected IAPP Officers and Board of Directors.

Seated from left to right: Addie Lorber - Secretary/Treasurer; Denis Tremblay - President; Liz Hymans - President Elect.

Standing from left to right: Fred Yake - Chairman of the Board; Bob McIntyre, Everen T. Brown, Will Landon and Richard Schneider (not shown) - Board of Directors. ▬

QPP Off To A Good Start

Qualified Panoramic Photographer Program Summary

By Jeff Weisenburger

I'm happy to report the QPP Program got off to a good start in Moab. Thanks to committee member Denis Hill, who helped prepare the test, and provided the reference books to verify correct test answers.

One of the most recent changes to the QPP Program is the way service points will be awarded. Originally, service points were awarded for the time period back to January 1997 only.

Now those service points will be retroactive to the beginning of IAPP. For those members who have passed the exam, service points in most cases will have to be recalculated. It will be the responsibility of the member to notify the committee of additional service points earned.

A total of 22 members took the test. All 22 members passed with scores ranging from 75% to 98%. The test consisted of multiple choice, fill-in, and camera identification. The test is just the first step in obtaining the QPP designation.

Applicants, after paying a $15.00 registration fee to the IAPP Treasurer, will need to submit six panoramic prints for a yea/na judgement. Four of the six prints submitted must qualify.

A minimum of ten service points will be needed as part of the certification. These points can be accumulated in any of the following categories:

2 points - *Completion of a term as an officer or board member.*

1 point - *Participation on an IAPP Committee.*

1 point - *Publication of an article in Panorama Magazine.*

1 point - *Attendance at IAPP International Convention or weekend conference.*

1 point - *Presentation at International Convention or local Weekend Conference.*

1 point - *1st, 2nd, or 3rd place photo contest winners at International Convention.*

At present the Committee members are Denis Hill, Charlie Ridgeway, Benjamin Porter, and Jeff Weisenburger. Board member Will Landon will oversee the QPP Committee. We will make every effort to administer the test at the next scheduled regional meeting. ▬

Member Profile

Meet Your President... Denis Tremblay

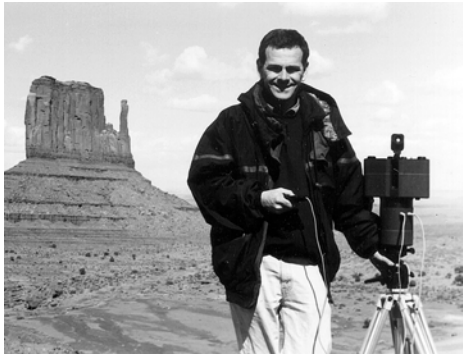
By Jean Yake

After graduating from high school, Denis went to the Conservatory of Music to become a teacher of music but while doing amateur photography changed his vocation to photographer. Denis has been a professional photographer in Quebec, Canada for 27 years. Along with his wife Micheline, daughter Any and son Paul he owned and operated a successful camera shop and photo lab for many years. Upon learning about panoramic photography in *Shutterbug Magazine* 13 years ago, Denis decided this was a format he wanted to pursue. Micheline and Any are also involved in panoramic photography. Since joining IAPP he has never missed an IAPP convention.

Shooting with a Roundshot camera he specializes in interiors of buildings such as churches and photographs Hot Air Balloon Festivals. In 1989 Denis was the Official Photographer representing Canada and the U.S. during the 200-year celebration of the French revolution in Metz, France where there was 789 balloons participating. In 1996 Denis was voted Man of the Year by the Chamber of Commerce of Jean-SR-Richelieu and has had Expositions of his work in 9 different countries. His photo entry with a swing lens camera during the '96 convention got first place and in '98 he took home two second place awards.

Denis has produced panoramic calendars, photo cards and did a book of panorama photos on his home town in Quebec. Denis shot a panoramic photo for a client that was produced into a 100+ foot finished print. Currently he is involved in shooting panoramas of cities for VR and his most exciting endeavor has been shooting for a book on Jerusalem, with others in the planning stages.

Denis enjoys talking with IAPP members about the technical aspects of as well as the marketing of panoramic photographs. ■



While in Tunisia, Denis photographed these "camel shadows" from atop his own camel.

Denis captured this panorama during his visit to Holland.

VR News

By Warren Wight

Kaidan, Kodak and Live Picture Announce the First Turnkey Immersive Imaging Solutions for Interactive Photography. Four new immersive imaging kits offer custom solutions that include Kaidan hardware, a Kodak camera, and Live Picture software.

FEASTERVILLE, PA, June 16, 1998 - The leading manufacturer of immersive imaging hardware, Kaidan Incorporated, announced new solutions for creating interactive panoramas and object movies.

Created through collaboration with Kaidan, Kodak Professional, a division of Eastman Kodak, and Live Picture Inc., these four new kits offer the first professional level turnkey solution in this rapidly growing industry.

According to Jim Anders, President of Kaidan, "These kits offer a compelling solution for professional photographers, multimedia and web designers, advertising firms, and anyone who wants to utilize the technology that is revolutionizing e-commerce, photography and web design. Now virtually anyone has access to a full set of tools that make immersive imaging a reality!"

More VR News, page 5

VR News
from page 4

The first two kits, Interactive Imaging Solution for the DC220 Pro Edition Camera and Interactive Imaging Solution for the DC260 Pro Edition Camera, provide panoramic solutions that work with Kodak's newly announced DC220 and 260 cameras. For their role in the collaboration, Kaidan engineered custom molded panoramic tripod heads for both of these cameras. The Kaidan KiWi+ 220 and KiWi+ 260 positions the camera in portrait orientation (for a wider field of view) offers a set of click-stops (16 and 18 positions, respectively), includes a twin-axis bubble level to indicate that the unit is level, and positions the camera so that it is rotating around its optical center, or nodal point.

The third kit, Interactive Imaging SLR Solution, will feature the Kaidan QuickPan Magnum QPX-2B panoramic tripod head for Kodak single lens reflex cameras, including the DCS 315, DCS 4XX and 5XX series. The QPX-2B is a custom tailored version of Kaidan's top-of-the-line professional panoramic tripod head. The QPX-2B offers a choice of click-stop positions, a low profile micro-tilt adjustment stage, twin-axis bubble level and many additional features.

All three kits include a kit-specific version of Live Picture's PhotoVista software, and a trial version of Reality Studio. Like the KiWi 220 and 260 brackets, this software eliminates the process of tailoring your camera to fit the application. You are ready to begin shooting as soon as you open the kit!

The fourth kit, Interactive Imaging Studio, features a new Kaidan motorized turntable for single-row object movie creation. Designed to be controlled via your computer, the new 19-inch diameter turntable supports objects up to 75 lbs. in weight. The turntable offers three elastic slip-on caps in three colors; blue, red, and green, that make it easy to "key" out the background.

Also included with all the kits is an instructional video that demonstrates how to get started and provides shooting tips from professional photographers.

The Interactive Imaging kits from Kodak, Live Picture and Kaidan will be available this summer through authorized dealers of Kodak Professional products, including Kaidan.

For more information about the Interactive Imaging kits, please contact Krista DiGiacomo directly at Kaidan: Kaidan Inc., 703 East Pennsylvania Blvd., Feasterville, PA 19053. 215-364-1778 or fax 215-322-4186. krista@kaidan.com - http://www.kaidan.com.

VideoBrush Panorama Software is Faster and Better than Ever

Version 2.0 supports QuickTime VR, increases color quality and resolution, as well as adding support for USB and panoramic image scaling.

CARPINTERIA, CA - June 16, 1998 - VideoBrush Corporation announces a major upgrade to their popular Panorama wide angle imaging and web authoring software product.

The new Panorama version 2.0 software adds full support for USB and M-JPEG video cameras, better color representation and higher resolution.

VideoBrush Panorama software's professional features include image scaling, tripod mounting and more comprehensive image editing. In addition, improved memory handling algorithms allows creation of larger panoramic images and longer sequences.

For web and multimedia authoring, Panorama can now create and export QuickTime VR, as well as Infinite Pictures SmoothMove (.pan) and Live Picture RealSpace (.ivr). VideoBrush Panorama now processes full 24-bit color and provides outstanding color fidelity.

VideoBrush has also fine-tuned Panorama's real-time front-end, making it even easier to use and providing more creative control options.

VideoBrush Panorama software is still the only Windows 95 software on the market that can transform moving video sequences from camcorders, VCRs, avi files, and digital video cameras) into wide

More VR News, page 6

New Art Gallery Features Panoramas

IAPP brother members Kevin and Neal Kapp have opened an art gallery specializing in panoramic photography, the 4th Street Gallery located at 486 W. 4th Street, Dubuque, Iowa 52001. Established in 1998 by Kevin and Neal in the 1867 John Stoddard House, their goal is to serve their customers with the finest local art and the highest quality panoramic photography. The gallery is nestled next to the Fenelon Place Elevator in the historic cathedral district of Dubuque, the oldest city in Iowa. The elevator is "The world's steepest, shortest scenic funicular railway", 296 feet in length, elevates passengers 189 feet from 4th Street to Fenelon Place, with panoramic views of the Mighty Mississippi River and three states.

Kevin and Neal hope that IAPP members take advantage of the Gallery's location, location, location to sell there finest *best selling* panoramic images. The next step is yours if you would like to turn those panos into dollars. Contact Kevin, 319-583-0900 or e-mail him at: cirkut10@mwci.net. ■

Above: Kevin and Neals 4th Street Gallery in the 1867 John Stoddard House with the Fenelon Place Elevator on the right. Left: The Fenelon Place Elevator taking passengers to Fenelon Place 189 feet above 4th Street.

VR
from page 5

angle, panoramic still images up to 360 degrees around. Panorama enables users to easily create high resolution
and wide angle panoramic mosaic images that can be printed out, sent via email, or posted on a web site for online virtual exploration. No tripods, rigging or special lenses are required. Panorama software provides the unique capability to automatically capture, process and create images of all sizes and dimensions.

Based on VideoBrush Corporation's patented digital mosaic, alignment and real-time computer vision technologies, Panorama software creates the mosaic images from a series of overlapping frames that are digitally combined into a seamless final image.

Most other wide-angle imaging products require complicated set-up and extensive image manipulation within the applications. VideoBrush Panorama software, on the other hand, automatically assembles the image from a series of video images created by moving the camera back and forth, up and down, across a subject. Image quality is not limited by field of view or aspect ratios.

In late July 1998, the Panorama 2.0 product will be available for sale via download from www.videobrush.com and by calling 1-888 PIX-FORU (1-888-749-3678). MSRP is $59.99 for each of the VideoBrush products. Existing users of the VideoBrush Panorama retail product can upgrade

More VR News, page 11

Immersive Imaging Part Two-
Panoramic and Panospheric Image Capture

By Chris Brosinsky

In the previous article, the concept of Immersive Imaging was introduced, being an extension to the panoramic format. Panospheric images were also introduced as being an extension to the panoramic format, offering a substantially spherical field of view of 360º in pan by 180º vertical field of view.

An Immersive Image is one in which the viewer using a computer coupled to a monitor or headset has the sense of being "immersed " or surrounded by the image and can look up and down, all around. All forms of immersive imaging are finding prolific use on the Internet, marketing and on CD ROM projects such as the electronic versions of encyclopedias.

In all cases of Immersive Imaging, as with any other type, the art of image capture remains the most critical aspect of the imaging process. Specialized cameras, techniques, lenses and digital conversion have all improved the efficiency with which images can be captured. In the past year many companies have stepped into the immersive imaging market with product offerings for building and displaying these special images. It is now common to expect that a personal digital camera should be bundled with software for creating panoramas from segmented images. Once the imagery is captured the art of processing or building final images and displaying the end results are considered to be solved and repeatable processes.

As previously discussed there are three methods of capturing source imagery from which panoramic images can be made. Those methods are: 1. Specialized rotational cameras or similar, 2. Specialized lenses, and 3. Segmented methods or using indexed/registered photographs. In present commercial practice, Panospheric images can only be created using these segmented methodologies.

1. Rotational cameras are very familiar to readers of this forum and produce exceptional quality images of panoramic dimensions up to 360º by up to 90º. These images convert quite nicely into digital format for display on computer screens, full panoramic dimensions being the best fit here. Typical systems include the Globuscope, the Roundshot, the Hulcherama and many custom built systems. These images have found extensive use and are the foundation for the proliferation of today's electronic panoramic images. In general, these systems are not capable of capturing panospheric imagery at this point, due to limitations in either vertical field of view lenses (max vertical field of view is that derived from a 25mm lens) and/or limitations in full rotational freedom (up to but not a complete 360º image). Extending these cameras to capture the full field of view for panospheric would be a welcome addition to the capabilities.

2. Specialized lenses such as the rare Nikkor 6mm f 2.8 can capture a largely spherical field of view in one skyward pointing image with its field of view being 220º. (It's hard to get out of the field of view here!)

In Figure 1 we show the way this impressive lens can be use for panoramic imaging. This amazing lens has sixteen glass elements and weighs about 13 pounds, and is certainly not something you would want to pack around for long. The resulting polar image is then converted into a rectilinear or "panoramic strip". It is not practical to capture panospheric imagery with these large refractive optical trains or to extend the field of view beyond what this lens achieved.

Figure 1 (above) The Nikkor 6-mm lens on a Nikon F90 body. Photo PIER Corporation.

3.0 Segmented - The segmented methodology is by far the simplest way of capturing the full field of view; the trick is to simplify the methods of capturing the images. The balance of registering the photographs between shots, the changing of lighting conditions during the shoot, the movement of the subject in question, and the manipulation complexity are all factors that must be accounted for. In the most practical form, the faster that you can take the images (in terms of elapsed time not exposure time) the better as it allows the issues of changing environments to be a non-issue.

3.1 Segmented - Panoramic. Using a series of images taken from a rotationally

"In all cases of Immersive Imaging, as with any other type, the art of image capture remains the most critical aspect of the imaging process."

indexed tripod head, a photographer can create source imagery using conventional lenses. The resulting images must then be scanned into digital format in preparation for image processing. Figure 2 (below) indicates how a series of images (generally accepted as 5-32 images with conventional lenses) are captured to form the source imagery from which the panorama is made. The images must overlap to be seamed and distortion corrected; the more overlap the better. The lens chosen sets the vertical field of view.

The good news is that there are a host of software tools to stitch these images together, many of which do color blending and automatic seaming to create the finished panoramic image. The product offerings in this arena are abundant, as there appear to be no proprietary entry barriers to creating software tools of this nature. As consumers we are able to get this amazing capability very easily and inexpensively. Using these types of tools images from the recent Mars Pathfinder/ Sojourner mission have been created using a mosaic of many images to create a sense of being.

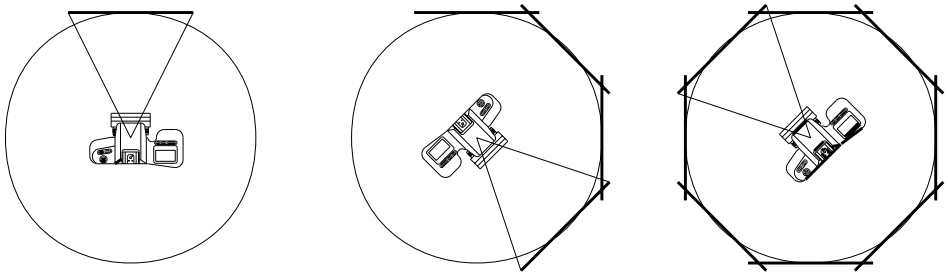


Figure 2 - Registered source images for building panoramas (shown capturing eight images). Image PIER Corporation.

Figure 3 - Distortion created when displaying a spherical or panospheric field of view in panoramic format. 360° x 180° field of view of Military vehicle inside building (taken from on top of vehicle) Photo PIER Corporation.

3.2 Segmented - Panospheric - Segmented methods are currently the only practical way of capturing the full spherical field of regard. The "sphere" is captured in a segmented way with as few as two images. The resulting spherical image is then created by stitching the two source images together complete with seam blending and distortion removal to effect the final product. Although not typical for this imagery, when viewed in a panoramic strip this full vertical field of view image exhibits the expected distortion (Figure 3) creating an interesting effect. In this image notice the building's beams at the top of the image and their shape; these really are straight, the effect is caused by the distortion of displaying a spherical image in rectilinear form. The best way to view such a spherical field of view is to do it immersively, such that the beams appear straight as there really are. Typical panoramic images do not account for such a large vertical field of regard; notice that the "typical" panoramic image is a subset of this one i.e. a cropped version of this image.

Currently there is only one fully panospheric imaging creation product on the market, the Interactive Pictures, IPIX. This software package allows the photographer to stitch together a pair of diametrically opposed wide field of view (180º) images taken with an 8-mm f 2.8 lens. There are several lenses that will suffice here. The best of the bunch is the fisheye Nikkor 8-mm, as it doesn't suffer from aberrations and light fall-off near the edge of the imaging field. Figure 4 shows the typical way of using the 8mm lens on an indexing head. Note that the area eclipsed by the indexing head and the tripod is digitally filled in during the image building process to create a fully immersive image. In practice the size of the "spot" on the ground is about four feet in diameter.

Figure 4 (right) Nikkor 8-mm with 180° field of view. Shown on indexing head with F70 body. Photo PIER Corporation.

Figure 5 (next page) is an image taken from the inside of the Stonehenge monument with such a set up. You can compare it with the immersive format version on our website at http://www.piercorp/com/ipix1.htm to see for yourself the difference in viewing an image immersively makes. To view the image you may need the browser plug-in from IPIX (IPIX is Active-X enabled) that is available by linking to Interactive Pictures Corporation from our site.

More Immersive Imaging, page 8

Immersive Imaging
from page 7

While you are at our website, we invite you to check out some of our other immersive images, which are presented in both panoramic and panospheric varieties.

In this format the extreme range of contrast - shadows and the sun almost always being within the image - is a technical concern. The panoramic version of the image shows a lot of shadowing and most of the rocks in the shade. The panospheric version on-line is the identical image. The bottom line is that there is only one "proper" way to view these full field of regard mages, and that is immersively.

Our Website at http://www.piercorp.com has a full discussion about Immersive Still imaging and for your convenience has links to all of the developers we are aware of and their software offerings. We invite you to use our Website as a launching point to investigate the Immersive Imaging field, to check out our example images, and to ask us questions about the technology.

Panospheric(tm) Imaging Engineering Research (PIER) Corporation is neither a Website developer, a reseller for, nor affiliated with any of the products mentioned. We do however extensively use Immersive Imaging products to provide the best imagery solutions for our clients. If you feel your projects, ideas or products can benefit from immersive imagery please contact us. Should you have questions or require assistance in looking at our site or others that feature immersive imagery, we would be pleased to help.

PIER Corporation
703 Taylor Road SE
Medicine Hat, AB Canada
T1B 3X7
403-525-3124 voice
403-526-5818 fax
info@piercorp.com
http://www.piercorp.com

Figure 5 Panoramic view of Stonehenge taken from the inside of the Monument. Photo PIER Corporation. 360° x 180° field of view presented in panoramic format.

Product Update

Fujifilm Announces Fujichrome MS 100/1000 Professional Color Film

New multi-speed color reversal film offers EI 100-1000 speed range for unprecedented versatility and image quality.

PMA 698, NEW ORLEANS, LA, February 12, 1998 — Fuji Photo Film U.S.A., Inc. is debuting its new Fujichrome MS 100/1000 Professional multi-speed daylight-type color reversal film. With a basic speed of ISO 100, the new film employs Fujifilm's latest emulsion and innovative film technologies for superior image quality and push-processing capability to EI 1000. Versatile enough for sports, fashion, editorial or any type of photography in variable or low light, Fujichrome MS 100/1000 delivers spectacular results in whatever speed the photographer chooses.

Photographers using Fujichrome MS 100/1000 film rated at EI 100 will find the accurate color and fine grain results that are the hallmark of Fujifilm professional film products. The new film shows its true capabilities for push processing when used at EI 200 all the way up to EI 1000. Even over this wide speed range, Fujichrome MS 100/1000 still produces excellent grain, sharpness, color balance and color reproduction.

Professional photographers now have a color reversal film that provides outstanding flexibility while delivering consistent results and exceptional image quality in changeable lighting conditions.

"While many transparency films will let photographers Push one or two stops for more speed, Fujichrome MS 100/1000 delivers consistent results every time, even at levels up to EI 1000" said Steve Herstatt, Product Manager, Photofinishing and Professional Markets Division, Fuji Photo Film U.S.A., Inc. "This is a breakthrough product for photographers looking for outstanding-image quality and unprecedented versatility from a color reversal film."

New Fujichrome MS 100/1000 utilizes a variety of new technologies from Fujifilm, including:

• New DDG (Distinctively Developing Grain) Technology — The next generation of the DDG technology used in Fujichrome films, new DDG technology dramatically raises effective film speed as development time increases. The key is there is virtually no effect on tonality, tonal balance or color balance. The result is the consistent image quality from standard processing time of EI 100 to push processing at EI 1000.

• New MFIL (Multi-functional Intermediate Layer) Technology — First introduced in Fujichrome ASTIA 100 film, this technology has been improved for greater control of push-processing characteristics. Applied individually to each emulsion layer, this technology helps preserve color clarity, and minimizes changes in tonality, tonal balance color balance and color accuracy that result from changes in processing time.

• AGC (Accurate Gradation Control) Technology — AGC technology uses triple sub-layers in each light sensitive emulsion layer together with the precise placement of extremely fine, uniform grain. The result is clean, bright highlights and seamless gradation from brightest highlights to deepest shadows.

• SUFG (Super Uniform Fine Grain) Technology — Fujifilm's proprietary grain technology makes possible outstanding push-processing image quality.

• DIR (Development Inhibitor Releas-

ing Compound) Technology — This innovative Fujifilm technology help deliver brilliant, realistic color reproduction over the entire EI 100-1000 speed range.

New Fujichrome MS 100/1000 Professional film can be processed in standard E-6 chemistry. It will be available in spring 1998 in 135-36, 120 and 220 sizes.

Robot Silent Mini-Camera For Candid Observation

Extremly lightweight (9 oz.) unbelievably compact (3 1/2" x 2 1/2" x 1") the silent Robot SC Auto-Electronic 35mm mini-camera combines all desirable features for security, surveillance, cavort photography, at an affordable price.

The electronically governed shutter offers through-the-lens light metering, automatic speeds from 4 seconds to 1/500 sec. plus manual settings from 1/30 to 1/500 sec. for 100-3200 ASA films, plus B and X synchronization at 1/60 sec. The Schneider Xenagon 30mm f5 high-resolution lens has a wide angle of 30º with great depth of field, suitable for life-size enlargements. There is a choice of 4 distance settings: infinity to 8', 8' to 5 1/2', 5 1/2' to 2 1/2', and for copies up to 13" x 13".

The daylight quickchange cassette/camera back slides off easily, gives 35 color, or 40 black and white (50 with polyester) exposures of 16 x l6 mm on 35mm film. The camera can be set for automatic one-by-one shots or sequences, at 1.5 or 0.9 second intervals, within a wide temperature range of -5º to +150º F (-20º to +70º C).

Operated by a standard 6-volt battery, with red testlight or an external rechargeable battery rod, the integral mini-motor automatically recocks the shutter, counts the exposures and advances the film, up to the automatic film end stop. You have a choice of manual, remote or radio release. Other accessories include daylight quickchange cassettes, viewfinder, camouflage cases.

ROBOT SC with 1.5-second intervals, with case - $2,999. Same, with 0.9-second intervals - $3,199. Mini-Radio Release for up to 1200 ft. - $l,699.

All are covered by Unique Full Warranty Buyer Protection for Life - Plus Reincarnations.

The Robot factory came out with the first 35mm camera with integral motor in 1932, long before any other camera maker, and has been manufacturing exclusively motorized 35mm cameras, for any data recording ever since, for more than 65 years.

Please fax, call, or write for additional information and questions.

Heitz Service Corp. 51 Years, 34—11 62nd Street, Woodside, NY 11377. Phone 718-565-0004 or Fax 718-565-2582. http://www.sbshow.com/NY/Heitz ▬

The IAPP Boutique

T-Shirts & Caps

←**Caps** - *adjustable, white w/red logo* - $8.00

←**Coasters** *set of 3* - $10.00

All T-shirts are best quality available, 100% cotton, pre-shrunk, heavy weight, taped neck, hi-crew collar, full fit.

←**Standard LogoTee's** *red logo* - *$15.00*

****New Items****

IAPP Cap - *modern low profile design, brushed suede visor, cream with blue leather adjustable strap* - $9.95

IAPP long sleeve shirt - *heavy duty denim that's soft as can be, looks great, washes up great, large & XL* - $34.95

Panoramic Resource Book - *Contains information on panoramic equipment, supplies, service providers and more! You can't pass up this deal* - $5.00 each.

Audio tapes - *Set of six, 90 minute audio casettes, of presentations at the 1996 IAPP Convention* - $18.00

PHOTO BOOKS

IAPP members take 10% off listed price for books.

Photographers Resource	0-8230-7654-7	$19.95
Aerial Photography	0-8174-3293-0	$22.50
Guide to Russian & Soviet Cameras	1-874031-63-0	$45.00
The Backpackers Photography Handbook	0-8174-3609-X	$19.95
Capturing the Landscape with your Camera	0-8174-3658-8	$22.50
Capturing the Night with your Camera	0-8174-3661-8	$24.95
Field Guide to Photographing Landscapes	0-8174-3871-8	$16.95
Industrial Photography	0-8174-4017-8	$22.50
John Shaws Landscape Photography	0-8174-3710-X	$24.95
The Photographers Guide to Exposure	0-8174-5424-1	$18.95
The Photographers Guide to Using Filters	0-8174-5449-7	$22.50
The Photographers Guide to Using Light	0-8174-5422-5	$18.95
Photographing Buildings Inside and Out	0-8230-4016-X	$27.50
Pro Lighting: Indoor Shots	0-8230-6465-4	$29.95
Shooting for Stock	0-8174-5871-9	$22.50
A Users Guide to the View Camera	0-8230-4988-4	$36.50
Using the View Camera	0-8174-6353-4	$22.50
The View Camera - New Ed	0-8174-6375-5	$22.50
Panorama California	IAPP-00000-1	$20.00

To order: Send check, money order, VISA, MC (include $4 shipping) to:

➔IAPP Boutique • PO Box 2816 • Boca Raton, FL 33427-2816←

Discovering " La Patagonia" Through Panoramic Photography

By Alberto Gandsas

For many years I have been fond of photography, with some incursions in 16mm amateur cinema. The photographs were the classic of any family album with some adding of journeys or excursions.

For work reasons, I started travelling to the south of my country. Those trips were never less than 4,000 miles by car in a circuit that can start either in the West or the East. I recommend, by experience, to start in the East where you enter the "Patagonia" approximately 700 miles south from Buenos Aires.

The smooth landscape of the famous "argentine pampa" changes little by little as we are entering in rough and windy zones. We must not forget that the National Route 3 to the south, which we take, is very near the Atlantic Ocean.

With large scenics opening to our sight, with horizons that seem incredibly faraway, the panoramic view before us invites the contemplation of such a wonder.

It is there ... in that moment ... when you perceive the image that slowly grows up in yourself, and you feel the necessity to transmit it. As a painter may do with his colors, or the writer with his words, you take the camera and begin to discover angles, composition, color, contrasts and hidden creativity overflows yourself.

If we then go west, we are travelling through the country. We will almost reach the foot of the "Cordillera de Los Andes" where lakes, mountains, snowcapped peaks and places (where, perhaps, you are the first human being stepping on them) are waiting for us. The "Patagonia" is huge, attractive, and offers for the lover of panoramic photography endless opportunities.

My enthusiasm for photography is suddenly inclined towards the panoramic technique, and through the internet I found IAPP. I discover in IAPP a whole world that moves in this specialization.

Even though my residence is far, geographically speaking, through the wonder of Internet, and with the magnificent IAPP *Panorama* magazine, today I receive constant information about such exciting subject as panoramic photography.

Of course I am at the disposal of the members of IAPP that would like to come and visit our "Patagonia" and return home with wonderful photographic images.

Alberto Gandsas
Buenos Aires, Argentina
Gandsas@interlink.com.ar
http://www.gandsas.com

VR News
from page 6

their version for free via the web site. Panorama 2.0 is Year 2000 compliant.

VideoBrush Corporation, founded in 1997, is a leader in the development of innovative digital video and photographic technologies. VideoBrush Corporation develops and markets technology, SDKs, and image alignment and mosaic composition tools that enable personal computer users to easily create seamless, panoramic, wide-angle mosaic images from video generated by camcorders and video cameras, as well as from still photographs, especially images created by digital still cameras. These panoramic images can be viewed directly and printed, saved and exported to another application for further processing, shared by e-mail or fax, or posted on a web page and viewed with a panoramic viewer. Current VideoBrush products include Panorama, Whiteboard & Photographer panoramic imaging software, and associated SDKs.

Ongoing research and development at VideoBrush is supported by Sarnoff Corporation of Princeton, NJ and its world recognized researchers in the fields of computer vision and pyramid processing. The Company's corporate partners include Toshiba, Sony and Winnov.

For additional information contact:

VideoBrush Corporation
4690 Carpinteria Ave.
Carpinteria, CA 93013.
805-566-0030/fax: 805-566-0084
marketing@videobrush.com
www.videobrush.com.

Part 2

Improve Your Panoramas by Improving Your Timing

By M. Denis Hill

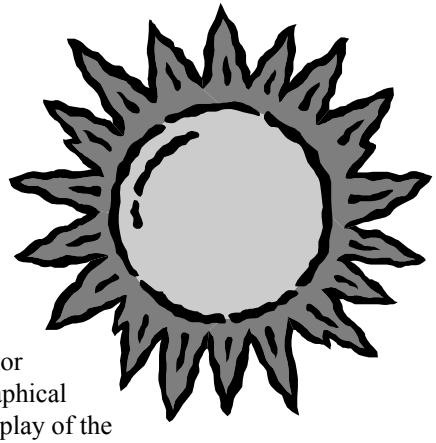
In the last issue of Panorama we discussed resources (published in print and online) for insuring you are in the right place at the right time for your panoramic photographs. Now let's see what's available in software and the advantages software has over other sources.

Software solutions have several advantages over print and Internet sources of information. Software offers more selective data than books, and better graphical representation than most web sites. Some software offers representations of data that are elsewhere unavailable. And your laptop computer brings infinite stores of information with you on location.

Stock photographer Charles Krebs (425-644-0077) has tailored his program, Suntracker, to the specific needs of photographers. An example of this approach is a report showing the position of the moon in 15-minute increments for two hours before and after sunset and sunrise. Since Krebs wrote Suntracker as an MS-DOS program, it runs under DOS, Windows 3.1, or Windows 95. His product, which is priced at $49, is the source of information published in Outdoor Photographer.

The Naval Observatory Multiyear Interactive Computer Almanac, (MICA) is touted as an easy-to-use program that provides much of the information printed in the annual Astronomical Almanac. It covers a 16-year period (1990-2005) and allows the user to tailor computations for a specific location and accepts input catalogs of celestial objects prepared by the user. Version 1.5 of MICA for both PCs and Macs is about to be released and orders for it are now being taken.

SunTimes for Windows at **http://www.zephyrs.com/** generates sunrise and sunset tables for any year and for any location on Earth. Get monthly reference tables as output to the screen, printer, or to ASCII text files. There is a built-in database of thousands of cities worldwide.



A color graphical display of the position of the sun shown across the local sky plots the sun at rise and set, and for every half-hour between. For those who plan their photos in excruciating detail, it's possible to add the features of the local horizon like mountains, buildings, etc., by specifying the altitude and azimuth points. This

program also calculates times of twilight and the maximum altitude of the sun, time of maximum altitude (local Noon) and hours of sunshine for each day. Besides rise and set times, get the horizon location, or azimuth, for where the sun rises and sets. The effects of refraction are even included for precise sunrise/sunset times. For high latitude locations, program indicates if the sun never rises or sets (midnight sun effect). This program for Windows 3.1 or 95 is priced at $59.95.

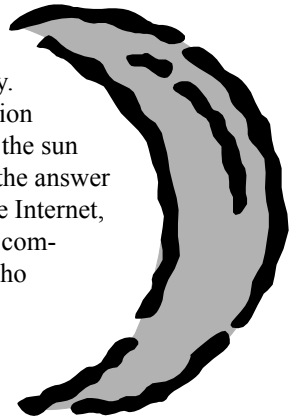
Moonrise version 3.2 at **http://www.iserv.net/~bsidell/moonrise.htm** advertised as a simple-to-use, yet accurate program designed to run on Windows 95 or Windows NT 3.51 or later. Moonrise for Windows 3.1 is available to download. Moonrise is a shareware program offered for free trial usage. If you keep it, you are expected to register it for $20.00 U.S.

Sunrise Sunset Calculator at **http://www.suncreations.com/sun.html** is a shareware program that calculates sunrise, sunset and twilight times for locations worldwide. Results are said to be accurate to within five minutes in Alaska, and more so elsewhere.

EarthWatch at **http://www3.stratos.net/lnagy/** graphically presents in real-time a dynamic Mercator projection map of the world. Features include: day and night areas of the earth, sunrise and sunset times for a specified location and date, comparison of sunrise and sunset times with those of the previous day, tracking and display of latitude/longitude coordinates and major cities as you move the cursor over the map, position, age, and phase of the moon. Three map types are offered: elevation, natural features, or national boundaries.

Conclusion

As you can now see, there is no excuse for failing to consider celestial bodies in your next photographic itinerary. When the question is, "Where will the sun and moon be," the answer is as close as the Internet, a book, or your computer. In fact, who among us is satisfied with a single camera? I say, we all need several of these sources.



One caveat: remember that your compass does not point to true north. To make your readings match the tables you'll have to adjust your directions to true (map) bearings using the magnetic declination (variation) for each area you visit. You'll find this information in USGS topographic maps or other sources. ▬

IAPP International Convention 1998!

What will go down as one of the most successful International Conventions ever, the IAPP International Convention at Moab was great. There was no way not to enjoy the Moab area and the Convention.

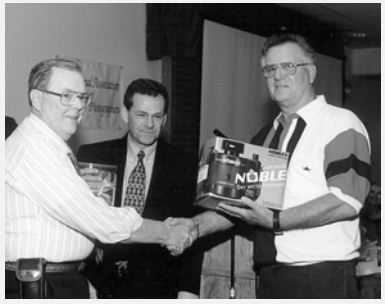
The weather was kind to us. Lots of blues skies with a touch of cloudy (and a little rainy) weather for those dramatic weather panoramas. The schedule was set up to allow plenty of time for shooting panoramas of the incredibly picturesque area.

There was something for everyone at the Convention this year, with organized outings and field trips with local members or those familiar with the area. Camera manufacturers also

More IAPP Convention, page 15

Above: IAPP group shot at Monitor & Merrimak Overlook, photographed by Peter Lorber and Thomas Bleich.

The passing of the gavel.



Joe Strassbaugh won the Noblex.

Don Forthuber won the Roundshot.

Congratulations Dick!

Left: Charter IAPP member Richard Fowler receives the PPA National Award of Merit, for his years of dedicated service to IAPP. Presented by John McCarthy.

Moab International Convention Outstanding

Text and photograph by Seth Arlow

In addition to the great scenery, good weather and camaradie, a high point for me was the talk given by Joe DeRenzo on digital printing of panoramic images, including the creation of 360º images from three seperate but stitched together photos taken with a swing lens camera. The quality of the ink jet prints was inspiring!

The photo to the left shows a crowd of IAPP members at Dead Horse Point at 6:30am---reached by our convoy after dodging cattle on the roadway in the pre-dawn light.

IAPP Convention
from page 13

took members on photography safaris (bringing along cameras for the members to try out). Two river trips on the Colorado River were offered, a river rafting trip and a night cruise as well. Both got rave reviews from the participants when they got back to the hotel.

As with past Conventions, there were lot's of Cirkuts and older panoramic cameras represented, but the real buzz around the convention was "digital imaging" and "virtual reality". IAPP members who have been working with this exciting new arena of panoramic photography, put on demonstrations, workshops and open forum discussions about panoramic imaging and its use in digital and virtual reality applications.

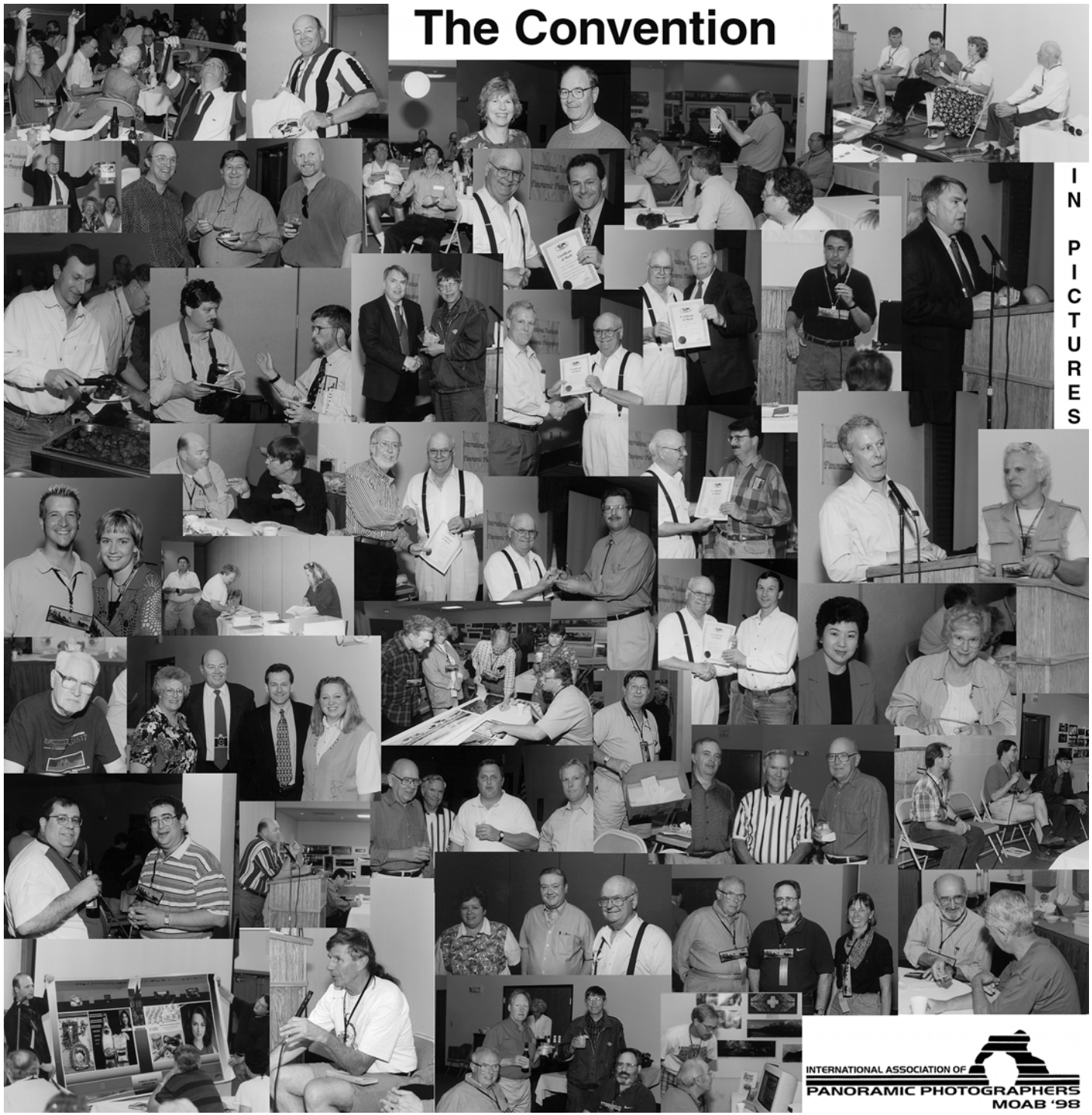
This year there were a number of special interest workshops presented with subjects from Antique and Cirkut cameras to Stock Photography to Digital Imaging to Hand Built cameras.

Will Landon's famous panoramic slide show opened the Convention and the images from Arches and Canyonlands were spectacular.

This years print competition was better than ever, with a record number of prints being entered for judging. This issues cover photograph by Tom Bleich was the first place winner in the Rotational category and also won the Fuji Award. There are more winners printed in the center spread of the magazine. More winners will be published in future issues and will be displayed on the IAPP website as well.

The first qualifying test for the QPP was given this year. Jeff Weisenburger and Dennis Hill worked hard on the test, and hope to give the test at all local meetings

More IAPP Convention, page 31



The Winners

By Bob McIntyre
Print Competition Chairman

The photo competition was a great success with 135 prints entered. The judges did a fine job to get the following winners.

Straight back cameras:
1. Tom Salyer
2. Denis Tremblay
3. Joseph De Renzo

Swing lens cameras:
1. Fred Yake
2. Denis Tremblay (top)
3. Peter Burg (middle)

Rotation cameras:
1. Thomas Bleich (cover)
2. George Pearl (bottom)
3. Brad Le Payne

Digital:
1. Michael Westmoreland

Kodak award:
1. George Pearl (bottom)

Fuji Award Digital
1. Michael Westmoreland

Fuji award general
1. Thomas Bleich (cover)

The Fuji general award was also the best of show because the winner could use any film or paper. The Kodak award winner had to be on Kodak film and paper. ▬