3-D Imaging Past & Present

STEREOWORLD

Volume 28, Number 1

Shooting for 3-D Gold
The Kaiser Panorama
3-D in Chaos
Shooting San Francisco in 3-D from a Helicopter
Welcome to the first installment of Fifties Flavored Finds. Not long after I started shooting stereo images, I realized that I could combine my love of stereo photography with my fondness for 1950s-era styling, design and decor by collecting amateur stereo slides that were shot in the "golden age" of the Stereo Realist—the late 1940s through the early 1960s. These slides sometimes contain priceless images of everyday life in that era, and the fact that they are 3-D and were often recorded on Kodachrome film, whose colors today seem as fresh as the day the photo was taken, makes viewing these slides the next best thing to hopping aboard a time machine! From clothing and hairstyles to home decor to modes of transportation, these frozen moments of time show what things were really like in the middle of the twentieth century.

While collections of these amateur slides are interesting to view, exploring them often requires sifting through numerous shots marred by focus or exposure problems, distant subjects containing minimal depth, or generic scenery that would look the same today as it did 50 years ago. Every once in a while, however, a true gem is discovered—some unstaged moment from a typical day in the '50s just dripping with the colors, styles and decor of that era—in which the focus, exposure and 3-D composition all come together nicely. I've often thought, upon discovering such a slide, that it would be fun to share it with other stereo and '50s enthusiasts in a publication like Stereo World. But because information about the photographer and the subjects of such slides is frequently sparse or non-existent (Continued on page 29)
CONTENTS

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R E G U L A R  
F E A T U R E S

2 Editor's View
Comments and Observations
by John Dennis

22 The Society
News from the Stereoscopic Society of America
by Norman B. Patterson

28 European Gems
Stereoviews from Old Europe and the Stories Behind Them
by Dennis Pellicer & Pierre Tovillioz

33 View-Master
Information on the Reel World
by Wolfgang & Mary Ann Sell

36 NewViews
Current Information on Stereo Today
by David Starkman & John Dennis

38 Classified
Buy, Sell, or Trade It Here

3 Viewing the Enchanted Islands
review by John Dennis

4 Shooting for 3-D Gold
with David Klutho
by Ron Labbe

14 The Kaiser Panorama
Phenomenon
by Dr. Dieter Lorenz

24 Hyper Active
Shooting San Francisco in 3-D
from a Helicopter
by Robert Bloomberg

30 3-D in Chaos
by Lee Lane

34 A Magical Stereo Handbook
review by George Themelis

Front Cover:
Dave E. Klutho at the 2000 Olympics rowing venue with RBT X3 with 20mm lenses and another RBT x3 with 100mm lenses. On the monopod are dual Nikon F4 cameras with dual Nikon 80-200 F 2.8 lenses and three Flash Wizard synchronization units. For more about David Klutho and his work on Sports Illustrated anaglyphic 3-D issues, see the feature "Shooting for 3-D Gold" by Ron Labbe on page 4. (Stereo by David Stuckey.)

Back Cover:
"Crazy Maze" is one of the more colorful of several computer generated fractal designs featured in the article "3-D in Chaos" by Lee Lane on page 30.

This issue is dedicated to the memory of Erin Elizabeth Borst.
There's Change...

Every few years, it's time for a change. Readers of magazines aren't generally the people who find this logic compelling, but it seems to be a necessary form of therapy for those who produce publications—from the National Geographic to Sunset. The new look on the cover of this SW issue isn't designed to boost newsstand sales (we don’t have any), but to allow more flexibility in the way we feature images from various stereo formats.

Previous cover designs (the arch-top frame and later the rounded-corner square frame of recent years) have required that both current and historic images be forced into a rigid format shape—requiring some brutal cropping of the original picture in many cases. By eliminating a frame altogether, images can be used in ways that best suit them. Many Realist format shots can be presented on covers as “full bleed” images filling the page, while vintage views can be reproduced as an enlargement of a full half card without cropping into any part of the image.

This will also allow the reproduction of other formats in their original shape, such as View-Master, 6 X 13 glass views, and video or movie frames. In short, it will be the images that determine the look of the cover rather than the other way around.

And Then There's CHANGE...

Just as this issue was being completed, the September 11 attacks on New York and Washington D.C. took place. Exactly how much that day will change everything remains to be seen, but the potential is more than just big, it's ominous. As a publication devoted to the study and presentation of historical stereoscopic images, Stereo World can both urge the documentation of events related to this situation and provide a venue for the publication of such stereoscopic documentation.

This means much more than printing views of the actual destruction in New York that may have been taken, although those could of course be included. Any full stereo documentation of the historical impact could also include images of everything from public events around the U.S. and the world to pictures of individuals responding in their own ways. When an event changes everything everywhere, the possibility for stereographic coverage becomes equally wide.

For better or worse, the worldwide response and resulting chain of events from security measures to war will affect much of the planet for a long time. Both the best and the worst of human responses can be documented with more impact through stereoscopy than most other means, and we will make the pages of Stereo World available for those capturing both the inspiring and the depressing images resulting from this wrenching turn of history.

Correction:
In last issue’s article “The 321” the phone number given for the Vivitar Corporation was incorrect. The correct number is (805) 498-7008.
Viewing the Enchanted Islands

review by John Dennis

The land and sea creatures of the Galapagos Islands have been well photographed in both movie and still photography, but good stereos from these delicate and unique ecosystems remain rare. Easily the grandest stereo coverage of the islands was the 1999 IMAX 3-D film *Galapagos* (SW vol. 26 No. 5, page 22). Unfortunately, the film played in only a few locations for a limited time.

Now, thanks to the prolific combination of Mark Blum and Chronicle books, 44 very impressive color stereos of the islands can be viewed in *Galapagos in 3-D* without leaving your favorite chair. Like the earlier "In 3-D" books, (*Beneath the Sea, Amphibians & Reptiles*, and *Bugs*) Galapagos incorporates large viewing lenses into a cover flap and features one stereo per page with the text for each image printed on the facing page—which becomes the "floor" of the viewer when in use.

*Galapagos* is packed with the same level of amazing images and well researched information as Mark Blum's previous books. The only real difference is that this one covers a specific location rather than selected types of creatures, allowing a greater variety of images that range from underwater shots to views of land animals, birds in flight, and plant life. There are of course the expected shots of tortoises and iguanas, but among the best gems in the book are views of blue-footed boobies (both nesting with a chick and in flight) and eyeball close-ups of creatures like a green Sea turtle, a stone scorpi- onfish, a seahorse, a great frigate-bird, and a whale shark.

Besides the shots of animal life both on and off the coastal areas, the 3-D tour takes us inland for some fascinating views of the islands' volcanic geology and their seven vegetative zones, from mosses to cactus. With the exception of some distant, non-native balsa trees in one shot, the images show no obvious effects of human activity on the islands—easily a subject for another book.

One interesting note in the preface assures readers, "None of the 3-D photographs in this book were created or enhanced with computers; all were taken with stereo cameras." In a more reasonably ordered world, it would be authors of books illustrated with computer converted stereos who would feel obliged to include the opposite notation.

"Land Iguana South Plaza Island." Looking as much like a badly painted plastic toy as a real animal, this land Iguana on South Plaza Island is Plate 33 in *Galapagos in 3-D*. The text on the facing page reads in part: "This lizard is one of two species of land iguana found only in the Galapagos Islands. An impressive 3 feet (1 meter) long, these iguanas are mainly vegetarian, favoring opuntia cactus fruit but also feeding on insects, carrion, and sea lion afterbirth...."
The year 2000 proved to be an especially exciting one for 3-D, as *Sports Illustrated* published what are arguably the best two anaglyphic stereo magazines in history—totaling over 10 million issues! A number of key events provided a foundation for the blockbuster publications:

**October 1982**

Epcot Center at Walt Disney World opens, showcasing the sensational dual 70mm 3-D film *Magic Journeys* (written, directed and produced by Murray Lerner, who had also made *Sea Dream* in 1978 for Marineland in Florida) which exhibited a multitude of special effects never before achieved in 3-D. David Hutchison, in his book *Fantastic 3-D*, noted: “The film involved a variety of stereographic techniques including hyper and hypo stereo, as well as stop-motion, high speed photography, blue screen traveling mattes and computer animation.”

**July 1997**

While traveling in Prague, Czech Republic, David E. Klutho (veteran photographer for *Sports Illustrated*) came upon a cardboard stereo viewer of local scenes (that were slightly hyper) in a tourist shop, and was impressed: might this kind of imaging be used for sports? Scouring the Internet for information, David discovered the technique of syncing two cameras for stereo: at a professional basketball game in February of 1998 he put a pair of Nikon F5’s on a bar and...
attached it to the pole on the back of the net... he used a “Flash Wizard” to sync the cameras together with six 2400 watt Speedotron quad flash heads in the ceiling of the arena. He tested the setup before the game using Polachrome instant slide film and a viewer he made out of a pair of slide loupes: everything looked good! The resulting game shots, especially an incredible air shot of wildman Dennis Rodman, exhilarated Klutho and everyone else who was lucky enough to peer into his homemade viewer. He wasted no time in setting up a pair of dual Hasselblads, then two pair, soon he was running five mounted pair from a remote and a sixth directly from the floor. “There’s a three second recycle delay with the flash, so even with motor drives the timing has to be perfect to get the shot you want” said David. Klutho’s other sports specialty is hockey: he actually cut a hole in the bottom of the boards at one end of a rink to get a low angle view which would accent the ice spray that happens when hockey players brake. “You pretty much get one shot per period... after that the glass over the hole is covered with ice!”

Meanwhile, Klutho also found Jon Golden, of 3D Concepts, via the Internet. As the U.S. distributor for the German company BBT’s custom stereo cameras, Jon went out of his way to get David three very hard to get models in short time. Unhappy with the zoom connections on his X3 (siamesed Ricoh bodies) he worked with NSA member John Roll to construct a direct drive gear rather than the ball and socket arm it came with.

Jon Golden referred Klutho to me as someone who might be able to give some advanced technical advice on stereo photography and projection. David visited Studio 3D in March of 1998... I was totally blown away by the most amazing stereo super-slide format sports images in 3-D—original tack-sharp Hasselblad transparencies in a Hugo DeWijs achromat viewer (which 3D Concepts also provided)! We worked together via phone
and Internet... I never knew when to expect a call: “Where are you?” “I'm on the catwalk over the basketball court... how far apart should I have these 200mm lenses?”

August 1998

*National Geographic* publishes their groundbreaking anaglyphic issue containing 2 articles featuring stereoscopic illustrations (“Return to Mars” and “Titanic”). Digital technology allowed for full-color anaglyphic printing (though both subjects were decidedly monochromatic) with standard CMYK inks, where in the past most anaglyphs were printed in “black and white” (grayscale) using special red and cyan inks. A full page by Peter Smith (who designed the 3-D camera system for the Mars Pathfinder) was devoted to explaining how stereo imaging works. He explained that he had seen a 3-D film at Epcot/Walt Disney World (*Magic Journeys*): “During a bucolic scene, dandelion fuzz floated right off the screen to within my reach. That's when I realized the power of three-dimensional technology to put the viewer in the picture”. Bill Allen, the publisher, remarked, “For all the memories 3-D glasses conjure of campy Hollywood scare flicks, in this case the use of depth perception is no gimmick. Three-dimensional image technology was fundamental to the success of both these voyages of discovery”.

*Sports Illustrated* photo editor Steve Fine came home to find his copy of the 3-D *National Geographic* and wondered: “If they can shoot 3-D on Mars, why can’t we do it on a football field?” He decided to recruit special projects photographer Heinz Kluetmeier, though he had never before photographed in 3-D. Neither had any idea that David Klutho had been behind the scenes making the most action-packed, exciting and unprecedented stereoscopic sports images that anyone had ever seen. When Heinz went to have a bracket made for his dual 35mm cameras, he was told that David Klutho had already had one made. Heinz called Klutho who agreed to collaborate on the project (though the big presentation he’d been gearing up for was possibly compromised—he decided not to let on that he was compiling a cache of great sports images). Kluetmeier’s football tests were quite up to the level of Klutho stereo-wise, but Heinz (SI’s senior photographer) had already been selected as lead on the project. (Football turns out to be an extremely difficult

This shot of the St. Louis Blues vs Phoenix in NHL hockey shows stereo’s potential for making visual sense of crowded sports action that can be confusing in flat images.

Anticipating that some advertisers might not be able to produce stereo photography, Studio 3D converted this test image for SI using an image from Toyota, one of their top advertisers. (Toyota seems to have been very friendly to stereo advertising, such as the stereo viewer insert they did in People magazine, Oct 26, 1987.)
sport to shoot in 3-D the field is huge, the players are far apart.)

October 1998

I met with various production people at *Sports Illustrated* in New York, to show the test inkjet anaglyph conversions of the football pairs and offer technical advice for the test CMYK (offset press) prints. I brought in Mark Ober of Theatrical Support, who had produced very high quality anaglyph glasses for the OMNIMAX anaglyph film *We Are Born of Stars*. (He created a cyan filter for the blue eye of the glasses that extinguished well, but also was much brighter than the typical blue.) We strongly advocated going with the higher cost, better quality 3-D glasses. They agreed, but it would be necessary to get a number of advertisers interested in order to pay the substantial cost of the glasses (not perforated, but tacked in, full-armed 3-D glasses). Early on there was some debate whether or not to go with the "cleaner" grayscale images or work in full-color (looking through red and blue lenses to view an anaglyph image does compromise colors, strong reds are particularly objectionable)... but of course the all-important ads would have to be color, so full-color it would be. (We managed to digitally desaturate the colors enough to keep retinal rivalry to a minimum.)

Unfortunately, it seemed as though the project might fizzle out due to lackluster response from the advertisers. Fortunately, Steve Hoff-
man, creative director for the very lucrative Swimsuit Issue, thought 3-D was just the ticket! (He'd been looking for something to surpass the previous year's novelty:

This shot from the NCAA, Missouri Valley Basketball Tournament was used to create a cover mock up for a presentation to show SI how printed anaglyphs would look. It was taken with dual Hasselblads with 40 mm lenses and illuminated with the same ceiling mounted flash system used for the bull riding shot.

bathing suits that were painted on!)

Many tests were done for this very important issue. The publication people had me convert a regular Toyota ad to 3-D to see how well it would work. (The first ad they presented had very little potential for 3-D. Luckily, they came up with a second choice.) I also worked with a computer artist, who created some abstract stereoscopic environments into which we inserted some "rounded" 2-D swimsuit models. The next big step was conversion to CMYK (computer images are RGB—red/green/blue, but printing inks are cyan/magenta/yellow/black). This conversion process is an art in itself, many variables can cause the subtle anaglyph colors to become corrupt. The test proofs, however, turned out excellent! And so did the test run they did on the stock paper that is used by Stereo Illustrated...technically, we were on track. (At this writing, we're hoping that this issue of Stereo World can do the same!)

Steve Hoffman thought it would be fun to include a historical section. I scoured my collection, especially looking for any mix of sports and beachwear. After finding a few View-Master possibilities, I contacted Fisher-Price to see if the originals were available. Excited and helpful, they managed to find at least one original pair (Miss America contestants), which they copied for me. However, the legal department was very reticent: no model releases were found! The various concerns of reproduction rights were apparently softened by the fact that the images would appear in a purely editorial context.

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Dave & Dave's 3-D Olympic Adventures

Anecdotes From Sydney by David Stuckey

**The Filter Incident**

*Venue: Bondi Beach Volley Ball Stadium. David K has positioned himself in the stand to photograph the action at the net. David S is in the press tribune packaging exposed file in readiness for the courier who will transport it to the *Sports Illustrated* office at the Main*
Meanwhile, Klutho not only hired and test photographed various swimsuit models, but he created mock ads in 3-D to show the possibilities that 3-D offered to advertisers. He worked with various stereo artists including Boris Starosta, John Roll and myself to supplement his own 3-D photography and graphic design. At Studio 3-D we put together a 35mm slide show that included some of his best sports, swimsuit tests and ads. We presented it to the Sports Illustrated staff in New York: they were blown away! Of course they wanted to know how these incredible images would look in print form, and Klutho was prepared. We passed around his portfolio, which contained prints of many of the images they'd just seen projected, now in anaglyphic form. The special glasses from Theatric Support had just come in that morning!

The presentation left no doubt that this would work and that Klutho was the man to do it—but Heinz Kluetmeier was still the photographer—Hoffman directed Klutho to assist. Understandably, this led to some contentiousness: finally it was decided to allow the two to co-shoot...possibly a first in the history of the Swimsuit edition. Directing two photographers was not an idea relished by Hoffman—but as it turned out, the pairing worked out just fine.

The staff was so impressed with our presentation that they felt it was important to bring it also to the advertisers, who were going to have to pony up an additional $100,000 each to cover the cost of the glasses. Two key staff members accompanied me to show it to several of the big agencies in Los Angeles and Chicago. They too were excited, but it was necessary to point out certain restrictions in design when creating color ads. For most of them he did all the original photography and graphic design. For "Absolut Protection", the author did the bottle cage in 3D Studio MAX, and John Roll provided the underwater photography.

Press Centre for processing. Courier arrives and collects the film. David K to David S: "Why don't you grab the RBT X3 with the 20mm lenses and see whether you can get some wide stuff near the net?"

So I wander off laden with cameras to see where I can sit for a good angle. I have David K's RBT X3 plus two of my Ricoh twin rigs for some close up stuff. I spot a good vantage point, however, it is reserved seating for the "Olympic Family" only. My press pass does not permit entry to this section. It is totally empty and I approach one of the marshals to seek temporary access for a couple of shots only. After some convincing, I am allowed to sit down at the front for a short while, however, if the venue manager should come past, I would be asked to move quite quickly.

I start shooting, the marshal keeps looking at her watch...you guessed it, the venue manager decides to have a wander around the stadium. The marshal becomes quite agitated knowing quite well that she will be in more trouble than me because she allowed me there in the first place. "Sir, sir! You have to leave that area!"

"Okay, okay, just a couple more", swap cameras. "Now, please, please!!" I feel sorry for the marshal and start up the stairs back to the press tribune. To ease her anxiety, I start to jog up the stairs. Of course, I only fall...
anaglyphs for CMYK printing. Ghosting is very difficult to avoid with high contrast images, and red is a particularly difficult color to use in anaglyphs. The stereo window was explained, as well as the fact that people like things to come out of the window (contrary to what some purists might think!). They were urged to shoot or create their ads specifically for 3-D, but this was mostly not possible. Studio 3D worked with the advertisers to get the best 3-D within the constraints that each demanded.

Jim Beam set up a shoot specifically for 3-D. We gathered in a strip club around 6 am, so we could be out of there by noon when the doors opened. An RBT S-1 camera was used for the shoot, and the image turned out very well but the high contrast and strong parallax produced a ghosty image. On top of that, the image was set in a field of solid red (to match their other ads).

I tried to convince Universal Studios to use already created stereo images from their theme park rides, Spiderman and Terminator 2 3-D. They had no license to use the image of Schwarzenegger, and they had already created an ad that was running in other publications. Studio 3D converted that ad to 3-D: thankfully they were able to provide the bottom collage in layers—otherwise it would have been a nightmare!

Wolverine Boots decided to shoot their ad in 3-D. It was going to be a vertical ad, so we decided to shoot it with my vertical Konica 35mm rig. I worked with the agency’s photographer, who shot the pictures under my direction for stereo effect. A morning shoot was scheduled in the Florida Keys and my plane was booked to leave that afternoon. However, the art director wanted to shoot several more images that afternoon. As I could not get a later flight, I left my camera rig behind for them to use. The cameras were shipped back without a problem, but it turned out that one of the images shot in the afternoon had a flare—naturally it was the one that the client decided he liked! So the photographer was told to shoot again! The cost for the re-shoot may have been as much as $20,000. The photographer was convinced that a flare problem was due to my cameras. I knew that it was not my camera problem. Even though Sports Illustrated helped bail the photographer out, I did not get

over at the very last step and collapse flat on my stomach on the landing. Let’s see now, 200mm rig to the left, 135mm rig to the right...what’s this under my chest???

Ah, David K’s RBT X3, now carefully redesigned.

Back at the press tribune, “Err Dave, I’ve made a change to one of the filters on your X3”. “What? Did you clean it or something?” “Smashed actually”.

The Tipping Dilemma

Our days worked themselves into a routine, I would drive into the city and pick up David Klutho and any of the Sports Illustrated staff who needed a lift. We usually had breakfast in the hotel cafe. David Klutho and the other Americans could not get used to the idea that tipping is not practiced in Australia. If you received extra good service, you might leave a couple of dollars as a reward, but it is by no means expected.

We had all befriended a young waitress, Roxanna, who knew in advance what we were going to order. For instance, David Klutho would order a coffee “to go”, but would drink it at the table. It was 20 cents cheaper you see. One morning after a particularly animated discussion on Australian customs, we were settling up the bill and David K was concerned about tipping Roxanna. I explained that it wasn’t necessary and she didn’t expect anything. “Watch this”, I said to David K...the bill was

This unidentified swimmer was stereographed during David Klutho's preliminary testing, using dual Hasselblads with 180mm lenses and six Elinchrome 500 watt second strobe units.
paid for my time (but at least I wasn’t sued!). He did the re-shoot with a pair of his own Nikons and a bar from Jasper Engineering.

Incredibly, the image that was finally chosen to run in the magazine was one that was shot on that first morning that I was there with my cameras! (The background parallax is a bit strong, but the photographer had a very hard time ignoring his 2-D impulses! And who’s looking at the background?)

The Lexus ad is disappointing because the image that they provided would simply not translate well to 3-D. Not all scenes make good 3-D images.

The Celica ad, however, turned out pretty well. It was a combination of having their agency’s photographer shoot the foreground element (a woman’s hand with keys) in 3-D and my converting the 2-D background to 3-D. It’s easy to add type normally: it will float over the background (which is behind the window) and look 3-D itself since anything you add will be at the window.

Unfortunately, the Toyota ad—which is a two-page spread—was totally put together by the agency’s photographer, who decided he understood enough about how the process worked after my explanations and his own research. He shot several elements in 3-D and combined them to create an ad that would’ve been impossible to do in one shot. It was pretty good for someone who has not done much 3-D, but there were quite a few errors which cause the image to be uncomfortable to view.

I was consulted by the writer of the editorial about some of the facts in his writing...he had previously not known anything about 3-D, and had found his informa-

$15.80. I gathered the exact money and gave it to Roxanna, who started back to the cash register. David K. could not bear it any longer, summoned Roxanna back and gave her an extra $5.00 from his pocket. Roxanna looked at me, “These Americans are strange aren’t they?”

Mr President

Following the opening ceremony, there were all sorts of discussions, reconstructions, flash backs and reports on the television. We were watching one of the telecasts during a quiet period at the Sports Illustrated office. One channel was playing back a tape of the Atlanta Games where President Clinton was making a speech at the opening.

I pointed at the screen and asked in a loud voice “who is that guy?”. Stunned silence and blank stare from everyone in the room. Some even had their mouths open. They really couldn’t decide whether I was kidding or not.

Are you THE David Klutho?

Some days were busier than others and would require different equipment. Sometimes, David K. would be shooting an event and I would have to race back to the press centre with some unrequired equipment for safe storage and retrieve some other gear for the next event.

Swimsuit model Heidi Klum (minus swimsuit here, so this shot didn’t appear in SI). Stereographed using an RBT X3 with 50mm lenses.

The shot of Heidi Klum as a stereo pair reveals the degree to which color is subdued for anaglyphic printing.
tion at the library. I made some additions and changes, but he would not change the line about 3-D glasses causing splitting headaches! I could not fathom why he wanted to include this misinformation, which also put a very bad light on 3-D (which I thought they were trying to promote!).

While I was working with the advertisers and SI staff, Klutho and Kluetmeier were down in Mexico stereographing supermodels. David Burder was also there with Craig Adkins, shooting a 3-D segment that would air on TNT (I had cautioned against it, as anaglyph colors simply do not hold up in the NTSC color space. It aired, unremarkably.) Various locations were scouted before the models arrived. A beach isn't exactly the most dimensionally robust environment! Rocks, splashes, sand (David built a sand castle at about 4am for a shot that didn't get used), leaves, boats, pillows, animals... they used what they could to fill each space with layers. The photographers had one model per day, and would shoot from about 6:30 to 10 in the morning, then again from 4:30 to 7:30 sunset. After their long day of shooting by the pool, they could relax and socialize... food and drinks were brought out... when has a 3-D photographer ever had it so good?

I met Klutho and Kluetmeier back in New York to help edit the 25,000+ exposures from south of the border. Definitely the most pleasant work of the entire project! Original 35mm and medium format pairs—taken with the best equipment, seen with the best viewers—of what are arguably some of the best swimsuit models, by two of the best photographers. Finding and collating the pairs was left to some of the staff help two

Most photographers were wandering around with huge lenses slung over their shoulders balanced with a monopod over the front. David's Nikon twin rig with the synchronising units and 400mm lenses was a little conspicuous, not to mention quite heavy. One day, heaving this rig through the basketball stadium, I hear behind me "David! David! Stop, can I have your autograph?"

Fame at last I thought! "I saw your 3-D shots in the Sports Illustrated Swimsuit Edition." "Ah, actually, you want the other David... he's over there!"

The Boxing Portrait

Following a session in the Boxing arena, the crowd was exiting and I wandered down from my seat in the press tribune to assist David pack up his equipment. We'd set up a remote controlled twin rig on a catwalk, high above the ring.

As we were leaving through the public seating, I noticed some of the police security were still hanging around chatting. I offered my digital camera to David K. "I'll just go over there and get the guards to pretend to throw me out of a seat, you can get a snap with the digital... It'll look great on the website, I can see the caption..."
long, but glorious days were spent doing the rough edit...down to maybe 50 or so of the very best P*.

We were so excited—we showed people some of the most incredible images as they walked by: the expletives should not be repeated! These shots were totally killer! Pro-
ducer Mane Smith, however, nixed some of the best images because of what she considered bad hair. (?!)

Finally 12 were chosen, including 3 double page spreads (which are also not recommended for aM81YPhl).

February 2000
The 3-D issue hit the stands! Apparently, it was quite successful, since the editors decided to go with 3-D again for a special Olympic issue!

September 2000
Sports Illustrated sends a solo David Klutho to Sydney, Australia to shoot the Olympics with assistance from Australian ISU (International Stereoscopic Union) member David Stuckey. The equipment consists of 3 RBT X3s (including pairs of 20, 28, 50 and 100mm lenses), 2 RBT Sls (59 and 45mm interocular) and a pair of Nikon F4s (with pairs of 16mm, 80-200, 300 and 400mm lenses) with remote radio controls. No flash was allowed, so 800 speed color neg film, pushed one stop, was used indoors.

Though they attended most of the events, some (like wrestling and many gymnastics) just didn’t lend themselves to good 3-D, especially since it was so difficult to get a good vantage point. “You’re competing for position with photographers from all over the world,” says Klutho, “and usually there’s only one or two spots that would be good 3-D wise... in 2-D you can go up in the stands and shoot but you’re limited in 3-D”.

Klutho and Stuckey came up with what are likely the best Olympic stereo images ever taken.

October 2000
The Sports Illustrated Special Olympic issue, with 3-D cover and 30 3-D pages (including the 3-D ads), is unleashed. In an incredibly short amount of time, David Klutho not only took the art of stereography to new heights, he managed to bring the thrill of the third dimension to millions of people around the world. He works as hard as any of the athletes he photographs—and he very much likes to win. If there was a gold medal for stereo photography, David Klutho would take the prize.

Anaglyphic viewer courtesy of Studio 3D and Theatrical Support.

In this rare shot of a swimsuit model actually swimming, Sports Illustrated model Shkara creates a stunning pattern with a twist of her head.

now...What do you mean it’s Samaranch’s seat?” David brushed me aside...“I don’t do portraits.”

At the Airport
One of my last duties at the games was to transport David Klutho to the airport the morning after the closing ceremony, before I had to return the hire car. The airport staff had been increased dramatically to handle the large volume of departing visitors and athletes. As I pulled up at the departure terminal, several porters with trolleys descended on the car and started unloading David Klutho’s quite large collection of cases and bags. I could feel the van getting higher and higher as each bag was removed.

David seemed unusually fidgety. “Well, it’s been 2 of the most amazing weeks of my life working with you and seeing the games Dave. I hope you have a good flight back.” David Klutho was by now heading for the terminal door, he looked back at me and jerked his thumb in the direction of the last disappearing luggage. “Do I have to tip these guys?”

STereo WORLD Volume 28, Number 1
The Kaiser Panorama Phenomenon

by Dr. Dieter Lorenz

This article is the text of an introduction to a workshop held by NSA board member Dr. Dieter Lorenz and was originally published in the German magazine Museum-heute (No. 9, June 1995, pp. 45-52). It is reprinted here (translated from the German by Duncan Woods of Cygnus Graphic) with the permission of the publisher, providing the more detailed article promised in "Remembering the Kaiser Panorama", which included 10 color reproductions of tinted glass views in Stereo World Vol. 21 No. 1, page 8.

The title "Kaiser Panorama Phenomenon" brings up several questions, the first of which is: what is a Kaiser Panorama? Most dictionaries don't list this term, but rather only the word "panorama", meaning "an extended pictorial representation of a landscape or other scene." The Kaiser Panorama, though, is something entirely different—it's an apparatus for viewing stereoscopic images. The name "Kaiser" was added as a result of the patriotic fervor that swept across the German empire after the Franco-Prussian War of 1870-71. This might lead to a belief that August Fuhrmann, the "inventor" of this device, was devoted to the German emperor, but he wasn't really all that selfless and his choice of this name most likely came from a well-developed business sense.

The large circular apparatus had 25 seats and stereoscopes, and customers could view 50 hand-tinted photographic stereo pairs shown in succession. Why Fuhrmann chose the somewhat inappropriate term "Panorama" isn't known, but it may possibly be because his device resembled the round panoramic painting exhibits that were fashionable at that time. These exhibits were viewed from the inside, though, while Fuhrmann's device was viewed from the outside, which meant that a panoramic view wasn't seen. Be that as it may, Fuhrmann's idea was so well received by the public—and this is the phenomenon—that it became extraordinarily widespread throughout the German empire of that day and could be found in foreign and even some overseas countries. Kaiser Panoramas were installed in some 250 locations, and the central office in Berlin offered over 1000 different picture series. Today we would indeed call this "franchising."

The Kaiser Panoramas weren't all placed in permanent locations. Traveling enterprises used a number of them, and there were still others that usually had permanent locations, but were also temporarily moved elsewhere depending on the season, for example, to seaside resorts during the summer.

Kaiser-Panorama San Francisco Series, No. 3, "Verkehr in der Marktstrasse nahe des Landungsgebäudes." [Traffic on Market Street near the Ferry Building.]
The heyday of Fuhrmann's enterprise lasted from the 1880s up into the First World War. In addition to travel photos, there were "patriotic" picture themes—today we'd probably call them political—that often portrayed the imperial family, thus adding justification and legitimacy to the use of the name "Kaiser Panorama."

Development of Picture Presentation Media

As a picture presentation medium, which provides the user with a view of a scene or an event, an outline of developments over time (see the table below) shows that the Kaiser Panorama followed such devices as the arcade viewer, the diorama, the panoramic painting and the magic lantern, and was in turn succeeded by moving pictures, television, and video, among which interactive television and virtual reality are the latest developments. There were, of course, no sharp dividing lines between these developments, and each individual medium overlapped others during their various times of development.

The most important advance made by the Kaiser Panorama in comparison to its predecessors was that it could not only show stereoscopic images, but also that it...
could present an entire series of them one after the other to a group of people. This had been possible before only with the magic lantern, although its images weren’t stereoscopic. Among the successors to Fuhrmann’s system, moving pictures took the lead, but audiences had to give up the third dimension, and for a time, even color. Color eventually returned decades later (if the early inadequate attempts at monochromatic coloring of entire film segments and the coloring of individual frames are disregarded), a process that occurred again in the development of television. After a long absence, the third dimension finally returned, but only sporadically; even today, it hasn’t gained permanent acceptance and is used only in specialized fields. In recent times, the introduction of interactive television and virtual reality, in which the spectator can take an active part, may influence the future course of events.

The history of this enterprise revolves around August Fuhrmann, who was born on December 13, 1844, in Namslau (today Namiska) in Silesia. He studied physics and became an avid experimenter and “inventor.” In the 1870s, he promoted the so-called “telephone concerts” in such resorts and spas as Bad Ems, Wiesbaden, and Baden-Baden, and during this same time, his “Nebelbild” (“fog picture”) projection system—the forerunner of today’s multivision shows—appeared. Then he turned to stereoscopy with his “Exhibition of Glass Stereoscopic Slides of a New Type.” One reason for this may have been that he wanted to give up all of the traveling and its associated problems that had always been part of his enterprises and establish a business with a fixed location. Along with this was the boom in stereoscopy (even then it was spoken of as “stereo mania”) which had developed with increasing intensity after stereo images were shown at the World Exhibition in London in 1851.

Stereo images were already widespread by the time Fuhrmann began his enterprise, but viewing them was done only in small groups, usually within the family, and the viewer and image had to be passed from person to person.
Although there were viewing devices that could show a series of views, they could be used by only one person at a time, and nothing existed that could allow viewing by a number of persons at one time.

The lack of such a device led Fuhrmann to the construction of the viewer that he later called the Kaiser Panorama. It was built in the form of a cylinder 12.3 feet (3.75 m) in diameter and 7.9 feet (2.4 m) high, and was equipped with 25 stereoscopes and seats around the outside. Inside the cylinder was a "picture wheel" with 50 stereo slides in a 170 x 85 mm format; a "precision drive mechanism" rotated the wheel to place the 50 views, one after another, in the fields of view of the stereoscopes. The time required to view all 50 images was usually from 20 to 30 minutes, although the picture wheel could be speeded up when large numbers of customers were waiting for a seat.

While this system couldn't accommodate mass audiences like the magic lantern and "Nebelbild" projection shows, it nevertheless made public showings of stereo images possible. Fuhrmann doesn't appear to be the "inventor" of this system; as early as 1860, the Frankfurter Intelligenzblatt had reported on an art exhibition at which, among other things, stereo views were shown in "an elegant rotating apparatus for 24 persons".

Another problem in Fuhrmann's time was the lack of a practical method of producing color photographs. He himself had experimented in this field without any satisfactory results, so he decided to color the images by hand, a particularly difficult task with stereo images since each member of a stereo pair must match the other exactly. After many attempts, he was finally successful in applying special transparent colors to the diffusion screens behind the image transparencies, a technique which created a slightly out-of-focus effect in the colors and helped minimize the possibility of seeing any slight differences in them. He called this invention "Indirekte durchschimmernde Polychromierung" (which can be translated approximately as "indirect polychrome transmission") and was obviously very proud of it, as can be seen in his advertisements.

The stereo transparencies were illuminated by petroleum, gas, or electric incandescent lamps, depending upon what was available at each location. Gas lighting...
was predominant, and it was also preferred because brightness could be adjusted with a dial at each individual stereoscope for a day or night effect, a technique also used for dioramas.

Fuhrmann's first Kaiser Panoramas began operating around 1880 in Breslau and Frankfurt am Main, and shortly after that in Berlin as well, where he had set up his central office on the first floor of the "grosen Passage Unter den Linden zur Behrenstrasse" (a covered pedestrian mall between Unter den Linden and Behren streets) to supply his approximately 250 locations with images. As noted before, topics included travel photos (both in Germany and in foreign countries), "current events" (and above all here "patriotic" events), and disaster scenes such as the great earthquake of 1906 in San Francisco (e.g., "Photoplastic Documentary of the Destruction of San Francisco on April 17 and 18, 1906"). The weekly changing of the picture series did in fact provide a certain degree of up-to-date reporting, which was later taken over by weekly newsreels in movie theaters and daily news reporting on television. Special picture series were also produced for schools and were presented to them at additional showings.

This program continued to expand steadily until the beginning of the First World War. Picture series went in part to sovereign rulers, but they were also seen by scientists and many teachers, from whom Fuhrmann received many positive letters of praise that he used extensively in his advertising. In 1909, he published his "Golden Book of the Kaiser Panorama Central Office", which contained some 250 pages of these letters. On September 4, 1897, he became supplier to the court with the title "Herzoglich-Sachsisc-Coburg-Gothaischer Hoflieferant"; he called himself "Stereo-Moment-Photograph" (a term meaning roughly "Instant Stereo Photographer"), since he was using relatively fast negative emulsion films and exposure times were short enough in most cases to show moving objects and persons as clear, unblurred images. After 1909, he received another court title, "Koniglich Preussischer Kommissionsrat". He had a good relationship with the imperial family that resulted in, for instance, his photographing a stereo picture series on the opening of the Nord-Ostsee Canal "by imperial decree". Picture series were enclosed within the capstone of the Nord-Ostsee Canal in Holtenau and the foundation stones of various monuments to
serve as contemporary documents of that time.

During the First World War, several series on the "Volkerkrieg" ("The Great War") were produced. When the war ended, though, there was no longer an emperor, so the firm's name was changed from Kaiser Panorama to "Weltpanorama" ("World Panorama").

The end was soon in coming, though. By this time, the theaters with their moving pictures—which Fuhrmann had dismissed in the belief that "they wouldn't prove to have a permanent wide appeal" because of their disturbing and disruptive images—had so improved and perfected their technology that interest in still stereo images faded away. Fuhrmann was very elderly by this time and he eventually gave up leadership of the Weltpanorama in August 1923. As late as 1925, he occupied himself with slide projection presentations and "changing pictures", fields of interest that were his particular favorites and that he had begun working with even before he developed the Kaiser Panorama. Before this, though, he had already turned his archives of non-stereoscopic slides over to the Bildspie- bund Deutscher Stadte e.V. (Lantern Slide Projection Society of German Cities, Inc.) so he could devote more time to the production of artistic lantern slides.

August Fuhrmann died in Berlin on August 10, 1925.

Afterwards, the Weltpanorama enterprise more or less wasted away. No further picture series were produced, and those already in existence eventually became worn out, damaged, or lost. Indi-
individual panoramas still existed during the 1930s, and the one in Altotting continued to operate long after the end of the Second World War, even though the Central Office in Berlin had closed in 1939.

Equipment and Images

The most widely-used Kaiser Panorama was the classic model with 25 viewing stations that showed 50 stereo images. In 1907, this unit cost 3,450 Marks including packing. Fuhrmann also sold two models of a coin-operated “Small Kaiser Panorama Automat” for 900 Marks that had 8 viewing stations; one could show 24 stereo images and the other 32 stereo images. He also offered a coin-operated arcade-type multiple stereo viewer for use by one person at a time. Along with this variety of stereo slide presentation media, he also offered standard non-stereo slide projectors and even a moving picture film projector, although in his description of this last item, he was very quick to point out all of its disadvantages in comparison to his Kaiser Panorama.

Fuhrmann at times employed up to eight of his own photographers to take stereo pictures. Special picture series, such as those of the German emperor or the Pope and his chambers were photographed by Fuhrmann himself. He also bought stereo images from other photographers—this is evident not only in the images themselves, but also from the “images wanted” advertisements he placed in German newspapers and newspapers in foreign countries such as the U.S.A.

Competitors

August Fuhrmann’s great success gave rise to a large number of imitators of his system who used the name Kaiser Panorama for their own enterprises. In his publications, Fuhrmann warned against the illegal use of the name “Kaiser Panorama” and the term “Photoplasticon”, which he had patented, by competitors for their own “Kaiser Panoramas” and picture series in their advertisements.

What Became of the Kaiser Panorama?

August Fuhrmann called his enterprise a “first-rate institution of art” and his collection of stereo images an “archive of stereo documents.” As early as 1914, he had hoped his archives would be taken over by the state, but the end of the German empire in 1918 put an end to this wish. After Fuhrmann’s death, the collection of stereographs became lost little by little, and after the firm was liquidated, there was no one left to look after the estate. Despite this, some of the images survived the wartime and post-war turmoil in Berlin; they turned up after a number of years and are now in the possession of Prof. Erhard Senfs Kaiser Panorama Picture Rental Company in Berlin.

A few of the original Kaiser Panoramas themselves still exist. The most well-known of these is the one in Altotting that, as noted before, remained in operation there up into the 1960s. In 1969, this unit (including its stereo picture series) was moved to the Munich Photo Museum, where it’s now displayed as a star attraction. Another one that wasn’t built by Fuhrmann—it came from the Netherlands—could be seen in the now-closed Berlin Museum, while another one—again not one of Fuhrmann’s—with many picture series is part of the collection of Bernhard Paul of the Circus Roncalli in Cologne. Other original units, some of them with picture
series, are known to exist in Austria (in the Museum of the City of Wels); Haarlem, Netherlands (on loan from the Amsterdam Film Museum); Antwerp, Belgium; Brno, Czech Republic; Warsaw, Poland (there are even two of them there); and Swan Hill, Australia. Of these, the “Photoplasticon” in Warsaw is especially interesting—it’s still in operation at its original location, and during the Communist era, it even played a political role: it was considered unimportant by the censors and thus could serve as a window on the West by showing stereo pictures taken by those who were allowed to travel to the West during that era.

Some of Fuhrmann’s company documents still exist, including a catalog from 1907 which lists not only the picture series available at that time, but also includes descriptions and illustrations of equipment; the already-mentioned “Golden Book” of 1909 with the letters of praise; and posters, leaflets, admission tickets, and similar items. Contemporary photos of Kaiser Panoramas are quite rare; the oldest one known by the author probably dates to 1913 and is found in the archives of the Deutsche Photothek in Dresden. Another photo was published much later in 1937 in the Münchner Neuesten Nachrichten and afterwards in the magazine “Das Raumbild” (“The Spatial Image”).

The Kaiser Panorama Today

The nostalgia wave of the last decade has reawakened interest in the Kaiser Panorama. Besides the one in the Munich Photo Museum, other original units have been restored, and new ones are being built in both antique and modern designs. Units have been installed in museums in Berlin, Kiel, Düsseldorf, and Dinkelsbuhl; some are equipped with old picture series, while others have modern picture series. A modern reproduction built in the antique style belongs to the Kaiser Panorama Picture Rental Company in Berlin and is used for special exhibitions, such as those that have been held in Bonn and Paris.

Newspaper and magazine articles have also created interest in the Kaiser Panorama, and it has attracted academic attention. An almost forgotten picture presentation medium, a predecessor of moving pictures and television, is being rediscovered and thus saved from disappearing completely. Its reappearance, especially in 1995, the year in which the 100th anniversary of the moving picture film was celebrated, is particularly gratifying.

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[Continued on page 23]
Caprine Print Circuit

Several columns back, the question of the role played by voting in the Society circuits was discussed and it was indicated that although it is useful and of interest to most participants it is not high on the list of reasons for the Society's existence. Still a detailed study of voting patterns sometimes can be interesting, and, if one can interpret them (usually beyond my ken) it can be informative. At best, judging pictures is a subjective process and interactive as well.

The Caprine Print Circuit recently went through a difficult period of adjustment following a transfer of leadership to the new Secretary, Ron Kriesel of Gladstone, Oregon. All of the traveling boxes are now back on track and Ron was able to report on the voting results for the calendar year 2000. Ron Kriesel reports:

"The fundamental we keep in mind is that the circuit folios are for enjoyment and education. A way that works well in documenting these virtues is the use of the Voting/Tracking Cards that are sent to the Secretary each time that a member reviews a folio.

Tallying up statistics from the votes received honors those who made the favorite and best views and gives everyone a chance to take note of the techniques of those photographers and learn ways to improve their own images. The system is far from perfect—some views carry over from one year to the next and no two members ever vote on exactly the same package of views. I try to include only voting cards dated from January through December."

The Short Report

First we will give the short report of the vote tallies and then look at the results in a little more detail to learn something about the voters. The total points attained by all members for the year was 1228. Joel Matus of Los Angeles, CA, was the clear leader with 147 points. Tied for second place were Quentin Burke and Ken Carpenter with 112 points each. Thom Gillam was fourth with 109 points and Bob Kruse was fifth with 97 points.

The next five places were Carole Honigsfeld 88 points, Bill Patterson 84 points, Tim White 82 points, Jack Cavender 76 points, and Steve Braun 69 points.

Favorite Views

The total number of stereo cards considered in the Year 2000 voting was approximately 125 views. The top scoring individual views were:

1. "Mission Santa Barbara" by Joel Matus (52 points)
2. "Cemetery at Briggs" by Quentin Burke (41 points)
3. "The Pier in Winter" by Joel Matus (37 points)
4. "Decimated Ranks" by Thom Gillam (28 points)
5. "Fishing" by Jack Cavender (27 points)
6. "Arctic View" by Harry Richards (25 points)
7. "Turning of a Leg" by Steve Braun (24 points)
8. "Air Show" by Quentin Burke (24 points)
9. "St Francis Church" by Ron Kriesel (24 points)
10. "Restoration" by Bill Patterson (24 points)
11. "Grand Rue" by Bill Patterson (24 points)

One can see that having two pictures in the "top three" when all others could score only once in the "top eleven" explains much of the point lead Joel Matus earned over the rest of the field. In this case, a single picture can have a considerable effect in getting one into the running—a second can put one over the top.

First Place Votes

Looking at 1st place choices adds some more insight to the scoring. Each Caprine voting member makes a 1st place pick as well as 6 more picks in decreasing order of preference for each folio.

Those stereographers earning first place votes for any images were:
- Thom Gillam, 7 votes for 5 cards;
- Joel Matus, 7 votes for 4 cards;
- Steve Braun, 4 votes for 4 cards;
- Quentin Burke, 4 votes for 4 cards;
- Ken Carpenter, 3 votes for 3 cards;
- Bill Patterson, 3 votes for 3 cards;
- Tim White, 3 votes for 3 cards;
- John Baker, 1 vote for 1 card;
- Carole Honigsfeld, 1 vote for 1 card;
- Bill Kreitzer, 1 vote for 1 card;
- Ron Kriesel, 1 vote for 1 card;
- Harry Richards, 1 vote for 1 card.

One is struck by the fact that only cards by Thom Gillam and Joel Matus were selected best more than once—all others were chosen only once. This seems to speak to a rather even level of quality among the Circuit's folio entries over the calendar year. No "super view" was able to blow all the others away. Since voting is optional, one is restricted to the input of those choosing to participate.

Votable Card Count

Finally, if we look at the number of occasions when a circuit member received any vote (whether 1st, 2nd, 3rd, etc.) we see just how evenly the talent is distributed among the circuit's viewmakers. Tim White, Ken Carpenter, and Tom Gillam each had their cards selected 22 times in the voting. Joel Matus and Quentin Burke made it 21 times; followed by Bob Kruse 20 times, Bill Patterson 19 times, and Carole Honigsfeld 18 times. All in all, the Caprine stereocard makers seem to have enjoyed a pretty good year.
Exhibition Judging

If the above tips us off to the uncertainties of interpreting voting results in folio circuits, one should not be surprised that it is all revisited in the judging of Salon Exhibitions. Currently, there are at least a dozen photo exhibitions around the world which have a stereo card competition with Photographic Society of America approval where acceptances count toward PSA “star” ratings. There are more opportunities than that for those competing in the several formats of stereo transparencies. The mysteries of judging remain the same, though, wherever it occurs.

Judging is far from being a science. It is subjective and interactive. Years ago, when the mainstay of PSA competitions involved Black & White prints mounted on 16 by 20 inch white, pebbled mounting boards, a popular proverb said, “Change a judge and you change all of the winners”. I still go with the proverb. Judges bring their life experiences and their biases with them, just as we all do. They make their selections in good faith as they see the situation at that time. But one should be prepared to accept some things as inevitable, without bellyaching about them. It is part of the process. To wit:

A picture may be “Best of Show” in one competition and fail to receive any honors in another. A picture you did not regard highly may receive accolades while the one you counted on may be passed over repeatedly. A viewcard that has done well in several past competitions may not be accepted in the next one. But if a view you like flops several times in a row, forget it. Pictures run their course. Though exhibitions may be separated in time and geography, their catalogs do get around, as do the judges. The initial “impact” of an outstanding view evaporates and the judges move to the newer ones—been there, seen that. Selecting the accepted views is generally not all that trying a process. Selecting the award winners can be. Picture that were well received in Society circuits will likely be seeing one another again for a while in the exhibitions.

SSA-ONLINE

Illustrated is one of the recent entries by David Kesner of Boise Idaho in the Society’s electronic circuit that does all of its business at its Internet site. Dave reports it as “a close-up of a friend’s pet turkey taken just before I left for the NSA Convention. Camera was an RBT X3A with macro attachment and dual Metz 32Z2 flashes recorded on Fuji Velvia film”

Persons interested in participating in SSA-ONLINE should contact Shab Levy, shab@easystreet.com.

Kaiser Panorama Phenomenon (Continued from page 21)


Lorenz, D (199, 199): Das Stereobild in Wissenschaft und Technik (Ausstellungskatalog). Köln, Oberpfaffenhofen


(Continued on page 32)
The client came over to look through my stereo slides of the Golden Gate Bridge and San Francisco Bay Area for use in a new 3-D project. He liked the bridge images but kept asking if I had anything “really dynamic with the towers coming at you through the window.” I half-joked “the only way you’re going to get that shot is to hang off the bridge in a helicopter,” and that’s how I ended up in an Enstrom 280-C the size of a Volkswagen bug, hovering 150 feet above the Bay, hanging out of a hole where the door should have been.

I’ve shot hyper stereos out of many a scratched jet window and even a few small planes, but this was my first time shooting hypers from a helicopter. I immediately called everyone I knew who had ever been up in a helicopter, then contacted various Bay Area helicopter rental companies for pricing. I discovered that for the price of one hour in a big Bell Ranger four-seater helicopter with room for an assistant to change my film and hand me cameras, and a five-point safety harness, I could book two hours in the telephone booth-sized Enstrom changing my own film, strapped in with duct tape. (The duct tape, I should point out, was simply a precautionary measure to keep me from accidentally tripping my suitability buckle, which of course I never, ever would have done.)

I had the utmost confidence in the helicopter, thanks to pilot Cameron Rolf, who was also the local Enstrom rep and a full-time flight instructor. Cameron, a photographer himself, gave me a quick lesson in helicopter aerodynamics, pointing out the Enstrom’s many safety features. He also listed all the famous people who had thought enough of the Enstrom to buy one, a rather eclectic group that included Clint Eastwood, Wayne Newton, and Dolly Parton’s husband. I in turn gave Cameron a quick lesson in the unique requirements of shooting 3-D hypers, which included the following top four:

1) Fly level at a 90-degree angle to your subject.
2) Fly as slow and shoot as fast as possible.
3) Keep the sun to your back.
4) Don’t bump into anything.

In preparation for the shoot I made several trips to the Golden Gate Bridge North Tower. A close-up of the Golden Gate Bridge North Tower. StereoJet postcard #GGBN 01.

A slightly closer shot from the other side of the island was used for a StereoJet postcard, but more of the structures on “the rock” can be seen in this view.
Gate Bridge at different times of day to observe lighting conditions and shot a couple of test rolls from high vantage points at the approximate time of day I planned to fly. I knew from these tests and past experience that I would need to shoot at a shutter speed of between $\frac{1}{500}$ to $\frac{1}{1000}$th of a second to compensate for the speed and vibration of the helicopter and to deliberately underexpose the Fuji Provia 100F film from $\frac{1}{2}$ to a full stop (resulting in a final exposure of between $\frac{1}{500}$th-$\frac{1}{1000}$th /sec @ 5.6.) It was then just a matter of monitoring on-line weather sites and waiting for a cloudless, wind-free day.

I looked forward to the first flight with a mixture of excitement and trepidation; the trepidation due to one friend who told me “you know if those blades stop moving, you’re just a brick in the sky.” (Note: Cameron wants me to point out here that if the blades stop moving you are not a brick in the sky. You’re a really expensive brick in the sky.)

My camera of choice was a Canon AE2 that I shot at its maximum speed of 5 frames per second. No filters or artificial ingredients of any kind were used in the taking of the photos.

I had also brought along my trusty, twin Konica FT-1 rig on a custom 2-ft. bar I had built at a local machine shop. I figured that if I had the opportunity to get close enough to the towers, I might get some usable pairs and save the client many hours of Photoshop work moving cars and boats around to eliminate anomalies. Although I did get some acceptable pairs with the Konicas, the results with the single SLR were much more dramatic and the ones the client eventually chose for the project.

One thing I had learned from shooting landscape hypers at ground level was to always shoot my sequences moving in the same direction as the clouds to prevent them from becoming pseudo. I therefore had the pilot whenever possible fly in the same direction as any moving objects in the scene. Some anomalies were unavoidable, but since most were far enough away, they did not present any major problems and Photoshop touch ups were kept at a minimum. Despite all the 3-D formulas and esoteric bridge facts tucked away in my head, the reality of the situation eliminated all but the basic rule of “shoot a lot and shoot fast.” Given some of the quick maneuvers, I often only had the time or inclination to shoot a few frames (The close-up of the Transamerica pyramid was chosen from the best two out of only three frames shot.)

Despite the myriad of things I had to keep in mind—loading film, getting the pilot to maneuver into position, keeping an eye out for other aircraft—I did manage to enjoy the flight. The voice-activated headsets Cameron and I wore made for quick and easy communication and a minimum of aircraft noise.
pointed out two consenting adults on a nearby rooftop “not having sex” (as Bill Clinton might testify). Of course I was changing film at the time, didn’t have my 300mm lens, and left my model release forms in the car. In any case, I’m pretty sure this was not the “dynamic, coming through the window shot” the client had in mind.

You can judge the results for yourself if you drop by the Golden Gate Bridge Gift Shop where StereoJet’s new 3-D postcards are being test marketed*

Bottom line: the client loved the images, I had a great time, and we didn’t bump into anything. Can’t ask for more than that.

Note: I would like to give special thanks to Allan Griffin and Steve Aubrey for their invaluable pre-flight advice and support.

Ordering codes for StereoJet postcards:
- Alcatraz (AZ01)
- Coit (CT 01)
- GG Bridge north tower looking to Marin (GGBM 01)
- SF skyline (SFO1)
- Bay Bridge (BB01)
- Close up of GG bridge north Tower (GGBC 01)
- North tower GGB & Sausalito (GGBS 01)
- Trans Am. Bldg. (SFTA 01)

*If a trip to the bridge isn’t practical and you absolutely can’t wait to get your hands on them, postcards can be ordered directly from San Francisco Imaging Services, Inc., 300 Broadway, Suite 14, San Francisco, CA 94133, (415) 957-1369, or viewed at www.stereojet.com. Cost is $19.95 per postcard (includes glassine envelope, matte, and 3-D cardboard glasses) California residents please add appropriate sales tax.

What is a StereoJet Postcard?

by John Dennis

StereoJet® 3-D polarized digital prints and transparencies have been displayed at NSA conventions and numerous other trade shows and museums since 1997, but until now have not been available as over-the-counter retail images for the general public. The Stereojet website www.stereojet.com provides both historical and technical information as well as commercial production and ordering contacts.

The prints are, in effect, digital ink jet color Vectographs viewed with polarized glasses—but that name appears nowhere in the material on the Stereojet website. Two paragraphs from the site’s history page provide a concise description of the process:

"The StereoJet® three-dimensional printing process was developed at the Rowland Institute for Science, a non-profit scientific research institution in Cambridge Massachusetts. The Institute, was founded in 1980 by the inventor and industrialist Edwin H. Land...

Each StereoJet print or transparency consists of a pair of superimposed, oppositely polarizing digital images, one representing the left-eye view and the other representing the right-eye view. The two images are printed on opposite surfaces of a single transparent support sheet. An observer wearing polarizing 3-D glasses views only the assigned image with each eye. Just as in natural binocular stereo vision, the brain processes the information so that the observer perceives the pair as an image in depth."
In geodesy and cartography, digital techniques have been applied for years. In Germany, private users will be able to do their own mapping now by using the digital data on special CD-ROMs offered by the Federal Offices of Land Survey. These came on the market for nearly all of the German federal states at the beginning of 1997. These first CDs have been replaced by new ones with added elevation data. The first upgrade was prepared for North Rhine-Westphalia, and this was followed by upgrades for Mecklenburg-West Pomerania and Bavaria. New CDs for the remaining states are in preparation now.

There are two CDs, named Top 50, for Bavaria, one for the northern section and the other for the southern section. They contain, along with other information, digital topographic data for maps at scales of 1:50,000 and 1:200,000, as well as a map at the scale of 1:1,000,000 that covers the entire Federal Republic of Germany. Also included is an index to locations (Ortsterzeichnis) which allows the user to select the area wanted.

The main product of Top 50 is a digital three-dimensional terrain model with a resolution of 50 meters. This feature allows the user to prepare an elevation profile along any route, which would be most useful, for example, in planning bike tours.

The digital terrain model can be used mainly for three-dimensional imaging to produce, for example, perspective panoramas or anaglyphic stereoscopic views (anaglyph glasses are included). It isn't possible, however, to generate single images or stereo pairs from the CDs, so the user can't bring onto the screen or print out 3-D color maps with different colors (for example, to indicate vegetation and water surfaces) that can be viewed with a lens stereoscope or an over/under prism viewer.

Minimum system requirements are a 486 processor, 32MB of RAM, 80MB of free space on the hard drive, Windows 95, 98, 98SE, 2000, or NT4.0, and a graphic chipset with 256 colors. Unfortunately, there are no versions of these CDs for Mac and Linux systems; this is regrettable, since Macs are often favored for graphic applications.

The software of the CDs now available and those planned comes from EADS Dornier GmbH. The CDs for Northern and Southern Bavaria are available from: Bayerisches Landesvermessungsamt (Bavarian Office of Land Survey) Alexandravstrasse 4 D-80538 Munich (Munich) Fed. Rep. of Germany The CDs cost 78 Deutschemarks each or 128 Deutschemarks for both. The organizational web site is http://www.bayern.de/vermessung.
The English Colors of James Elliott

Color was a natural purpose in the beginnings of stereo. Early daguerreotypes were painted with transparent colors which took the observer one step closer to reality.

James Elliott, "Nice Duck, Sir?"

Among the earliest paper views which were exquisitely water-colored, we have to acknowledge the results achieved by the London Stereoscopic Company from 1856 (or even as early as 1855, referring to Russell Norton's article in *Stereo World* Vol. 16.

James Elliott, "The Wedding."
No. 2). He sold his negatives to Charles Gaudin in 1861, but few Elliott views are known with a Gaudin imprint.

The Elliott views are identified by an Elliott imprint or by one or two of three possible blindstamps: "J. Elliott" or intertwined JE (scarce), or a crown: he was the king of stereophotographers!

We have a fair idea of his work with the samples reproduced here and also with figures 51, 54, 55, and 57 of Darrah's World of Stereographs (1977). The attribution of these early views is often uneasy: Darrah's figure 60 is an Alexis Gaudin view, and Mark Anthony's "Fine fruit, sir?" (Stereo World Vol. 15 No. 1) is by Elliott.

A tentative identification of Mark Anthony as a London pseudonym of Alexis Gaudin by reference to his brother Marc Antoine, who was one of the earliest pioneers of photography, has not been confirmed yet. In addition, a ghost view with an Elliott imprint ("The Orphan's Dream") looks like a typical Silvester. Where is the truth?

Elliott's favorite subjects split into eight major categories:
1. Christening, confirmation, preparing for a wedding, wedding ceremonies. (Many titles exist, including "Broken Vows" of which three variants are known: one with the door opening from the left, one with the door opening from the right, and one with the door closed!)
2. Home views (many titles).
3. Lovers in seventeenth century costumes (including "The first love-letter").
4. Staged indoor occupationalss (including "Fortune-telling", "Nice Duck, Sir?" , and "The Inventory").
5. Other staged scenes. ("Pic Nic", "The Golden Age", and "Very Pretty Indeed" are three views in the same forest-like setting.)
6. Historicals.
7. Bizarre ("The Pursuit", "Wicked Eyes").
8. Artistic Arrangements.

50s Flavored Finds

(Continued from inside front cover)

after all these years, there is often little that can be written about them in the form of an accompanying article.

It seemed that a periodic feature such as this—sort of a "show and tell" with the emphasis on the "show"—might be a good way to share some classic 50s 3-D images, even if little is known about them. The first few installments will include slides from my own modest collection, but if you come across any classic 50s-era images that you would like to share through this column, I would welcome the help. (I don't claim to have a corner on the market on these slides, and I would enjoy seeing the treasures that other enthusiasts have found!) As space allows, (and depending on the response) we will select a couple of images to reproduce (usually without the luxury of full-color printing, unfortunately) in each issue. This is not a contest—just a place to share and enjoy. Since we'll only have room to print one or two images per issue, please limit your submission to a single slide for now. If the slide's subject, date, location, photographer or other details are known, please send that along too, but we'll understand if it's not available. Please include return postage with your slide. And now the required legal disclaimer: Slides will be returned within 6 to 14 weeks, and while we'll treat your slide as carefully as our own, Stereo World and the NSA assume no responsibility for its safety.

Send your slide to: Fifties Flavored Finds, 5610 SE 71st, Portland, OR 97206.
Fractals are beautiful, fascinating designs of infinite structure and complexity, the sort of intricate patterns that capture your attention and evoke a sense of wonder. They combine contemporary mathematics and the high-tech computer revolution, but are nonetheless a phenomenon as close to home as the flowers in your garden or the pores on the back of your hand. There are essentially five qualities that, taken singly or together, define fractals: an ever increasing complexity of something the closer you get to it, such as a mountain or a coastline; a complex structure at all scales, like the surface of a body of water on a windy day; infinite branching, as in the human circulatory system; a repeating self-similar pattern, as with a fern; and chaotic dynamics, like the flow of water over Niagara Falls. Fractal geometry can often model nature better than classical geometry can, and thus can bring us closer to an understanding of the world around us and how it works.

But perhaps the best thing about fractals is the sheer enjoyment of creating, coloring and contemplating them. They have become popular these days because the computer, with appropriate software, allows us to create them quickly and easily in any shape or color. They have become an art form and occasionally show up on calendars or book jackets. But despite their artistic appeal, they are nothing but pure math and so represent a sort of marriage of math and art.

Fractals that we create on the computer are the graphic realizations of calculations repeated.
many times, using the result of one calculation as the basis for the next. The key is that the calculations are always done with what are called complex numbers, each of which is actually the sum of two numbers, the second of which is a multiple of the square root of negative one. Fractals owe their fascinating designs to the particular things that complex numbers do when used in computations.

Computer screens are a grid of points of light called pixels, each of which can be identified by two numbers indicating its horizontal and vertical position. Fractals can be generated on a computer screen by converting each of these number pairs to a complex number and then using it to do a series of computations on each pixel. The first and most famous of all fractals is named for Benoit Mandelbrot of IBM's Watson Research Center, who introduced the notion of a fractal in his book *The Fractal Geometry of Nature* (Wilt Freeman and Co., 1977). It is produced by doing no more than squaring a number and adding another one to it (using the formula $Z_{n+1}=Z_n^2+C$, where $Z_0=C=$pixel), and repeating this over and over. This simple process produces what has been called the most complex object in mathematics: a curiously shaped geometric form, the border of which is a chaotic region of infinitely repeating patterns of exquisite intricacy. Investigating this region and choosing colors to delineate the patterns can produce beautiful images. Thousands of formulas have now been written that produce amazing fractals, and there is literally no end in sight.
Fortunately, you don't have to understand any math at all to make beautiful fractal images. All you need is a computer that's not too old, some time, curiosity and the appropriate software. The foremost software is called Fractint (for fractals with integer math) and is available free at its web site:

http://spanky.triumf.ca/www/fractint/fractint.html. It was created as open source freeware by a dedicated group of programmers called the Stone Soup Group, two of whom wrote a book called Fractal Creations (Walter Group Press, second edition 1993). There is also a discussion group on the internet along with numerous galleries, downloadable files of formulas and tutorials, and an annual contest.

But for our interests, the best thing about Fractint is that it has programs for creating 3-D transformations, stereo pairs, anaglyphs and random dot stereograms with dot or image backgrounds. Stereo effects from fractal images can be derived either from the range of numerical results from the computations on each pixel, or from the gradations, or grayscale, of the colors chosen to represent those results. It is easy and rewarding and, as fractal images graphically show the beauty in math, the 3-D option enhances it by adding the magical third dimension.

The appeal of computer generated fractal images depends to a large degree on the colors chosen to delineate the patterns created by the formulas. Fractint offers virtually infinite color palettes, and the same fractal with different colorings can be totally different but equally appealing. Color printing is therefore important, since black and white can only hint at such possibilities.

The random dot stereograms here are actually two fractals: the visible and the hidden. They were created without calibration bars since the repeating pattern of the background image served the same purpose. They were, of course, designed for viewing on a PC screen, making it unfortunately easy to hyperconverge them when printed in a smaller size.

Anyone interested in investigating fractals can contact me via e-mail at leedane@excel.net for some hints on getting started, and for some parameter files to generate these and other stereo images on a PC.

Kaiser Panorama Phenomenon (Continued from page 23)


For important information and other support, the author wishes to thank the following individuals: H.-Ch. Adam, Göttingen; Prof. J. Cameron, Rochester, NY, U.S.A.; T. Chudy, Warsaw; Dr. F. Dering, Munich; K. Halbig, Celle; G. Kenmer, Berlin; G. Kosthofer, Bergisch-Gladbach; Dr. E. Mayer-Wegelin, Bad Homburg; Dr. W. Pohlmann, Munich; W. Selle, Oberaudorf; Prof. E. Senf, Berlin; H. de Smidt, Overveen; Duncan Woods, Cygnus Graphic, Phoenix, AZ, for his translation of the original German article to English; and Prof. Ernst A. Weber, Berlin, Germany and Sun City, AZ, for his review of the translation and his suggestions for improvements.
Harry Potter and the Sorcerer's Stone

Describing the newest offering from the folks at Fisher-Price is a real delight. Their research and development team has brought us a totally different look from the traditional View-Master format. (See SW vol. 27 No. 6, page 28.) Harry Potter and the Sorcerer's Stone comes to us in the form of a special "jeweled" viewer that uses 3-D windows to tell the magical story of a young boy and his journey into wizardry.

The viewer and the cards are currently available at local retailers. Target Stores and Toys R Us charge $6.99 for a set of cards or the viewer with one card. Walmart's price is a bit better at only $5.99 per set. However, it is next to impossible to get a whole set of cards without buying a multitude of sets. Each 5-card package contains a random assortment of cards. Therefore, you may buy a card with Harry on the front and get five cards and buy a package with Hedwig on the cover and get 2-3 of the same cards. The purpose of packaging them this way is twofold. One: it encourages kids to swap cards in order to collect a complete set. Two: it encourages increased buying of cards to obtain a complete set. This appears to be very clever marketing strategy on the part of Fisher Price.

The cards are slightly thicker than the traditional View-Master.

(Continued on page 37)
A new book about stereo is always good news. But a book that is chock-full with information and valuable reading for both beginners and advanced stereo photographers is especially good news. This book comes to us from the UK and the author is Dr. G. R. Ogram.

I remember when I got started in stereo photography, I was looking for a modern reference to explain both the practical and the theoretical details of stereo photography in a simple and easy to understand way. No such reference existed in 1988.

Things are not much different today. Newcomers in the field have to rely on older, hard to obtain books, or get bits and pieces of information from participation in various stereoscopic organizations or the Internet. This situation is about to change with Geoff Ogram’s new book Magical Images - A Handbook of Stereo Photography.

To appreciate what has been achieved here, first a little background about the author. Geoff Ogram obtained his first stereo camera in 1965 and for the next 30 years he took stereo pictures on and off, remaining effectively, as he puts it, a beginner, busy with his professional career.

It was only in 1995 when he retired from teaching science that he decided to take stereo photography more seriously. At this point, like other beginners with intense interest in the subject, Dr. Ogram had the vision of writing a book on stereo photography. A book that would help put his own thoughts and knowledge in order and also help other beginners and advanced stereo workers gain a better understanding of the subject. But, unlike others, Dr. Ogram made his vision a reality with Magical Images.

In my opinion, three factors in the author’s background are working to make this book a success: 1) Long association with stereo as a “beginner”, 2) Short time of serious involvement in stereo, 3) A logical and technical mind developed through 30 years of teaching science. As a result of these three ingredients, the author possesses a deep knowledge of stereo photography, has everything fresh in his mind, and is able to present the information in a logical and comprehensive way.

The bottom line is that the author has achieved this stated goal of producing “an all-purpose book, which would provide not only practical information and advice for the beginner but also a comprehensive and logical treatment of the theoretical principles involved, so that the more experienced worker could study the subject in more detail”. The book is divided into three parts:

Part I (Chapters 1-15, a bit longer than the half book) is called “Basic Principles and Practice” and deals with the practical aspects of stereo photography. This part will be of most value for the beginner as it describes the equipment and basic techniques for successful stereo photography.

Some of the subjects discussed in this part include perception of depth, stereo photography with an ordinary camera, stereo photography with a stereo camera, stereoscopic formats, review of selected stereo cameras, stereoscopic attachments in ordinary cameras, stereo with twin cameras, freewing, stereoscopes, stereo mounting, hyper- and hypostereo, stereo projection, autostereoscopy, photographic composition and lighting for effective stereo, trick photography and special effects, anaglyphs, stereoscopic drawing, digital imaging, and more.

Part II (Chapters 16-21) is called “Analysis” and it presents a mathematical approach to the subject. Subjects discussed include the eye and binocular vision, light, lenses, optics, the orthostereoscopic image, the distorted stereo image, advanced mounting techniques and image control in stereo space. According to the author, this mathematical approach is valuable because it shows the important variables and how they affect the results. It also shows the limitations and approximations used in different formulas. The level of mathematics required is simple high school geometry, trigonometry and algebra. The reader could skip most of the derivations and equations and still grasp the main ideas presented in this part.

Part III is called “Supplements” and contains more detailed discus-
ession of certain topics that appear in the main text, such as Perspective, Pantograph, two-mirror beam splitter, Elliot and Cazes stereoscopes, criteria for projection of stereo images, etc.

One of the nice features of this book is that it is structured so that, in addition to being a complete and logical treatment of stereo photography, different chapters or sections stand on their own so it can be used as a reference to look up a specific subject or technique. Examples of such topics include stereo projection, stereo mounting, anaglyphs, lenticular prints, trick photography, hyperstereos, and more. Some subjects are easy to comprehend with a casual reading but others need to be studied carefully for the full benefit to be gained.

Magical Images is self-published by the author and printed in a printer (digitally, not a photocopy) on heavy paper and comb-bound with a metal spiral and plastic covers. There are 314 pages printed in small type (high density of information) and there are hundreds of detailed illustrations, including a few black and white stereo pairs and a page of color stereo pictures. The quality and originality of the illustrations is particularly impressive. Regarding the style, the book shows its continental origin at places, especially when the Wray Stereo Graphic camera comes before the Stereo Realist and the Hawk stereo projector is mentioned instead of the TDC. Also, the concise, to-the-point, disciplined and well-organized writing is more typical of a European than a US presentation, which is good news for myself and perhaps other readers with a background in science and engineering.

I liked the book so much that I have obtained a small stock to sell in the USA. The price set for US distribution of this book is $50. It might sound a bit high, but considering the size and weight of this volume, most of the money goes for the custom printing and mailing. Those in Europe can obtain a copy by contacting the author directly at: "Geoffrey Ogram" gogram@uk.packardbell.org.

—George Themelis, Dr7-3d@att.net
Edward's IMAX Theaters Bite the Dust
by Lawrence Kaufman

It might be another nail in the coffin of the current 3-D movie boom. On July 2nd, a judge's ruling formally dissolved a marriage between two financially reeling companies at 14 existing or proposed theaters, including three in Southern California.

U.S. Bankruptcy Judge Lynne Riddle in Santa Ana granted a motion by Newport Beach-based Edwards Theaters Circuit Inc. to cancel its development agreements and 3-D equipment leases with Canada-based Imax Corp. The motion went into effect Aug. 1.

Edwards Theater chain, along with numerous other major film exhibition chains, filed Chapter 11 bankruptcy after a miserable year last year. A combination of over-expansion and competition from rival multiplexes forced Edwards Theaters, which racked up debt of nearly $36 million to film companies like DreamWorks SKG, 20th Century Fox, Warner Bros. Distributing, Universal Studios and Miramax, to file for bankruptcy last August. Commercial 3-D large format (LF) theaters hadn't been around long enough to prove themselves when many theater chains signed their agreements with Imax. The 3-D LF theaters weren't profitable for Edwards and being in Chapter 11 they had to look to maximize creditors' recovery.

The Imax contracts obligated Edwards to develop the mammoth theaters and lease IMAX's 3-D large-screen projection equipment. Six 3-D LF theaters had already been built and another eight had originally been planned, but were unlikely to ever be built. Imax will now pursue a $29 million claim against Edwards for breaking the agreement. Now that Edwards has the approval to break the contract, Imax becomes a claimant.

Imax has suffered its own financial turmoil, reporting a $92 million loss for 2000 despite a $15.6 million increase in revenue from 1999. Imax will continue creating films using large-format technology, but very few 3-D LF films are now being planned.

Some theaters have been exploring alternatives for failing 3-D IMAX screens. Cathedral City's downtown association took over the Desert IMAX 3-D Theater in January, and Redevelopment Agency Director Susan Moeller is considering folding it into the new Mary Pickford Theater complex. "I think you have to look at expanding the venue, (possibly) bringing in a 35-millimeter projector (for) showing second-run features," she said.

Billionaire Philip Anschutz has been buying large stakes in several failing theater chains. When Edwards completes their reorganization, the group lead by Anschutz will own 51% of Edwards.

Anschutz and Oaktree Capital Management control more than 90% of the world's largest exhibitor, Regal Cinemas.

North America's second largest theater circuit, Loew's Cineplex filed chapter 11 in February and has been in a bitter fight for control. Loew's runs a 3-D LF theater at Universal CityWalk and perhaps the best attended, the Sony IMAX in New York. Anschutz's interests will likely control more than 20% of all the North America movie screens. With the Edwards 3-D LF screens now history, this does not sound like good news for 3-D LF theaters.

Even though there has been no announcement of what will happen with the six shuttered Edward's LF 3-D theaters, speculation has been that they will be turned into 35mm theaters. The removal process for IMAX might take a while, since it involves the massive projectors and the involved sound systems. The LF theater entrances are currently blocked with other film advertising and the IMAX signs have been covered with plastic. There are rumors that some of the theaters will reopen with less expensive 8perf -70mm equipment, but that likely won't happen until Edwards completes their reorganization.

Lenticular Print Labs

The assumption that no labs exist for the processing of consumer lenticular prints seems to grow every year or so, but there are two labs advertising their services on the web.

The Orasee Corporation offers lenticular prints in either 3.5 X 4.5 inch or 5 X 7 inch sizes under the trademark i3DxTM. Color negative 35mm film from either three or four lens cameras will be processed and printed. For prices and ordering information, contact Orasee Corporation, 4850 River Green Parkway, Duluth, GA 30096, (770) 497-0727, www.orasee.com.


Keep in mind, Stereo World offers no assurance of quality or turnaround time at either lab, so readers should try a single, short roll first.
Stereo Camera Web Site

The Photographic Historical Society of New England’s Stereo Camera web site continues to grow into an increasingly valuable resource for either reference or browsing. There are now 172 camera photos, most in color, with simple identifying captions. Many cameras are covered in two or more photos (all flat) to show the camera from different angles or to show identifying name plates, etc.

The cameras, representing a wide variety of origins and ages, are listed alphabetically within six format categories:

- 16mm through 35mm 9 perf advance Cameras
- 35mm 10 perf advance Cameras
- 35mm Euro through 127 Roll Film Cameras
- 120 Roll Film Cameras through 118
- 45x107mm Plate Cameras
- 6x13cm Plate Cameras through 8x10"

Many of the images are nearly full screen size, and of higher than usual web resolution. If you haven’t visited it yet, go to http://www.phsne.org/stereocameras/STEREOFORMATS.HTM.

Can James Cameron Bring 3-D up from the Abyss?

James Cameron is going back to the Titanic for a large-format 3-D documentary titled Ghosts of the Abyss. He’s taking a camera crew (and Bill Paxton!) down to the wreckage to shoot for six weeks using a digital camera system he developed himself. He’ll also tour the sunken German warship Bismarck. The final film will be shown in both 45-minute IMAX-sized version and a 90-minute video.

Cameron will also co-executive produce, partnered with Walden Media, an educational production company owned by Denver billionaire Philip Anschutz. The filmmaker’s brother John David Cameron will capture making-of footage of the exploration, and brother Mike Cameron is chief designer of the deep-diving 3-D camera housing and related technology. Cameron will use specially developed Sony digital-video cameras on the picture. The cameras will be deployed on submarines launched from a Russian research vessel, with subs then deploying remotely operated vehicles to film underwater locations that are particularly difficult to access.

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View-Master (Continued from page 33)

reel and should hold up relatively well over a period of years. They are less likely to bend in half than a reel because of the heavier material. The viewer is also made of a very durable plastic and should hold up for a long time as long as the diffuser is set back in place properly upon closing.

This is a great new product in our opinion. Although completely different from the traditional View-Master format, it gives us a wonderful new collectible to treasure. We only hope that the popularity of Harry Potter continues for many years to come and that all of Rowling’s wonderful books come to life through the magical world of View-Master 3-D.
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STEREO VIEWS for sale on our website at: www.daves-stereos.com e-mail: wood@pikeonline.net or call me writing to Dave or Cyndi Wood, PO Box 838, Milford PA 18337 phone (570) 296-6176. Also wanted, views by L. Hensel of NY and PA.

STEREOVIEWS, CDVs, CABINETS, etc. Direct sale: send me your wants. Tim McIntyre, 137 Nile, Stratford Ontario N5A 261. (519) 527-3590, Fax: 519-273-7310, email: timonj@acorn.ca, web page: http://www.orn.ca/timonj. I collect: Canada and Europe views - let me know what you have.

STEREO VIEW LENSES - two wedge-shaped lenses, each molded and embodied in 1.5” square frame. Precision optical quality: build, experiment. $7.95 postpaid (USA). Taylor-Mercuri, 296-6176.

STEREO X-RAY VIEWER. Westinghouse X-Ray Co., probably from the 1920s or 1930s. Elegant, but large and heavy. Stereo X-rays are quite dramatic, and are a “lost art” today. One stereo x-ray set included. Free to a good home, but you’ll have to fund all expenses of moving it. Bassett Stereo Anatomy, (View-Master) complete set, and some of the earlier (ca 1900) sets as well - interested parties call me, or e-mail at elvijat@yahoo.com. (631) 423-1397.

VIEW-MASTER COLLECTION, 2000 plus reels, viewers, Chinese Art, Mushroom reels, etc. -1 Handling, single and three reel, and Foreign. $4,000 for all. Jack Scannell, RR1, Box 232, Haskell, OK 74436, (918) 492-2384 or (918) 492-6694.

VISIT STEREOVIEWS.com, the Maine Antique Photographica Gallery, for stereoviews and other fine 19th and 20th Century photographs, books, ephemera and equipment.

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WANTED

ARE YOU SURE you still need your vintage German stereoviews cards? Please check your collection and contact me, Klaus Kemper, Kommerzierschulen, 146, D-52385 Niedergimmendingen, Germany.

AUSTRALIAN IMAGES, stereo or otherwise, ephemera, comics, etc. Pay cash, or trade in cards. Warren Smythe, 258 Cumberland Rd. Auburn, NSW 2144 Australia, asmythe@bigrig.com.au

BICYCLES AND MOTORCYCLES. Any stereoscopes, photographs, ephemera, medals, catalogs, memorabilia, etc. related to cycling Singles or collections. Generally 1860-1955. Permanent want. Loren Shields, PO Box 211, Chagra Falls, OH 44022-0211, Phone (905) 866-6911, vintage-antique@home.com

BUYING SAVANNAH GEORGIA and southern stereoviews. Also buying pre-1930 Georgia and southern postcards. Historical Savannah items also wanted. Call (912) 447-9898 or write Clifford Burgess, 404 E. Oglethorpe Avenue, Savannah, GA 31401.

COLLECT, TRADE, BUY & SELL: 19th Century Images (cased, stereo, CDV, cabinet & large paper) Bill Lee, 8658 Saliski Way, Sandy, UT 84094. billlee@uno.com Specialties: Western, Locomotives, Photographers, Indians, Mining, J. Carbutt, Expeditions, Ships, Utah and occupational

CORTE-SCOPE VIEWS or sets, any subject or condition. No viewers unless with views. John Waldsmith, 302 Granger Rd., Medina, OH 44256.

I BUY ARIZONA PHOTOGRAPHS! Stereoviews, cabinet cards, mounted photographs, RP post cards, albums and photographs taken before 1920. Also interested in Xeroxes of Arizona stereographs and photos for research. Will pay postage and copy costs. Jeremy Rowe, 2120 S. Las Palmas Cir., Mesa, AZ 85202.

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Volume 28, Number 1 STEREOWORLD

38
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INDIANS & WESTERN, especially Colorado; all formats (especially large); delegation, survey, railroad, mining; Jackson, Russell, Savage, O'Sullivan, Hillers, etc. Rob Lewis, 1560 Broadway #1500, Denver, CO 80202, (303) 861-2828, rplevis@denverlaw.com.

INFORMATION REGARDING the repair or replacement of the slide changer on a Stereo Realist Projector Model 81. Guy Kidwell, 28925 Wayside Lane, Bay Village, OH 44140, (440) 871-4117.

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Westford, MA 01886

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Preview Admission 8:30AM $25
Managed by Russell Norton
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New Haven, CT 06504
(203) 281-0066

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<th>Sleeve Type</th>
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