PANORAMA

Presidents Message
By Denis Tremblay
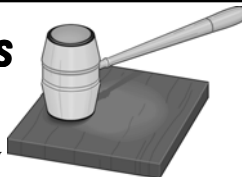
We are fast approaching the new year. 1999 means our next International Convention in Quebec will be here faster than we think. In the first week of January the convention committee chairmen and I will begin to organize and plan. I ask all our members throughout the world to make every effort to attend this Quebec convention, as it will be the last one of this century. Mark the date in your calendars and try to make it.

If you have not already done so, it is very important to get your renewal forms and payment into us by January 1 in order to get in the membership directory.

The major exchange of ideas and information by members between conventions is our *Panorama* magazine. Your input is very important. Any experience concerning an assignment, camera modifications etc. can be valuable to the members. Please be sure to send your articles to Addie Lorber. ■

Secretary Says
Looking Back At The Past Year
By Addie Lorber

Another year is coming to a close and what a great year it has been. I am still getting comments from members and spouses about what an outstanding Convention we had in Moab. Fred and his committee worked very hard to make it the success it was. It brought into focus the popularity of panoramic photography both in the traditional and digital formats. The most interesting part for me was seeing the artistry that went into many of the images. Panoramic photography is truly an art, not just a picture.

We saw the continued excellence in *Panorama* thanks to Warren striving to put out the best issues possible, and to our members for contributing articles and photographs. Warren needs your help so please keep sending them in. I would also like to thank our advertisers for their continued support.

Our web page has gained notoriety and was mentioned in a national photo magazine as being one of the best in its category. Again we have Warren to thank for constantly upgrading and improving our web site.

I am looking forward to October 1999 and Quebec. Hopefully you are already planning to attend this picturesque area during very picturesque time of year.

Many members have already sent in renewal forms. It is very important for each of you to do so in order to he listed in the next membership guide, Don't delay, send yours in today.

As this is the last issue for 1998, I would like to wish all our members and their families a happy and healthy holiday season. May the last year in this millennium be a successful one for all. ■

Qualified Panoramic Photographer
IAPP's First Recipients
By Jeff Weisenburger

Ron Tuttle of Peoria, IL, D. John McCarthy of Wilbraham, MA, and Fred Yake of Las Vegas, NV are the first three IAPP members to successfully complete the Qualified Panoramic Photographer Program. Each applicant passed the written exam, received a "yea" judgement for the panoramic photos each submitted, and earned the necessary service points, as outlined in the July 98 issue of *Panorama* magazine. Special thanks to committee members Denis Hill and Charlie Ridgway for keeping the program running smoothly. ■

It's Never To Early
Start Planning Now For IAPP Quebec '99

The dates and location of the next IAPP International Convention have been set. The Convention will be held October 13-17, 1999, in Quebec, Canada.

The host hotel and other information for the event will follow in future issues of *Panorama* magazine and on the World Wide Web at IAPPs Website, **www.panphoto.com**.

Mark those calanders now, it will be here before you know it!

Don't Miss This One!

IAPP weekend conference to be held in romantic French village, Peyresq

Peyresq, designed entirely for small conferences and seminars, is about 100 km North of Nice. The dates for the conference are June 10-13, 1999 and will feature speakers, equipment demos and photographic field trips.

Accommodations will cost 325 FF per person, double occupancy (approx. $60 US) or 375 FF single occupant. Three meals a day are included, as well as a touch of French wine with dinners. The Banquet is also included. Registration for the conference will be $30 US per member and $20 US per spouse. Due to the various currencies involved, registration fees will be collected at the conference.

Limited transportation from Nice is available and must be arranged with Denis Tremblay.

Please notify Denis if you are planning to attend as there are only 30 sleeping rooms available and rooms will be on a first come first serve basis.

E-mail Denis at panoram@cam.org or give him a call at 450-358-8020 / 450-358-4686 fax.

"Cherry Blossom" regional conference planned for spring
April 9-11 in the Washington, DC area.

Richard Schneider is planning a weekend conference, April 9-11, 1999. Activities will include a seminar day at the National Archives, including a panoramic exhibit he curated/produced. This time of year is also Cherry Blossom time.

It is sometimes hard to predict when the blossoms will peak. Last year it was two weeks early because of the mild winter. Usually you can almost set your clock to April 7 and it would be peak. We can only hope for the best!

Corbis Markets 360° Panoramas, Seeks Photographers

By Liz Hymans

Corbis is working hard to establish itself as *"The place for pictures on the internet"*. With substantial resources and some of the top staff in the business, they have been working hard since 1989 to establish a presence in the industry and sell reproduction rights to top quality photography and art. Initially Corbis set out to develop the most comprehensive photo collection possible. They have developed great breadth and depth in their archives, including rights to market Ansel Adams photography. They seek images of enduring quality with a longer "shelf life", rather than just loading up on the latest trends.

360-degree panoramas are becoming increasingly popular on the internet for QuickTime Virtual Reality (QTVR). The viewer presses the right or left arrow and the pictures scrolls all the way around to the right or left. Sometimes "hot spots" are embedded, and an enlarged view or expanded text is provided when the viewer clicks on the item of interest.

Currently Corbis' demand for 360-degree images is leading them to seek new photography. IAPP members are welcome to submit images for review and may be offered a contract.

Corbis' marketing program includes traditional stock agency business practices, as well as an internet publishing group that aggressively develops partnerships with other publishers and content providers (including Microsoft), and with non-professional consumers. They also have a poster and book boutique, and are interested in selling member-photographers' books and posters in addition to the materials generated in-house. Royalty-free image collections are for sale; individual photographers decide whether or not to participate in that part of the business. Corbis markets to Microsoft and to some of the same clients IAPP members market to individually, but they may be able to hit more clients with more sales than individual photographers are currently able to.

Their state-of-the-art Heidelberg drum and flatbed scanners make top-quality scans of photographers' images (the originals are returned to the photographer), and all of them are available over the internet. In-depth cataloging makes things easier to find, and provides more thorough captioning. You can check out their websites at: **http://www.corbis.com** or **http://www.corbisimages.com**.

Corbis is interested in 360-degree photography of the following sites (listed below).

Fresh, contemporary images are preferred, but they are interested in looking at everything at this point. The work must be in 35mm or 120 format, but nothing larger at this point. Cirkut camera material is too large. The maximum length the new Heidelburg scanners can handle is 16". Anything longer can be out-sourced locally in Seattle. The file size will probably end up being around 120 Megs.

If you are interested in having Corbis market your 360-degree images, contact:

Karen Huntt Mason
Manager of Image Editing
Corbis Corporation
15395 SE 30th Pl., Suite 300
Bellevue, WA 98007
karenm@corbis.com
425-649-3385 ▬

San Francisco: Chinatown - street scenes, shops, close up of objects; Exploratorium - interior and exterior; Alcatraz; Angel Island; Golden Gate Bridge; the Bay, a wide shot; Cable cars; Fisherman's Wharf; Lombard street (the crooked part); Washington, DC: the Mall; Washington Monument; Vietnam Memorial; Lincoln Memorial - interior and exterior, and close up of details; Jefferson Memorial - ditto; Smithsonian; White House; Capitol; Supreme Court; Library of Congress; National Geographic building
Mesa Verde, Colorado: Exterior, interior,

close up of any objects or details Carlsbad Caverns; New Mexico: ditto; Hawaii
NYC; New England fall colors; San Diego
Mt. Rushmore
Meteor Crater in Flagstaff
Temple Square in Salt Lake City
Hoover Dam
Petrified Forest in AZ
Mt. St. Helens
Wisconsin Dells
Orlando
Bahamas
Australia
Switzerland

Quebec, Montreal
Mexico: especially resorts such as Acapulco, Puerto Vallarta, Ixtapa, Cancun, Cabo, Mazatlan
London
Taj Mahal
Caribbean
Capetown, South Africa
Egypt: the pyramids
Istanbul
Rio, Barcelona
Amsterdam
Thailand
Nepal

Book Review
The Miracle of Israel

Another excellent panoramic book, by an IAPP member, has just been published.

Denis Tremblay has just had a book published containing mostly panoramic images taken in Israel. The book is all about Israel and the stunning cover shot is Jerusalem bathed in golden sunlight at sunrise. 90% of the photographs are panoramic and were taken during two trips. Seventy-five photos were taken during the first trip and 225 during the second trip. The book has been published in several languages.

Abraham was given the word of the Lord and was told to leave his country and family and go to a land that would be given to him and his descendents. It is this captivating story of an extraordinary journey that the book has set out to demonstrate, with the help of exceptional photographs.

Dr. Mario Massicotte wrote the text and the photos are by IAPP President, Denis Tremblay. This beautiful panoramic book will be offered through the IAPP Boutique in the near future. Congratulations Denis! ▬
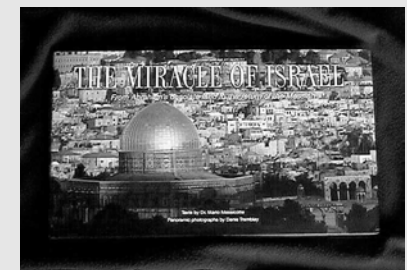
Mammoth Daguerreotype Panorama

By Vic Silveria

These Daguerreotypes were created by Jeremy Harris and Tom Story in 1996 and were inspired by classic San Francisco panoramas by Edwurd Muybridge.

A Daguerreotype is an exquisite contrast to a paper print, made of copper plate, coated in silver, polished to a mirror-like finish, sensitized to light with iodine vapor, then once exposed, developed in Mercury vapor (the traditional method) or under an amber filter using sunlight for the light source, known as the "Becqueral Method."

These two Daguerreotype/photographers came up with the idea of creating the world's only 360-degree Daguerreotype panorama on 11x14 plates. Trained in the art of creating Daguerreotypes by

Jerry Spagnoli, while they attended the Academy of Art College in San Francisco spurred their interest in this age-old, beautiful process of photography.

The next two years were spent honing

their plate-making and developing techniques. Finally, they tackled this extraordinarily large 11x14 multi-plate image project.

These photographs were shot from a parking garage on Sutter Street in San Francisco. They could not rotate the camera 360-degrees without obstacles in the garage blocking their view. The camera was placed around the edge of the

garage in an attempt to set up the shots to be visually consistent with the previous shot. Continuity was a concern but not a major issue, since each final plate would be individually framed and not spliced together. The photographs were shot over an 8-hour period on 4x5 film.

Jeremy and Tom use 4x5 film enlarged to 11x14 positives, then contact printed on 11x14 polished plates, exposing them to sunlight (sometimes a hard thing to find in San Francisco).

This mammoth Daguerreotype panorama was finally unveiled at The Daguerreotype Society Symposium in

Atlanta, Georgia, October 1996.

Fortunately, the two plan to continue shooting Daguerreotype panoramas. Thanks to Jeremy Harris and Tom Story for sharing their new twist of an age-old process. ■

Panorama Tip

A tripod carrying sling, either commercial or fabricated from two inch webbing and two d rings is a very useful way to carry a tripod when your hands are busy with the rest of the panoramic outfit. I have even used mine to lower camera gear from a rooftop accessed by a ladder rather than climb down the ladder with the gear.

Will Landon

Negotiating Prices for Stock Photography
good tools for professionals

By Liz Hymans

My first stock photo sale was a cover for *Adventure Travel Magazine* in 1979, which paid $500. Shortly thereafter *Sierra Club Magazine* paid $100 for a cover. Then the owner of the company for which I worked as a river guide began to notice my excellent photos and offered to pay me $10 per photo for brochure use, and he had never paid anyone before. Talk about confusion over prices! I was completely clueless and took whatever was offered, including the line about how they couldn't afford more.

Prices paid and accepted for stock photographs still vary widely because every sale has it's own idiosyncrasies, but there is much good help available. I have found that whatever I used to increase my knowledge of pricing paid for itself within one or two sales.

What I recommend for the beginner is *Negotiating Stock Photo Prices* by Jim and Cheryl Pickerell. Jim has been in the business for over 30 years and his daughter Cheryl has been working in the stock photo business since 1993.

The yellow heart of the 270-page book contains many pages of charts listing base photo prices for multitude of use types, sizes, and durations. The rest of the book is devoted to educating the photographer about basics, industry standards, catalog marketing, market characteristics, negotiating strategies and steps, establishing fees using the base numbers, handy lists of reasons for asking more or less, a telephone price negotiating form. This book will not transform anyone into an experienced expert, but it goes a long way towards helping beginning professionals get started on determining reasonable prices for their work.

This book is handy while doing business on the road, when I can't fire up my computer. It is worth reading many times to maintain a good understanding of everything associated with price negotiations. Beginning photographers tend to undervalue their work. When negotiating prices, it is essential that the photographer understand the value of her or his work, both from the production side, and the value to the client. The costs of staying in business include not just the film, but camera insurance and maintenance, time spent reading tax papers, filling out business forms, bad-light days (related to bad-hair days), time spent on non-sales, etc. The worth to the client is in advertising and sales, the cost of time spent looking elsewhere for alternate photos, saving the costs of assigning and producing an alternate photo, and more. Pickerell explains many of these things, so you don't forget them while negotiating.

It's good to "build value". I once had a client wanting a unique photo of their ski area (helicopter access and snow camping required to get the shot on a very lucky weather evening) for a ridiculously low price. I remembered that in *Strictly Business*, a seminar taught by ASMP, they had suggested we call magazines to ask advertising rates. I called the several magazines in which the client intended to advertise (you bet I used the 800 numbers listed on their mastheads), and discovered that the costs of running the ads was $245,000 if run at full price. My client was a regular customer of these magazines and had negotiated deals, but still the ad costs were over $150,000. After learning that, I was immune to the "We can't afford it" arguments. The photo works so well for them that they've used it in national advertising and brochures 4 years out of 5. The cumulative payments have made the job very worthwhile, and I swap out for the occasional 10 days of lodging and lift tickets at this world class resort. The "build value" concept has been very useful to me.

The Pickerells also have a variety of on-line support services. Some electronic use rates not included in the book are listed on the website. *Selling Stock*, an online subscription newsletter updated twice monthly, is very useful for keeping up with the stock business. They will, for a reasonable fee, help you with price consulting over the phone. Stock Connection is their photographers' stock agency. For a full description of their services, check out their website at **http://www.pickphoto.com**. Their book is $30 (plus $4 shipping in the U.S.) from Stock Connection, 110 Frederick Ave. Suite A, Rockville MD, phone: 301-251-0720.

The computer program fotoQuote is an excellent professional tool. The prices and information are based on six months research on actual sales records from confidential sources - photographers and agencies. The photographer selects usage, size, etc. from a menu and an average price appears in a corner of the screen, along with an adjustable price range, and a menu of information associated with that type of usage. "Coach" gives lots of useful hints for negotiating the price, and you can select Usage tips, Partial Covers and ads, Finding a Price, Royalties, Image Unique-ness, Multiple insertions, Steps to a Sale, Phone Scripts, etc. These pop into a text box on the screen along with the pricing information and options. It's nice to have them all handy on the same "page", rather than flipping back and forth through a book. The phone scripts are especially useful for giving answers to frequently presented arguments for low prices. You can print copies of their Phone Order Form to keep handy near your telephone.

The latest version, fotoQuote 3.0, has added printing options for quotes and tips and a you-build-it license description, a 200-magazine database, price displays in 8 international currencies, and boasts the most complete pricing guide ever at over 2000 prices and 30 elec-tronic use categories. Their website is **http://www.cradoc.com/index.html**. The fotoQuote 3.0 program for Mac or PC is $129.95 + $4 shipping in the U.S. from Cradoc Corp, 145 Tyee Drive, Suite 286, Point Roberts, WA 98281 Phone: 206-842-4030, FAX: 206-842-1381, e-mail: info@cradoc.com. Owners of earlier versions may upgrade to the 3.0 for $49.95 + $4 shipping before Feb. 1, 1998, and $59.95 plus shipping thereafter. Product updates will be discontinued if people continue stealing copies a la "shareware". (There is more theft than you want to know about in an industry that should be sensitive to and supportive of copyright law.)

Both the book and the program provide prices that are only a starting point. You will need to use many other factors, as they suggest, to negotiate a price with your customer. You will need to be knowledgeable, creative, firm, flexible, tolerant, patient, shrewd, and even more creative in your negotiations. Now and then you can get full asking price from a big client with a big budget. At other times you will accept a price for no good reasons other than that it's as much as you can negotiate for and your washing machine is worn out.

> *The costs of staying in business include not just the film, but camera insurance and maintenance, time spent reading tax papers, filling out business forms, bad-light days (related to bad-hair days), time spent on non-sales, etc.*

One regular client commented that she enjoys negotiat-ing with me because I use humor. With one millionaire client who always begs poverty, I was at $1600, and he was stuck at $1500. I said, "You know, one of us is going to squeal over this deal and I'd rather it be you than me." He laughed, and said, "Ok, ok, ok, just to save time, you can have the $1600." Another professional photographer friend uses the technique of a "higher authority" such as "Policy", and has gotten herself a business manager with whom she consults during calls. This business manager is a small teddybear that will nod or shake its head when she picks it up and moves it. Her client will then be told, "My business manager says . . . to hold firm on this price and to give you the X% discount you want on the next sale." or something like that. It's really a good idea to have answers to common problems ready in advance. Write up your responses to anticipated questions in advance, and have them handy when you negotiate.

You may well want to price your panoramic photography higher than other types. Take a good look at what it takes to shoot at panorama, read the informa-tion about image uniqueness and reasons to ask more. You will soon see that it takes more time and is more costly to produce panoramas. If your image is strong and you can educate your client about the production costs, you may effectively make a case for higher prices. With the Pickerell book you could then automatically make your base price some percentage more than their base price. With fotoQuote, you can adjust the program to raise all the prices by your calculated percentage.

Tools such as *Negotiating Stock Photo Prices* and fotoQuote are indispensable if you wish to do well at stock photo price negotiations. You need a good working knowledge of industry pricing standards and trends, negotiating techniques, and your client. If you lack experience, it's a good idea to find someone with whom you may consult until you do get the experience - another stock photographer, someone with good photo agency background, or Pickerell's consulting service.

Both Pickerells' book and fotoQuote are well written, easy to use, and well worth the money. You will learn many essential things you never even thought about. I currently use and will continue to use both of them. The fotoQuote program has more information and is good when I have a desk and electricity, but I need a book when I'm travelling and can't use my computer. ■

Member profile
Ashok Dilwali New Delhi, India

By Jean Yake

Ashok received a degree in school as a Certified Public Accountant and then realized that he would have more satisfaction being a photographer. He has been a photographer since 1971, learned photography from his father who was a photographer and was always interested in photography as a child. Now Ashoks son is also a photographer and works with him. Ashok owns and operates Kinsey Brothers Studio, specializing in portraits, as well as a full service photo lab. He also publishes his own post cards, calendars and posters of the Himalayas.

Ashok, shoots with Hasseblads and Mamiyas as well as Linhofs 4x5, 6x12, 6x17 and a Widelux 35mm. He has had many exhibitions in New Delhi and Bombay to showcase his beautiful photographs and is involved in numerous clubs and associations in Britain and India. Ashok has had his photos and articles appear in leading magazines and newspapers in India and he has published eight books, seven of them are on the Himalayas. He says that he has probably taken more photos of Indian Himalayas than anybody else in India or abroad and has traveled to several nooks and corners in the last 20 years. Ashoks next goal is to publish a book on the Himalayas all in panoramic format. ■

This panorama is of Ladakh Himalayas, from the highest motorable road in the world. - 18,380 feet - Winter temps reach - 30°C.

Taking Panoramic Pictures With A Roundshot 35

By Ed Westen

I have been an amateur photographer for nearly forty years and in that time I have used a great variety of cameras, everything from a Minox 16mm to an old 5x7 wooden view camera. Recently, however, I have been using 35mm Nikon cameras to produce both photographs and slides. Since I have always appreciated sweeping landscapes and interesting wide-angle cityscapes I bought a copy of *Panoramic Photography* by Joseph Meehan. When I saw what's possible with a panoramic camera I was hooked.

After considering the alternatives I purchased a Roundshot 35. I chose 35mm since the film and processing are reasonably priced and readily available, enlargement of the negative is easily done, and panoramic cameras in larger formats are considerably more expensive. I chose the 360-degree camera over a swing lens camera because I felt that for approximately the same price I could choose my field of view rather than be limited to the 140 degrees offered by Widelux, Noblex, etc. I understood the downside of the rotational camera compared to the others in that it is not able to be hand-held but must be mounted on a tripod. Finally I chose the Roundshot based on its reputation, apparent ease of use and solid construction.

The Roundshot is easy to use but there's a drawback in the way that I use it, which I hadn't foreseen. When the camera is mounted on the tripod at eye level (the normal height for 35mm photography) the controls for shutter speed and aperture, the viewfinder, and the "bulls-eye" spirit level are all impossible to see since they are located in the top surface of the camera. Lowering the tripod is acceptable

for some subjects but, generally, an eye level perspective works best for me. Carrying along a stepladder or even a hard case to stand on is not a workable solution, either.

Most of my panoramic photography has been done at "Steam Shows". A Steam Show, for the uninitiated, is a sort of rural fair at which antique farm machinery is displayed and demonstrated by collectors. There are usually competitions, flea markets, craft tents and food stalls in addition to the displays and demonstrations. It is a place for collectors to trade information or buy and sell equipment or parts and is a focal point for the local Steam Club that puts on the show. There are scores of these shows all across the United States and in dozens of other countries each year. I am a member of a club in northeastern Wisconsin that has put on an annual show for more than forty years.

Taking photographs at these shows requires a good deal of walking and whatever equipment I need I have to carry. Since I'm on the plus side of fifty and chubby I've tried to choose my equipment with an eye toward both versatility and portability without sacrificing quality. I use a Bogen 3021 tripod whose legs I have padded with plastic pipe insulation I bought at the local hardware store. I solved the spirit level problem by equipping the tripod with a Bogen 3047 head which features two built in levels. I take a Nikon N70 camera with a 24-120mm Nikkor lens loaded with Fuji Velvia slide film that I shoot at 40 ISO and, of course, the Roundshot loaded with Kodak Royal Gold 25 ISO film.

My usual procedure is to attach the Roundshot to the tripod with a Bogen quick release plate, fully extend the legs and carry it on my shoulder. The Nikon hangs around my neck and I carry extra

One of the Steam Show panoramas created by Ed Weston.

Steam Shows
from page 9

film in my pocket. I have tried carrying an exposure meter in a pouch fastened to my belt but I've found that the technique I now use to take pictures with the Roundshot makes the meter unnecessary.

I select a general location for the camera by finding a spot in the center of the displays or with a wide field of view of the demonstrations. I've found that sometimes a group of people off to the side or a steam engine with its plume of black smoke at one end of the picture contributes to the main subject's interest to make an effective composition. Sometimes it's hard to decide where to begin and end the rotation of the camera so I usually err on the side of including too much and cropping later. I have occasionally shot 540-degrees and then cut the resulting print into two or three nice panoramas. I realize that may be contrary to everything the great photographers say about composing on the ground glass but it works well for me in this format.

When I've picked my spot I set my Nikon's zoom on 35mm and its aperture on fl6. Then, looking through the viewfinder, I note the shutter speed the camera's meter selects as I pan around the horizon and note any areas of deep shade or strong backlighting. Since the Roundshot's lens has a 35mm focal length what I see through the Nikon is a close approximation of what will be included vertically in the final picture and by panning I can see the horizontal field of view and decide on the size of the rotation of the camera. Finally, by taking 75% of the average shutter speed indicated by the camera's meter I can set the shutter speed of the Roundshot. Before I set the tripod in its final position I set the Roundshot's controls for shutter speed and aperture since it will be too high for me to see afterward.

I position the tripod solidly and then level the camera using the tripod head's spirit levels. I rotate the camera to its starting position and attach the trigger cord. Before taking the picture I crouch down next to the tripod and look around to see what the people who will be in the picture are doing and if waiting a moment would put them in better positions as they view the displays. If too many are watching me I just tie my shoe, which seems to them to account for my crouching down and most invariably look away at something more interesting. If only a few are watching I take the picture anyway and have found that the result is quite normal. After pressing the trigger I watch the camera's rotation so I can stop it in the right place. Then I put the tripod on my shoulder and hunt for another good spot.

I have had my film processed by a local lab and then a contact sheet made. From this sheet I have chosen strips to print and had the lab take two pieces of film 4.5 inches long (about 180-degrees) and print them together using a 4x5 glass negative carrier on a piece of 16x20 paper. Then I cut out the two roughly 4x20 inch prints and framed them. A better method, though, has been to have the whole roll of negatives printed by a lab using a Roundshot enlarger. The resulting print can be cut up into individual panoramas and framed. I have found, also, that having frames made is prohibitively expensive so I've learned to make my own.

I have photographed high school sports with my Roundshot but pictures don't always come out as planned. I set up the camera next to the tennis courts where my son was competing and the results were surprising. The court is full of painted lines, of course, and they form a neat "U" shape in the finished 180-degree panorama. The players also end up nearly facing the camera. Still it's a neat effect and the verticals of fences and light standards are nice and straight.

I arranged to take a picture of a high school baseball game and everything worked out just fine. The teams cooperated and even the umpires agreed to be in a picture taken between games of a double header. I set up the camera on the pitcher's mound and had the batter square around to bunt. Runners on first and third led off and then the infielders charged and I took the picture. The trouble is that a baseball diamond is mostly grass and our high school field has only a few bleachers and small dugouts so the resulting 5x45 inch 360-degree print is beautifully sharp but mostly grass and sky. The team members, of course, think its great and point to themselves with pride when they take friends to see the framed print hanging in the school's main office.

The possibilities for panoramas are endless. The method of setting up the camera, determining the exposure and the field of view, outlined above, works quickly and well. Now... I live only 35 miles from Lambeau Field, I wonder if Coach Holmgren would let me set up on the fifty yard line, just for a moment, during a lull in the next Packer game, perhaps? ∎

Dye Stability Findings
Of Photographic, Ink Jet and Other Printing Materials

Henry Wilhelm from Wilhelm Imaging Research of Grinnell, Iowa announced his latest findings about the stability of contemporary photographic, ink jet and other printing materials at the American Photographic Artisans Guild, APAG, Spring Seminar held at the Rochester Institute of Technology in Rochester, NY April 27. While inks continue to improve, he still cautions against using some ink jet prints for final delivery to customers.

Wilhehn said that while the longevity of ink jet prints made with some combinations of papers and inks now exceed that of most conventional RA-4 photographic papers many prints still have light storage life of a couple of years or even months or weeks depending upon the intensity of the light they are displayed in. However, he predicts that new inks will be introduced in the near future that will greatly extend the life of prints made with these printers.

The advantage of ink jet printing is the ability of the printer to write on a variety of materials from special watercolor papers to tee shirts and just about any other material that will accept ink. However even after the stability issue is addressed the big disadvantage of inkjet other digital forms of printing, e.g. dye sublimation, will continue to be their speed and cost per print when compared to conventional photographic papers.

He predicts that photographers in the wedding, portrait and social markets will see their labs increasingly use combinations of digital and silver halide technology to make photographs. As more labs buy LCD and Laser printers that can write digital files directly to conventional photographic paper there will be no need to make color negatives from film recorders. Labs will then be able to accept input from digital files generated by cameras or from scanned color negatives and output them directly to photographic papers and other media

The low cost, high resolution, and ability to provide a visible original for storage make color negative film a good choice for portrait/wedding/social photographers for the foreseeable future. Color negative film can be used as the recording media and then scanned at the lab after developing for output to photographic prints and other media. This hybrid use of digital and conventional silver media offers the best of both worlds for now and the near future. ■

The chart on page 13 was a handout for a presentation by Henry Wilhelm entitled, "Permanence and Technology of Digital Printmaking" at the Spring Seminar of the American Photographic Artisans Guild, held at the Rochester Institute of Technology, Rochester, New York, April 27, 1998.

Inks and papers in column one are for use with Iris inkjet printers.

Iris Graphics Equipoise Ink Set

Arches Cold Press	32–36 years
Somerset Velvet Paper	20–24 years
Bulldog UG Canvas (Digital Pulse, Inc.)	18–22 years
Iris Canvas	16–18 years
Arches for Iris Paper	13–15 years
Liege Inkjet Fine Art Paper	2–3 years

Lyson Fine Arts Ink Set (FA-II M; ID C; FA-I Y+B)

Arches Cold Press	32–36 years
Somerset Velvet Paper	20–24 years
Arches for Iris Paper	20–24 years
Iris Canvas	10–12 years
Liege Inkjet Fine Art Paper	2–3 years

Lyson Fine Arts Inks with Prototype High-Stability Yellow

Arches Cold Press	(tests in preparation)
Somerset Velvet Paper	65–75 years
Arches for Iris Paper	(tests in preparation)
Iris Canvas	(tests in preparation)

ConeTech Wide Gamut Fine Art Ink Set

Somerset Velvet Paper	20–24 years

American Ink Jet Corp. "NE" Inks (C+M; Lyson FA-I Y+B)

Somerset Velvet Paper	4–6 years

American Ink Jet Corp. "NE" Inks (C+M; Iris ID Y+B)

Somerset Velvet Paper	3–5 years

Iris Graphics Industrial Design (ID) Ink Set

Arches Cold Press Paper	2–3 years [tentative]

Iris Equipoise Black Ink (Only) in Monochrome Prints

Arches Cold Press Paper	(tests continuing)	>100 years
Somerset Velvet Paper	(tests continuing)	>100 years
Arches for Iris Paper	(tests continuing)	>100 years
Iris Canvas	(tests continuing)	>100 years

ENCAD GO Ink Set (pigment-based inks)

ENCAD QIS Photo Glossy Paper	(tests continuing)	>100 years
ENCAD QIS Canvas	(tests continuing)	>100 years

ENCAD GA Ink Set (dye-based inks)
ENCAD QIS Photo Glossy Paper

ENCAD QIS Canvas	1–2 years

ENCAD GS Ink Set (dye-based inks)

ENCAD QIS Photo Glossy Paper	1–2 years

Ilford Archiva Inks for ENCAD Printers (dye-based inks)

Ilford Ilfojet Photo Glossy Paper	70–80 years

Epson Stylus 3000 17x22-inch Printer (standard Epson inks)

Fuji Super Photo Grade Inkjet Paper	4–5 years
Epson Photo Quality Glossy White Film	2–3 years
Epson Photo Quality Glossy Paper	2 years
Epson Photo Quality Ink Jet Paper [matte]	1–2 years
Kodak Inkjet Photographic Quality Paper [new]	(being tested)
Kodak Photo Weight Premium Glossy Paper	6 months

Lysonic Inks for Epson Stylus 3000 Printer (prototype inks)

Various types of fine art & other media	(tests in preparation)

Current Photographic Color Negative Prints

Fujicolor Crystal Archive Paper	60 years*
Kodak Ektacolor Edge 7 and Royal VII Papers	18 years
Kodak Ektacolor Portra III Professional Paper	14 years
Konica Color QA Paper Type A7	14 years*
Agfacolor Paper Type 10	13 years

*Predictions integrated with manufacturer's Arrhenius dark storage data

Ilford Ilfochrome Silver Dye-Bleach Photographic Prints

Ilford Ilfochrome Classic Deluxe polyester-base	29 years**
Ilford Ilfochrome RC-base prints	29 years**

** Data based on tests completed in 1992 with Ilford Cibachrome (the former name of Ilfochrome) prints

Lookaround Panoramic Enlarger

By Alan Zinn

I have been using this enlarger with great success for years. I have refined it a number of times to make it easier to build and use. The basic design will handle up to 2-1/4 in. film of up to 13-in. length. A custom-made fluorescent tube can be made at a neon shop for 2-1/4 negatives. Of course the major expense is the lens. Lenses that cover 4 x 5 inches will cover a 6-1/2 inch panoramic negative. This design is not good for darkrooms without solid walls and floors.

Features:
1. Compact, vertical wall mount.
2. Simple materials and construction.
3. Constant, lamp-on shutter system.
4. Vertical orientation is easy to keep aligned.

Description of main parts, numbers refer to the schematic drawing (see page 18):

Wall Bracket (1, 11) - 36 in. steel or aluminum adjustable shelf brackets.

Fluorescent lamp (3) - standard 1-1/2 inch x 14 inch, daylight tube and ballast.

Focus assembly (10) - 6 in. threaded vinyl plumbing clean out.

Negative carrier (4) - anti-newton ring glass, and plain glass sandwich, black tape, and mat board.

Shutter assembly (8) - light duty, 120v. fan motor, mat board shutter.

Size adjustment box (5) - wood box with sliding height brackets (12)

Easel (13) - sheet metal and particle board with leveling feet.

Suggested Construction:

The overall width and depth of the main enlarger housing I use for 180-210mm lenses is: 5(h) x 18(w) x 7(d). To get an idea of sizes you will need for your lenses use your regular enlarger to determine these measurements:

1. Distance from lens board to easel at the maximum and minimum sizes you expect to project.

2. Distance from negative to lens board for same.

"OOPS, A Description Of An Interesting Effect"

By Steven Bein

Recently, Bruce Klein, an IAPP member and owner of Rotation Specialties in Redondo Beach, CA, constructed a medium format rotating camera for me. Bruce learned much of his basics from the late Jim Lipari. He makes interesting and innovative rotational cameras, and I own one.

The construction took a bit of time, but was well worth the wait and the results are sharp as a tack. This photographer, however, lacks such a sterling description. Bruce instructed me on the loading and use of the camera. Twice I have goofed in the loading by putting the 220 film in backwards. Now, I have painted arrows showing the rotation of the spools so it won't happen accidentally again.

The first time I goofed was when using using a loaner, another Rotation Specialties camera that belongs to my girlfriend. That time, I took the shot from a floating and surging dock in Marina Del Rey, California. Interestingly enough, the tripod mounted camera recorded a sharp image and the up and down motion of the dock had no apparent effect, but that is another story. I guessed and had the film pushed two stops. The results of the reversed film were twofold. One was that it was underexposed due to shooting through the back coating of the film. The other effect is a strong warming of the photo, like double an 85B filter.

Recently, I was on Grand Cayman Island and took a few rotational shots, including some at "Seven Mile Beach", the touristy area near Georgetown. We were returning to the airport from our vacation and had a limited time available. In the rush, I loaded the Kodak EPP film backwards again. The photos with this article are the result of that trip.

My "Rotation Specialties" camera has speeds from 1/2 to 1/30 sec. The lens used is a Mamiya 645 - 55mm f2.8 lens. The tightest aperture is f22. The day was bright and sunny and the sunny 16 rule applied, confirmed by my light meter. I chose not to use a ND filter due to the shadows on the buildings and under the trees. I would have therefore over exposed part of the shot had I loaded the film properly.

When I realized that I had done it again, I did two things. One was to reload properly and reshoot. The second was to push the reversed roll two stops to compensate. My experience is that I usually must push three stops to get my desired results.

It is an interesting addition to controlling an image and I plan to repeat the process deliberately in the future. ▬
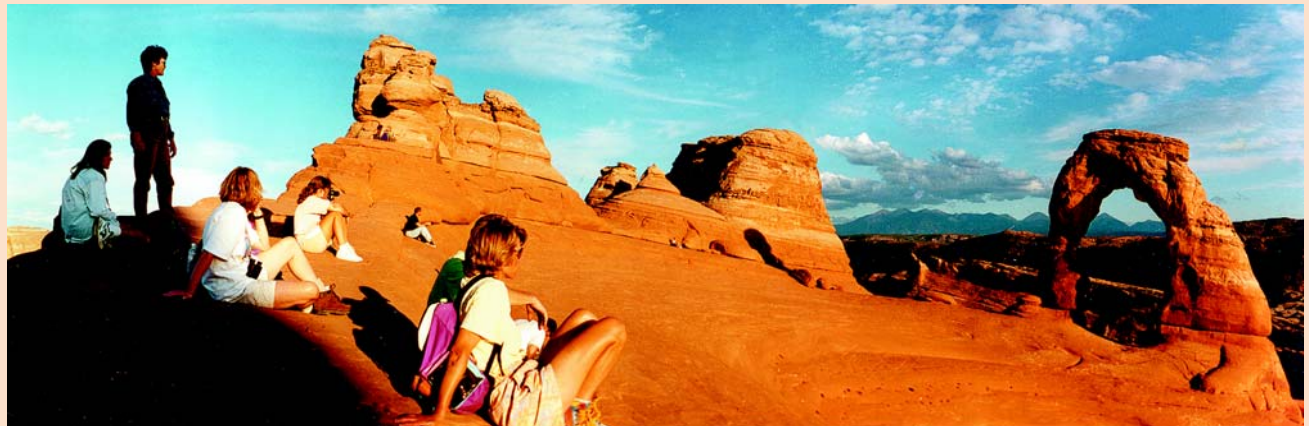
Member Gallery

This photo by Axel Bauer of Germany, is a mountain path leading to Rosenlaui - Glacier, Switzerland, over 700 meters above sea level. He used his Widelux F8 and Kodak T-Max 100 film to create this panorama.

Round House at San Jao del Rei, Brazil - 5-inch Roundshot - By Roy Christian

Delicate Arch at Arches National Park, Utah - 35 Roundshot - By Jan Christian

Historic Panoramas

By Richard Schneider

The National Archives has within its Still Picture holdings approximately 40 panoramic photographs of munitions plants and other facilities in Record Group 156, Records of the Office of the Chief of Ordnance. Most are unsigned, though it is likely John A. Dick took all of them.

John Dick was hired by the Du Pont Company in 1915 and in his 28 years "made a major contribution in taking photography ... from an avocation to an important research and communications tool...". His major task during the World War One era was to document construction progress at various Du Pont munitions plants from Parlin, New Jersey to Old Hickory, Tennessee pictured here. His format of choice was the panorama, and his equipment choice was the #16 Cirkut. These photographs were sent to the Engineering Department in Wilmington, Delaware as a pictorial component to textual progress reports.

> *At the World Convention in Moab this past Spring I was surprised and delighted to meet one of John Dick's descendants, Marie Greening, wife of IAPP member Al Greening.*

Armistice in 1918 brought an end to photographing munitions plants, but Mr. Dick would enjoy a long and productive career with the company and in 1940, at age 60 and with the advent of America's involvement in World War Two, he would again travel throughout Du Pont's industrial domain photographing construction progress, of course with his #16 Cirkut camera.

At the World Convention in Moab this past Spring I was surprised and delighted to meet one of John Dick's descendants, Marie Greening, wife of IAPP member Al Greening. The couple helped fill in some of the gaps in my Catalog of Panoramic Photographs, which was made available on site. As I mentioned before, most of Mr. Dick's photos are unsigned, so by connecting the time, the place and the subject of the image, they were able to determine the true author.

A far greater collection of John A. Dick panoramas, in contrast to the number in the National Archives holdings, is at the Hagley Library in Wilmington, Delaware. The Hagley site also contains a museum, "Where the Du Pont Story Begins", and the Center for the History of Business, Technology and Society, a noteworthy research facility. The publication, Corporate Images: Photography and the Du Pont Company, is available in the Hagley Museum Store and showcases some of Mr. Dick's panoramas. If you wish to see the original panoramic prints, and perhaps even the #16 camera used by the photographer, please contact Mr. Jon Williams in advance at 302-658-2400. The same protocol applies to the National Archives, in which you would contact the Still Picture Research Room. Phone 301-713-6795. ▄▄

U.S. Government Smokeless Powder Plant - Old Hickory. Designed and built by Du Pont Engineering Co. Pump houses at River. (RG156-PMP-274).
Photograph by John A. Dick. Date: unspecified, likely WW1 era.
Size: 15 x 76".

Web Report
panphoto.com

By Warren Wight

Things continue to change at IAPPs website. The navigation system had to be overhauled because the site has grown so much.

More and more IAPP members are getting their own websites, and our growing list of links to member pages proves it. Remember, if you have a website, and want it listed on IAPPs website, simply e-mail me the url with a request for a link and I will add you to the list. Send the link requests to: warren@wordsandpictures.com.

Attention all you VR enthusiasts out there. The Immersive Imaging area of the website is up and running, with links to vendors, software and other VR related websites, including information on current IQTVR events. I want to add a Gallery of VR images, and need submissions from members. Ideally a link to your VR image would be best, but if necessary we can store them on the IAPP website. Send those VR images or URLs now to the address above! ▄▄

Lookaround
from page 13

The lamp housing should be made from black foamcore assembled with hot-melt glue. 1/4-in. plywood is fine but requires more work. Make it just bigger than the lamp with the tube resting tangent to the bottom (2 x 13 in.) opening. Translucent white plex is not needed in front of the lamp. Bend a piece of stiff, white paper in a U-shape to make a reflector. The lamp does not get warm enough to require vents. Tape the top in place with black photo tape or make a shoebox type lid to allow access to the lamp. An alternate lamp design for 2-1/4 negs is available on request.

The main enlarger box is made from 3/4 in plywood. Use grade-A material and work carefully to keep everything square. It can be simple or fancy with kerfs for the lens assembly to slide in and out. Use 1/4-20 t-nuts and truss-head screws to fasten the shelf brackets on each side. They have to be readily adjustable to level the enlarger. You can add a filter (3 x 3 filters) drawer made from mat board that goes in a slot in the front of the enlarger box above the enlarger lens.

The lens assembly is made from a standard lens board (or make one from 1/8 in. plastic) screwed to the male threaded portion of a vinyl plumbing clean-out. Cut the square portion away and open a round hole big enough to clear the rear of the lens. Exactly how to make it depends on your lens and lens board. The main idea is to keep it flat and secure relative to the female portion. The female threaded section is screwed to the bottom of the main box or (better) to its own mount board and then slid into slots built into the box. Use pan head sheet metal screws (also glue if needed). Paint the interior flat black or use flocked paper.

The shutter assembly is easy to make - hard to describe. Its design is from an ancient Omega enlarger. It is perfect for fluorescent lamps because it allows the lamp to remain on at all times. The light output, therefore, remains constant. It can be made any number of ways. I use a small cooling fan motor.

Mount the motor next to the lens opening (a hole about 1/4 in. wider than the lens.) in the shutter plate which extends the width of the enlarger and is supported by shelf brackets. The lens can extend through this hole so that it is slightly above the shutter.

Mount a pivoting shutter (paddle shaped mat board) to the motor armature axis. To do this cut away all but one blade of the fan and tape the shutter to the remaining blade. Use a thin rubber band attached to the blade and to the shutter plate. It needs to be weak enough for the motor to stretch it and strong enough to pull the shutter closed. Mount a vertical bumper stop for the shutter to return closed when the power is shut off. It takes a bit of trial-and-error but once you see it working it is obvious what to do. Fasten a piece of soft foam material to the bumper to absorb the momentum of the returning shutter. The motor is connected to the lamp outlet of the darkroom timer.

Schematics for enlarger parts

SCHEMATIC DRAWING OF WALL MOUNTED ENLARGER FOR PANORAMIC NEGATIVES.

1. WALL BRACKET (2)
2. LAMP HOUSING
3. FL LAMP FIXTURE
4. NEG. CARRIER
5. SIZE ADJUSTMENT BOX
6. MAIN ENL. BOX
7. SHUTTER PLATE
8. SHUTTER ASSY.
9. LENS
10. FOCUS ASSY.
11. SHELF BRACKETS (4)
12. SIZE ADJUSTMENT PLATE (2)
13. EASEL ASSY.

LAMP FOR 2-1/4 IN. PANORAMIC NEGATIVES.

USE 8mm TUBING BENT TO 8mm BETWEEN COURSES. THE SIZES ARE APPROXIMATE.

USE A 20-30MA TRANSFORMER. 30 IS BETTER FOR SIZES OVER 150MM.

The lens shutter should swiftly rotate completely open (about 100 degrees) when you punch the timer, and close again with little bounce. It is a contraption and may require a bit of tape and bubble gum to work the way you like it. Once it is adjusted it will be trouble-free.

The negative carrier is a tape and mat board affair that I have found the best for long negatives. I use anti-newton ring glass on the top and window glass on the bottom. Use high-quality, black mat board for the main support material. Cut it the same size as the interior dimension of the main box (and the height size adjustment box outside dimensions).
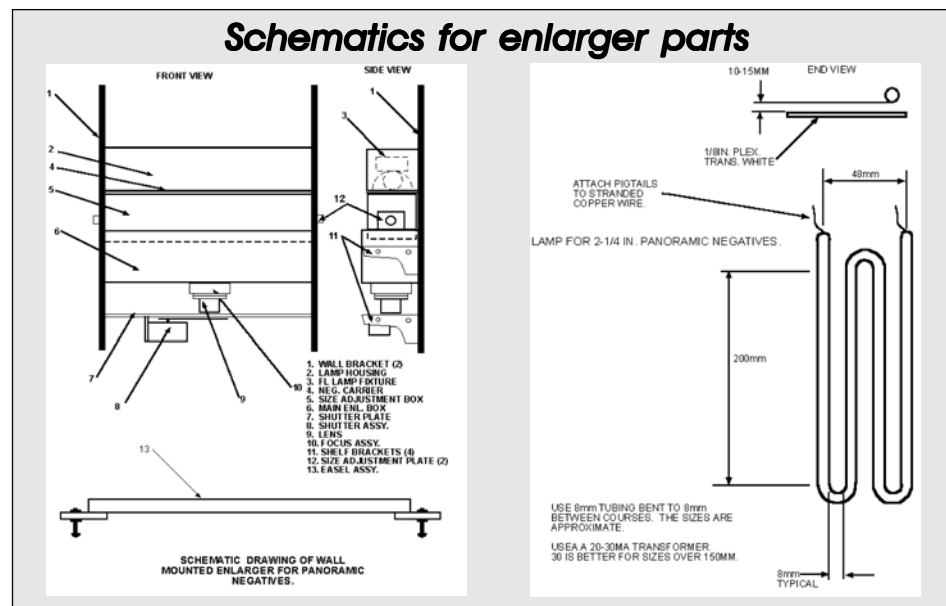
Assemble the glass with litho tape or black photo tape. Use fabric tape (duct tape) for a hinge on the long axis of the top glass. Use dense, black paper to cut masks for various negative sizes. The overall design is one you should make to suite the materials on hand and your working preference. I have changed mine over the years many times. Long negs can be a real pain to handle.

Make the size adjustment box AFTER all the other parts are complete and assembled. Make from 3/8-in. flake board or plywood, nailed and glued. The adjustment spacers are simply 2 x 3 x 3/8 in. slotted plates with a bolt, washer, and thumbscrew. They fit on each end of the box. The box should extend into the main housing at least an inch when set at its highest point. The depth of the box is determined by the lens you use and the size of the prints you make. Make a mock-up box from cardboard to get the exact dimensions. Test the dimensions using the process described below. You may need to make two (tall and short) for different lens, height combinations.

The easel design is very efficient for long sheets of paper. Use two 1 x 10 x 48 inch (this can be smaller if you don't expect to make large prints) particleboard shelves screwed and glued together to make a thick, heavy, warp-free plank. Bond a galvanized sheet metal (iron) face, painted flat black, to this with contact cement. Use four sets of 3/4 x 4-in. carriage bolts with two nuts and washers, and 4 x 8 x 1/2 in ply plates to make leveling brackets.

Vinyl magnet strips are used to hold print paper to the sheet metal.

Paint the interior of the boxes and parts that could reflect light flat black.

The shelf bracket rails:

Use steel if available. They should be mounted secure and level to a wall that is as free of vibration as possible. You might have to reinforce the wall. A masonry wall is best, of course.

It is good to have the rails extend above the highest lamp position so that you can add a small clear acrylic shelf to rest the lamp on while you adjust the negative. With the light above the negative carrier you can see the dust better.

Setting up and adjusting the enlarger:

Adjusting the enlarger is a by-guess and by-gosh process that is easier with two people.

Put a junk negative that has been prepared with diagonal razor scratches corner to corner in the negative carrier. Mount the enlarger mid-way up the shelf brackets. Raise the cardboard size adjustment box mock-up to its highest position and tape in place. Screw the focus mount out to the last two turns (be careful not to let the lens drop free). Leave the shutter assembly off. With the lamp on, raise the easel from the floor until an image focuses. Measure the distance from the easel to the enlarger. If it is close to your smallest image height, re-mount the enlarger at that distance (from the easel on

the floor) on the wall brackets. Adjust the image size box and focus mount again until you get the required size. (I use 4 inches for the smallest and eight inches for the largest.) The combination of lens screw position and shelf mount bracket spacing work together. You move one notch on

the wall (about 3/4 inch) and up and down with the screw thread about the same until you find a rough focus. Make marks on the image size box and the shelf bracket to mark the positions for the first size. Repeat the process for each size required.

Use a grain focuser for final adjustments and to get the enlarger completely aligned. This requires patient leveling of all components.

I have tried various types of fluorescent lamps with this rig. I use variable contrast paper with daylight lamps and it works fine. You can try various combinations of warm to cold lamps to see the changes in contrast and speed they provide. Be sure to let the lamp warm up about ten minutes before you begin work. Incidentally, this lamp design will work on some makes of standard enlargers for a cheap cool-light

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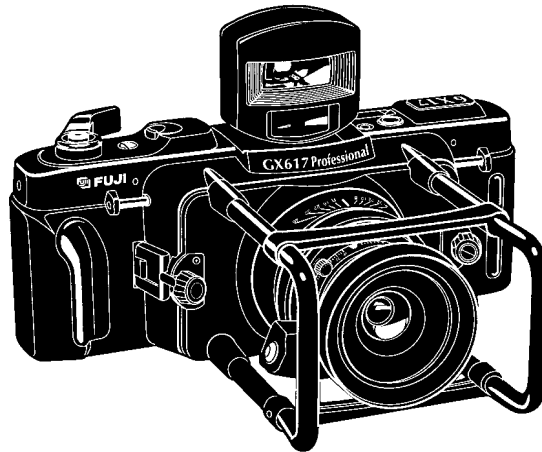
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Focal Lengths and Film Ratios in 360 degree Cameras

The following chart provided by IAPP member Adri deGroot first appeared in the September-October 1995 issue of Panorama. It is a valuable resource that newer members of IAPP might be interested in.

Focal Length	Vert. angle	360° Negative Length		Appr. Ratio	Camera Model	Enlarger needed
		in cm	in inches			
12.5mm	(83°)	7.85mm	3.1"	1:4.36 (18mm film height using 35mm film)	Pocket Panoptic, made by Michael Dusariez (IAPP Newsletter, Vol. 10, No. 2), using Kodak disk camera lens	4x5
14mm	(95°)	8.8cm	3.5"	1:3.7	Panorama Press by Hideaki Sato (IAPP Newsletter, Vol. 10, No. 4)	4x5
15mm	(90°)	9.5cm	3.75"	1:3.8	Hypothetical: Contax with 15mm Zeiss Distagon lens, with panoramic back, made by Jim Lipari	4x5
21mm	50°	13cm	5.2"	1:5 (35mm film)	*Roundshot 21/35 (newest model)	4x5
24mm	>100° (134°)	15.5cm	6"	1:2.75 (rollfilm)	Panopticon with Olympus 24mm shift lens	5x7
25mm	55°	16cm	6.25"	1:6.3 (35mm film)	Spinshot	5x7
25mm	55°	16.25cm	6.5"	1:6.5 (35mm film)	Globuscope	5x7
28mm	45° (49°)	17.6cm	6.875"	1:6.87 (35mm film)	Roundshot 28/35	5x7
28mm	90° (112°)	18cm	7"	1:3.3 (rollfilm)	Panopticon with 28mm Nikkor lens	5x7
35mm	38°	22.4cm	8.75"	1:8.75 (35mm film)	Roundshot 35/35 and 35/35S	8x10
35mm	81° (88°)	22.5cm	8.75"	1:3.8 (rollfilm)	Hulcherama with 35mm Mamiya 645 lens	8x10
38mm	71° (84°)	±24cm	9.5"	1:4.2 (rollfilm)	Conversion of a Hasselblad 903SWC with Zeiss Biogon lens (Someone has done this)	8x10
45mm	76° (71°)	28.2cm	11"	1:5.3 (rollfilm)	Hulcherama with 45mm Mamiya 645 lens	12x15
50mm	70° (65°)	31cm	12"	1:5.8 (rollfilm)	Hulcherama with 50mm Mamiya 645 shift lens	12x15
65mm	45° (220 film)	41cm	16"	1:7.6 (rollfilm)	*Roundshot 65/70-220	12x15
65mm	79° (96°)	41cm	16"	1:3.75	*Roundshot 65/5 inch	12x15
75mm	38° (42°)	47.5cm	18.7"	1:8 (220)	*Alpa Roto	pan enlarger
80mm	38°	50cm	19.5"	1:9.5 (rollfilm)	Hulcherama with 80mm Mamiya 645 lens	pan enlarger
40mm-350mm	many	25cm - 250cm	10" - 100"	1:4 to 1:100	*Roundshot Super; Hasselblad lenses (40mm to 400mm).	pan enlarger

Lookaround
from page 19

head for 35mm negs. You have to use the shutter with it.

The 2-1/4 width lamp for the Lookaround enlarger:

The lamp for larger panoramic negs (see page 18) is made from 8mm daylight tubing. It requires a neon sign transformer. I have had several made at a sign shop. Talk to the glassmaker. Take a pattern of the exact sizes to save time. Explain that you want the courses to bend smoothly and kept no wider than the width

of the tubing and that they must be flat across the width and length. The diffuser plex is the lightest density of white. You can get it from the sign shop scrap bin. Frosted mylar will work too. You have to experiment with the distance the glass is above the plex. You place it just high enough so you don't see individual stripes - about 1/2 in. You may be able to get a used transformer from a broken beer sign or something. If you don't know about wiring it up ask for help. It will zap you good. Wrap bare leads with tape and keep connections inside the lamp housing. Use ordinary zip cord to run the wire from the lamp housing to the transformer. Mount the transformer out of the way, preferably on the wall above the enlarger. Turn the lamp on about ten minutes before you use it. ▬

INTERNATIONAL ASSOCIATION OF PANORAMIC PHOTOGRAPHERS
IAPP

Make Your Own Ground Glass

By Ron Klein

It is really simple to make quality ground glass for your view camera. I have made many of them by hand, grinding with a second piece of glass.

Use 600 grit carborundum which is available at a lapidary shop. Finer grit is better, but 600 is minimum. Place the glass on a good flat surface so it can't bend (glass is actually quite flexible). Wet the glass, sprinkle the grit on it and start lapping. You need to keep the glass fairly wet, I dip my fingers in a bowl of water and dribble it on the glass when needed. It takes about ten minutes with two or three washes in between to check your progress. Make it a habit to grind the edges more than the center, and the corners more than the edges. That way everything comes out even. Another trick is to take a sharpening stone and slightly bevel the edges of both pieces of glass so they can't cut you or cause big scratches. The best part of this deal is that you end up with two pieces of ground glass.

When I was traveling in Russia and China with my trusty #10 cirkut, I took a 35mm film can full of carborundum in a small repair kit just in case of an accident.

You will find it is difficult to get the thin glass that was normally used in old cameras. Regular single strength glass from a local glass shop will work just fine. Your only trouble will be fitting it in the camera, as sometimes the brass clips need to be bent backward a tiny bit.

It's up to you to figure out how you want to rule the glass. I just use a pencil so I can erase it. ∎

Press Releases

iShell Frees Interactive Media Creators Unleashes the Power of Internet and QuickTime 3.

San Francisco, CA. — November 10, 1998 — Tribeworks, Inc. today announced a revolutionary approach to media creation and delivery with iShell, a digital media suite that offers creators of interactive digital content an unprecedented level of freedom and complete control over application delivery.

iShell enables creation of interactive media-rich applications without writing code. Creative professionals are free to specify exactly how users interact with content at every level. iShell also provides a powerful environment for programmers to extend the capabilities of the system without impeding the content development process.

"With iShell, interactive media creators are limited only by their imagination, not by their programming skills," said Duncan

Kennedy, president and CEO of Tribeworks. "We are excited about how effectively iShell can integrate media objects with QuickTime 3," said Mitchell Weinstock, Senior QuickTime product manager at Apple Computer. "iShell opens significant new opportunities for developers because it exposes the robustness of QuickTime 3 media authoring and the ability to use QuickTime 3 in a collaborative workgroup regardless of the authoring or playback platform" iShell's Editor features seamless integration of all media types supported by QuickTime 3, including full-motion video and CD-quality audio, from any location whether local or over the Internet. Media creators save significant development time through iShell's ability to reuse common interactive elements, thus streamlining the production process. iShell can be highly customized

Deadline for the next

issue of *Panorama* **magazine** *is*:

January 15, 1999

All submissions, articles, ads, etc. must be sent to:
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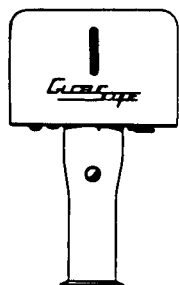# International Association of Panoramic Photographers

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ishell
from page 23

via plug-ins and scripts, which are integrated into the visual editor's user interface.

Download a trial version of the software now at **www.tribeworks.com**. The Tribeworks' Developer Network is a membership-based organization for individuals and companies working at the forefront of media content development. In addition to iShell software, the Developer Network offers technical, marketing and moral support.

The complete iShell suite, including iShell Editor, iShell Runtime and iShell Software Developer's Kit (SDK), is available for $2,000 as part of the Tribeworks' Developer Network membership.

About Tribeworks Based in San Francisco, Tribeworks, Inc. is a privately held company founded in 1998. Its business strategy combines powerful media creation software through an Internet-centric developer network.

For more information, please contact the company at press@tribeworks.com, or by calling 415-732-7004.

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Videobrush Named As A Top Technology Of 1998 - VideoBrush Core Technology receives R&D Magazine Award as one of 1998's Most Significant Technical Developments
Carpinteria, CA - September 21, 1998 -

VideoBrush Corporation, a Sarnoff Technology Venture, today announced that their patented Video Mosaic technology was selected by R&D Magazine as one of the top 100 new technologies of 1998. This technology enables the creation of wide angle, panoramic images from both moving video and still images.

Video Mosaic technology allows VideoBrush to combine multiple digitized images into a single high-resolution image with no visible seams. Video Mosaic technology, developed by Sarnoff Corp., Princeton, NJ, uses a multi-resolution "pyramid processing" technique to align and merge separate images.

Designed by a research team led by Peter Burt, the process creates an "image pyramid," which reduces images to lower resolutions. The program first coarsely aligns the low-resolution images. Higher resolution images are successively added and aligned to refine the mosaic.

Special features enable users to easily produce seamless 360° panoramic images and wide-angle pictures without using wide-angle lenses. Consumers can use this low-cost technology to record and manipulate images without expensive specialists' equipment. Other applications of Video Mosaic technology include online virtual environments, military surveillance, mapping, and land-use management.

"The key criterion of winning this award is technological significance. We often say that we're looking for major breakthroughs," said Tim Studt, Editor in Chief at R&D Magazine. "This new Video Mosaicing technology will enable users to easily create and manipulate images in ways never before possible."

"Digital imaging is one of the fastest growing multimedia segments", said Mark Kirstein, Cahners In-Stat Group, Director

of Research, Converging Markets & Technologies. "The availability of imaging application software, such as VideoBrush, will be key to the continued explosive growth of digital imaging markets."

For additional information contact:
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Challanging Panoramics

By Peter Lorber

Nothing is impossible if there is a will. On a recent trip to Paris I found the best place to do a panoramic view of the city. The site is 56 stories from the ground with a guardrail and spikes to try and work a tripod.

I wanted to get more of the city than the enforced limitations (for safety reasons) would allow. In order to accomplish that task the tripod would have to be extended through the opening of the rail, balanced on the spikes on the other side after which I would place the 70mm Roundshot Super Camera. In addition to the logistical problems there was rain and wind to contend with.

The first thing I did was perfectly balance the tripod and attach one leg to a spoke in the rail using a rope. Once I felt fairly secure I gently placed the camera and secured it to the tripod. The next challenge was to put the lens on the camera without jarring anything out of place. It was nerve wracking but

worth it because the view was spectacular and the shot amazing.

At first I regretted carrying my heavy-duty tripod on this trip. In retrospect, the shots I was able to get made the extra pounds well worth it. ▬

INTERNATIONAL ASSOCIATION OF PANORAMIC PHOTOGRAPHERS

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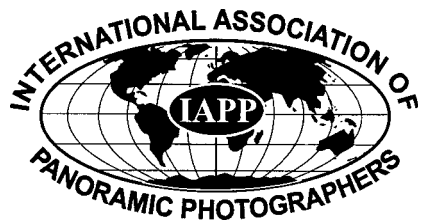
P.O. Box 2816
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First Class Mail

This issues cover shot of King Penguins, South Georgia, South Atlantic was photographed by Roy Christian with his 220 Super Roundshot. See more panoramas by Roy and his wife Jan inside.