It was a delight to see the submissions for the "Hyper" assignment arrive in such variety and quantity in recent weeks. People have attempted hyperstereos of just about everything that film can record, and have come up with some truly interesting results. The technique has even been used to enhance certain body contours in stereo nude shots. As you can imagine, this has potential applications for either gender, although the results tend more toward the ridiculous than what may have been intended. (Nothing of that sort arrived in response to this assignment, however.)

A good mix of aerial and ground based hypers arrived, including some better than average cloud shots and some close hypers of architectural detail. There will be plenty to choose from for the next few issues while we wait for a response to the next assignment.

New Assignment: "Wheels"

This isn't limited to rustic wagon wheels being used as fences or the chrome hubcaps of overly customized hot rods. Anything that moves on, under or by wheels is fair game here, including cars, trains, unicycles, pretzel carts, skateboards, etc. Things like large pulleys or tiny watch parts would also be eligible, as would spherical rolling devices like ball bearings or the ball on the underside of a computer mouse. The wheels themselves would not have to be the center of interest in views of things like vehicles, but a close-up of just a windshield wiper on a 1938 Plymouth probably wouldn't be in the spirit of things. Deadline for entries in the "Wheels" assignment is October 7, 1994.

The Rules:

As space allows (and depending on the response) judges will select for publication in each issue at least two of the best views submitted by press time. Rather than tag images as first, second or third place winners, the idea will be to present as many good stereographs as possible from among those submitted.

Prizes are limited to the worldwide fame and glory resulting from the publication of your work. Anyone and any image in any print or slide format is eligible. (Keep in mind that images will be reproduced (Continued on page 51)
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ON THE COVER

This ruptured gas main featured prominently in video and print news coverage of the January, 1994 Los Angeles area earthquake. Within hours of the initial shock, Dan Gilvezan was there with his stereo camera to capture this dramatic image. Southern California has more stereographers than anywhere else on the planet, and as frequent aftershocks rumble through the area several of them documented scenes of destruction and later sent selections of their views to Stereo World for the article we've titled "3-D Between the Aftershocks."

Color separations and preparation donated by Wy'east Color Inc., Portland, Oregon.

Stereo World (ISSN 0191-4030) is published bi-monthly by the National Stereoscopic Association, Inc., P.O. Box 14801, Columbus, OH 43214. Entire contents ©1994, all rights reserved. Material in this publication may not be reprinted without written permission of the NSA, Inc. Printed in USA. A subscription to Stereo World is part of NSA membership. Annual membership dues: $32 third class US, $32 first class US, $34 Canada and foreign surface, $48 international airmail. All memberships are based on the publishing year of Stereo World, which begins in March and ends with the January/February issue of the next year. All new memberships received will commence with the March/April issue of the current calendar year. When applying for membership, please advise us if you do not desire the back issues of the current volume.

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(Write for availability & price)
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Wondering just what to say about the 20th anniversary of the NSA and Stereo World, the journalistic practice of embellishing occasions like this with statistics occurred to me as an easy solution. (After 20 years, we must have built up some sort of impressive numbers!)

First I tried stacking up all 120 issues. This reached the dizzying height of eleven and three-quarter inches—a monument to publishing that even my aging dog with a heart condition could leap over. I weighed them on a bathroom scale, and the 20 years of concentrated stereo effort came to about 30 pounds—too heavy to lug around easily, but no cause for hiring a crane or checking the load limit of the next bridge.

Laid out end to end, they would total 110 feet of 3-D. That's ten feet less than the Wright Brothers' first flight, and there's an unwritten law of statistics ruling anything shorter than that unworthy of mention.

An estimate of the number of stereographs reproduced in our pages over the years came to about 5,000, but I managed to stop myself before actually counting them or averaging the number of words per issue or the number of times the word stereo appears.

The record that matters, of course, is the amount of enjoyment and information people have found in our pages during the past 20 years. The only solid numbers hinting at that are those showing the steady growth of the NSA, the high renewal rate, and the fact that Stereo World is read in every state and 30 countries around the world.

1974 vs. 1994

Along with any number of other differences between the world of 1994 from that of 1974, the public perception of stereo imaging has changed—the biggest difference being that there is a public perception of it now! In 1974 the total number of people on the planet able to free view any sort of stereo image would probably have fit in a medium size meeting room. Today, thanks to the explosion of interest ignited by single-image random dot stereograms and fueled by the refinement of other computer-generated 3-D color and texture patterns, literally millions of people now regularly free view at least the closely spaced image elements within single-image stereograms. Thanks to the efforts of two Japanese publishers, many of them now also free view full size stereo pairs through both cross and parallel viewing. When and if U.S. publishers of stereogram posters, books and cards catch up with this realization of free viewing's full potential, the wide publication of virtually any 3-D image will become practical. Free viewing could become a common form of visual literacy, allowing the use of stereo pair images without special notes or explanations in nearly any print publication or electronic media source. Even the remote possibility of that development would have been dismissed as nutty dreaming in 1974.

(Stereo World played a definite role in initiating the spread of interest in single-image stereograms with the appearance of Dan Dyckman's work in the May/June 1990 issue. That article led to the eventual creation of N.E. THING Enterprises by Tom Baccei. While the concept would eventually have been spread by interest among computer graphics fanatics, Stereo World gave it a real kick start.)

The stereo camera situation is also vastly different from 1974, when the newest cameras available were models from the 1950s unless you made or combined your own. Since then, several multi-lens cameras for lenticular prints have appeared, as well as some inexpensive point-and-shoot cameras for split-frame negatives and prints. On the other end of the price scale, several 35mm SLR cameras spliced into single units for easy full frame stereography have appeared on the market, the latest being the RBT X2.

(Continued on page 30)
Scoping Out the Language

I was somewhat surprised that a letter to the editor in the Nov./Dec. 1993 issue of Stereo World purported to solve the stereoscope/stereopticon terminological issue by pointing out that the two are listed as synonyms in the tenth edition of Merriam-Webster’s College Dictionary.

First, if one reads the introduction and statement of philosophy in that selfsame dictionary, one learns that G.C. Merriam and Company subscribe to the descriptive rather than the adjudicative school of lexicography. As a result, they see their role as the cataloging of the language as it is commonly used, rather than the promulgation of rules about how it should be used. Thus, in areas of controversy or uncertainty, their dictionaries are wont simply to describe both options. For this very reason, Merriam dictionaries were forbidden use as denotational authorities when I took rhetoric courses in the 1960s, and many professors still proscribe them.

Second, the world is full of examples of words which are used very loosely in common parlance, but have a narrower and more precise definition and usage within the applicable discipline. A common example is “flu”; to a physician, it describes a very specific viral respiratory illness, caused by viruses of the influenza family, and very rarely associated with stomach or intestinal complaint. By analogy, even if one were to condone the sloppy use of “stereopticon” as a synonym for “stereoscope” in common speech, that’s hardly a reason that stereographers and others active in the field should share in that imprecision.

Third, the simple historical fact (as reported by the researchers for the Oxford English Dictionary) is that the first recorded use of the word (in 1875) was in describing a display of projected images, long before the polarization technology for stereoscopic projection existed—it is thus quite impossible that this referred to a stereoscope. Moreover, the first devices to bear the word as a label (probably, but not absolutely irrefutably as a trademark) were dual projectors capable of dissolving from one image into another by use of shutters. I have seen three examples, and a stereo view of one was circulated a year or so ago in a print folio of the Stereoscopic Society of America. These devices were also in no way connected with stereograpy or stereoscope.

Finally, it’s not hard to find lexicons which disagree with Merriam & Co.; indeed, it’s harder to find ones which agree! Houghton-Mifflin’s The Heritage Illustrated Dictionary of the English Language, for example, defines “stereopticon” as: “A magic lantern (see), especially one made double so as to produce dissolving views.”

The entry contains no cross-reference or synonym listing for “stereoscope”; nor does the entry for “stereoscope” reference “stereopticon” as a synonym. The entries in the Oxford English Dictionary—generally accepted as the highest etymological authority in English—are exactly concordant with this usage, as are those in Webster’s New World Dictionary, the New Columbia Encyclopedia and each of the eight additional English-language dictionaries in our publishing office! It is also the usage—backed with historical discussion—set forth in A Stereo/Photo Glossary (Daniels and Hammerschmidt, Red Wing View Co., 1991.)

It would appear that G.C. Merriam has done something quite different from “set-[ing] the record straight,” as suggested by the letter writer. Rather, what they have done is acknowledge that a sloppy usage has become common, and they have condoned it.

Dale E. Hammerschmidt, M.D. (NSA, SSA) Senior Editor, the Journal of Laboratory and Clinical Medicine Minneapolis, MN

A Magic Eye Correction

We are very thankful for the review of our book, MAGIC EYE A New Way of Looking at the World. [Vol. 20 No. 5, page 27] It is very gratifying that your reviewer was so favorably impressed with the techniques we have developed.

We must point out, however, that the reviewer is guilty of flagrantly unprofessional reporting in crediting any of the work to Mr. Dan Dyckman. While Mr. Dyckman is mentioned in the introduction there is absolutely [no] justification for such a claim.... Arbitrary guesses of the sort published in your review are the result of lazy reporting.

Since the works in MAGIC EYE were created by a team of people here at N.E. THING Enterprises, Inc., no individual credits were considered suitable.

Another area of the review also reveals a remarkably myopic view of the means by which interest in 3-D imaging can be spread. The idea that every book of 3-D images must serve as a text book, history, and technical reference has seriously limited the growth of the 3-D over the years. Consider the difference between a “how to” Art book, and a book of prints. Please look at books of photographs as opposed to books on photography. Is it not clear that there is a need, and a place for both informational works, and recreational works?

We believe that we have expanded that audience for all areas of 3-D imaging by a vast amount through our efforts of the past few years. We have taught more people to free view with this one book than had ever previously been able to use the technique. We do not present our work as a “Clever 3-D”

(Continued on page 27)

If you have comments or questions for the editor concerning any stereo-related matter appearing (or missing) in the pages of Stereo World, please write to John Dennis, Stereo World Editorial Office, 5610 SE 71st Ave., Portland, OR 97266.
At 4:30 am on Monday, January 17th, the shaking started. We live up in the Hollywood Hills and in my 16 years in Los Angeles I've felt my share of shaking. But this one was different. Being in the hills, our home is built on solid bedrock; it tends to absorb a good deal of the seismic energy. A quake five miles away on loose earth feels a whole heck of a lot worse than it does up where we live. But a few seconds after the shaking started, I could tell this was a Big Mother; by far the most violent I'd ever felt. Almost without thinking, I went into our middle of the night "Earthquake Routine." I jumped out of bed and hurried to our six year old daughter's room, grabbed her (she was huddled under her blanket) and made my way down the hall to the front door. My wife, I knew, was close on my heels. Now, this action goes counter to the conventional wisdom on dealing with earthquakes. You're supposed to get in a doorway or arch-
A number of NSA members live in the Los Angeles area, several of them near or even within the sections most affected by the earthquake of January, 1994.

Dan Gilvezan, Susan Pinsky, David Starkman, Jeff Roe, and Mike Webber stereographed some of the damage in the hours and days that followed while the often strong aftershocks were a constant and unpredictable reminder of the strength of the quake they were documenting. The collapsed freeways were quickly sealed off, but this earthquake left plenty of smaller scale disasters to document in stereo—often in places not covered at all by the flat media. Dan Gilvezan’s slides of the gas leak and the banner shop have already won awards at a bimonthly competition of the Stereo Club of Southern California, and he provided the following account of the day of the quake.

- Ed.

The Kaiser Permanente office building in Northridge was unoccupied and collapsed with no injuries during the quake. Stereo by Dan Gilvezan.

The brick front of this sign and banner shop crumbled onto the sidewalk on Ventura Blvd. in Sherman Oaks, about 6 to 8 miles from the epicenter. Stereo by Dan Gilvezan.

This hole opened up just south of the gas main rupture on Balboa Blvd. in Northridge. Stereo by Dan Gilvezan.
Earthquake damage in Santa Monica got little attention on the national news, but many homes, apartments and commercial buildings were damaged beyond repair. Large sections of the 2-story San Vicente apartments separated, resulting in a red warning tag where there had once been a brick facade. Stereo by David Starkman.

Mailboxes lay in the entry to the shattered courtyard of the San Vicente Apartments in Santa Monica—obviously not a place to be stereographing during a strong aftershock! Stereo by Susan Pinsky.

The roof collapsed at Kramer Motors in Santa Monica, providing just one more example of how fortunate it was that the earthquake occurred before business hours. Stereo by Susan Pinsky.

Lines were long the first couple of days at this Disaster Relief Application Center in Santa Monica. Salvation Army Volunteers were on hand with direct help to make the wait a little easier. Stereo by David Starkman.
and before long we were all fast asleep. (Living in LA tends to inure one to natural disasters as long as the house is still standing.)

We slept until 7:30 am when the phone rang. It was my mother in St. Louis checking on us. She was greatly agitated, having spent the morning viewing the devastation on all the morning new shows. I assured her that we were all fine, hung up and that’s when the local calls began. Friends from all over Los Angeles were checking in with us to see how we had withstood the quake. As I reassured them, I began to understand the scope of what had happened. Chimneys had fallen. Concrete block retaining walls that had separated people’s properties had crumbled. Buildings had fallen. Entire kitchens (cabinets and refrigerators) had dumped their contents onto the floors. One friend told me half-joking, that I had not lived until I had spent the day cleaning a mixture of broken glassware, china, honey, jam, beer and milk from off the kitchen floor. I began to feel really, really lucky.

We dug out our 5” black and white battery powered TV and huddled in bed watching news reports of the devastation. A 6.6 on the Richter scale. Massive devastation. Loss of life. Finally, around noon, I decided I had to get out, to become connected with the outside world. Besides, I knew there would be tons of photos taken of the aftermath, but how many in stereo? I had an historical obligation.

And so, around noon, my wife, daughter and I packed water, sandwiches and snacks and headed out to document the carnage. Getting around was difficult as most of the traffic lights were out and maneuvering through the many intersections was a challenge. Oddly, in contrast to last year’s riots, the populace was greatly co-operative. Everyone seemed to bend over backwards to help the other guy. And so, we were there, right in the middle of this history-making event, and the fruits of our labors are printed here for all to see. I can only hope that when the “Big One” comes, we withstand it as well and can bring you stereo shots of what promises to be a once in a lifetime event.
A reproduction of a smaller Kaiser Panorama, seen here at a 1993 exhibit in Bonn, Germany.

Interior of the Kaiser Panorama in Munich showing the backs of the tinted views in the suspended circular tray. The title cards, seen and illuminated from the front through the windows above the lenses, are under the fabric above the glass transparencies. Half of the 50 views are always stopped between the panels, waiting their turn at the next pair of lenses. Stereo by Susan Pirsky.

A unique recognition of a unique stereoscope formed part of a 1994 Paris exhibition honoring the work of author, critic and philosopher Walter Benjamin (1892-1940.) The George Pompidou Center in Paris sponsored a series of exhibits, readings, debates, films and theatrical events around the city. The Bibliotheque publique d’information took part from February 22nd to May 23rd in the Pompidou’s Mezzanine Nord, displaying images of the city as seen by Benjamin: “Walter Benjamin: Le passant - le trace.” His literary visions of the cities Berlin and Paris, his historic reading of the city in the 19th and beginning of the 20th century, and his views as a contemporary personality associated with “modernism” in literature, art and philosophy were explored.

While Walter Benjamin is hardly a household name in the U.S., he was well known among European artists, writers and intellectuals in the 1920s and 1930s. His essays, magazine articles, lectures, and travel notes dealt with subjects from language to revolutionary politics, art, theater, the city, philosophy, and the position of Jewish culture in German society. (Much
of his writing is collected in his two books "Reflections" and "Illuminations.") Some of Benjamin's writing was done while he was living in Paris, and his account of a childhood fascination with the Kaiser Panorama led to the exciting inclusion of stereo images in an otherwise academically oriented French celebration of his writing and its influence.

In the Berlin division of the exhibition, a Kaiser Panorama was available for people to view original hand-colored glass stereographs of landscapes and cities in Europe and abroad and of the technology of the age of industrialization - just as seen by Walter Benjamin as a young boy in Berlin. The room-size stereoscope with its 25 chairs and viewing stations and its frequently updated series of 50 views left a lasting impression on him that he was later to describe with detailed sensitivity in "A Berlin Childhood around 1900:"

It was a great attraction of the traveling pictures we found in the Kaiser Panorama that it did not depend on where we started the round. For, as the division with the seats in front of it had a circular form, each of the pictures passed every single station, from which, through a pair of windows, one could look into a faintly tinted distance...

Music, making traveling by films so exhausting, did not exist with the Kaiser Panorama. to me, a
Looking down Friedrichstrasse at the corner of Behrendstrasse, Berlin, shortly after the turn of the century. At the left in the background is the entrance to the Kaiser-Galerie (popularly known as the "Passage" Unten den Linden), a covered, multi-story mall. August Fuhrmann's "Special Arts Institute for the Kaiser Panorama" was located here on the first floor. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin

Several views were made of Berlin's decorated streets as part of the coverage of the June, 1905 entry into Berlin of Cecille of Mecklenburg-Schlesin, the bride of the German Crown Prince. This view is from the Bauer Coffeehouse on Friedrichstrasse. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin

A marching band heads up a parade of troops starting at a Berlin cathedral while one woman in the crowd pays more attention to the camera. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin
Alf, from the rail yards with the Castle Arras in the distance. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin

The inhabitants of a village in Togo. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin

Looking toward the Geirangerfjord, Norway from Hotel Merok. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin
Heroic statuary in Berlin honoring Otto II. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin

The Kaiser Panorama continued to document urban life through the 1920s, as seen in this view of a modern building under construction in Berlin's Potsdamer Platz. A bus identical to the one at left appears on the jacket of Walter Benjamin's 1928 book Einbahnstrasse. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin

Berlin's Tauentzein-Strasse with Kaiser Wilhelm Memorial Church. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin

The Kaiser Panorama continued to document urban life through the 1920s, as seen in this view of a modern building under construction in Berlin's Potsdamer Platz. A bus identical to the one at left appears on the jacket of Walter Benjamin's 1928 book Einbahnstrasse. © 1994 Stereoskopischer Bildverleih Kaiser-Panorama-Berlin
small, in fact disturbing effect, seemed more impressive. It was a tinkling which rang just a few seconds before the picture jerked on, showing first a blank and then the next. And every time it rang, the mountains down to their feet, the cities with their mirror-like windows, the railway stations with yellow smoke, the vineyards down to the smallest leaf, soaked themselves with the woe of taking leave. I was convinced that it would be impossible to drain the magnificence of the scenery all at once. And then there was the decision I never followed, to come again on the next day. But before I came to a final conclusion, the whole construction, from which I was divided by a wooden barrier, trembled; the picture staggered within its little frame, very soon to move on to the left, out of my range of vision...

If it was raining, I did not tarry outside in front of the index of the fifty pictures. I stepped inside and found - in firths and under palm trees - the same colors that lighted my desk in the evening when I was doing my homework...

Besides the Kaiser-Panorama, two multiple card stereoscopes exhibited pictures of the "old west" of Berlin; the "Kiez" where Benjamin grew up and where he experienced the bourgeois lifestyle of Berlin; the "Kiez" where Benjamin grew up and where he experienced the bourgeois lifestyle of Berlin; the zoological gardens were also included to underline the local views from the time of adolescence that Benjamin described from his memories later in Paris.

A third large table viewer contained images of the changing metropolitan life of Berlin in the twenties, as mirrored in his 1928 book Einbahnstraße (One-Way Street), describing a new style of architecture, a changed infrastructure for the sake of expanding traffic, huge advertising billboards, and the electric lights of shop windows and department stores. At the entrance to the exhibition, some stereos of Berlin and Paris, displayed in six single viewers, emphasized the overall theme of the exhibition and the visual attraction of the Kaiser Panorama.

Behind the Panorama

As much as stereoscopes and views opened the world to those able to afford them in the 19th century, viewing the images was largely a solitary affair, limited to groups no larger than the average family and often to only one or two individuals. Large viewers holding multiple stereographs on a chain, a drum or in trays made the process more efficient for an individual but also more expensive, and the viewer couldn’t be passed from hand to hand for even a limited sharing of the experience. In the early 1880s, August Fuhrmann of Berlin devised a way to present an unending variety of current stereo images to the general public in groups of 25 people at a time.

The Kaiser Panorama was the closest to a group experience of stereo viewing that was to exist until stereo projection became practical many years later. Twenty-five pairs of stereoscope lenses were mounted in ornate panels forming a complete circle about 12 feet in diameter. A circular tray holding 50 hand-tinted glass views would advance by half a panel at intervals announced by a ringing bell. This would present all 50 views to each person in about 20 to 30 minutes, allowing time to see the stereos and read the title cards which were mounted above the views and appeared in a window above the lenses.

The concept was a huge success, with Kaiser Panoramas eventually being set up in most of the major cities of Germany as well as other locations around Europe. In a system similar to the one used years later by the motion picture industry, operators of the Kaiser Panoramas had to buy the machines while Fuhrmann supplied them with new programs weekly. He employed his own photographers to take the views, with subjects ranging from parades and expositions to the Nord polar expedition, the San Francisco earthquake, the Russian-Japanese war, and numerous cities, people and scenic wonders from around the world. During the firm’s nearly half century of
Starkman. the Kaiser Their stereo and in most international bulletin editor for the Stereoscopic Society of America, and the Potomac Society of Stereo Photographers. He later joined the NSA, the ISU, the British Third Dimension Society, the Stereoscopic Society of America, and the Potomac Society of Stereo Photographers.

He served as treasurer, vice-chairman, and chairman of the PSA Stereo Division; USA representative for the Third Dimension Society; and vice president, president and bulletin editor for the FSSP. While his stereos were to be seen in both PSA and Stereoscopic Society folios and in most international competitions, his first love was always “fraternal stereo” that kept him in contact with stereographers around the world either by mail or in person. As he explained in a 1993 Stereo Autobiography, “...my interests in stereo photography are less for garnering Stars and any other awards for excellence, but more for the sheer enjoyment of doing my photography in 3-D and enjoying the works of others (with technical excellence a secondary factor).”

Mel Lawson got started in stereo photography in 1950 while stationed in Paris at the same time General Eisenhower was recording his travels around Europe with a Realist. Mel bought a Verascope f/40 and started stereographing his travels in the Army and with his wife, Dolly, which included France, Germany, England, Portugal, Switzerland, Italy, Japan, Korea, Hong Kong, Bangkok, Papua New Guinea, and Australia.

Following a stroke a few years ago, Mel had been less directly involved in stereography but he remained an interested and active letter writer, as evidenced by his thoughtful letter of Jan. ’94, printed in SW Vol. 20 No. 6. His images and his company will be missed, and the mail will be a little less interesting to open without the chance of any more letters from COL. (Ret) Mel Lawson.

— John Dennis

Their stereo cameras on the stools beside them, Susan Pinsky and David Burder check out the Kaiser Panorama in Munich during the 1989 ISU Congress in Germany. Stereo by David Starkman.

operation, over 62,000 original stereographs are said to have been taken.

Fuhrmann referred to his company not as a producer of views or viewers but as the “Special Arts Institute for Kaiser Panoramas.” The artistic and educational aspects of the enterprise were greatly emphasized, and teachers were invited to bring their classes to view the stereos as part of their school lessons. People of all classes, even those unable to afford the least expensive paper views, could now see hundreds of new, top quality glass views a month and possibly discuss the subjects with others seated near them around the huge machine. Certainly nothing like it existed before or has been attempted since.

The height of the Kaiser Panorama’s popularity was between the turn of the century and the beginning of World War I. After the war, there was no longer a Kaiser and the machine’s name was changed to “World Panorama” with some other similar names used in various locations. While Fuhrmann’s company existed into the 1930s, motion pictures had caused a serious decline in the Panorama’s popularity by the mid 1920s.

Today just a few original Kaiser Panoramas remain in existence in Berlin, Munich and other locations. Some smaller versions of the device with fewer panels were made, perhaps for traveling exhibits. One such is known to have been stranded in Australia following World War I and now resides in a museum there. Smaller replicas have also been constructed for traveling exhibits of both the original 8.5 x 17 cm glass views and 35mm copy transparencies. A full size Panorama also exists in working condition in the Science Museum of Brno, Czech Republic.

The known archive of Fuhrmann glass views in good condition numbers about 12,000 and covers an amazing range of subjects. An organization dedicated to the study, preservation and publicizing of Kaiser Panorama viewers and images has recently been formed under the leadership of Erhard Senf, who owns the largest remaining collection of Panorama views. For a list of the most notable subjects by date and area, and information on the group and its publications, contact Erhard Senf, Stereoskopischer Bildverleih Kaiser-Panorama-Berlin, Schönließerstraße 97a, D-13465 Berlin, Germany, Fax (0 30) 406 13 19. A more detailed history of the Kaiser Panorama will appear in a future issue.

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**COL (Ret) Melvin M. Lawson: 1916-1994**

Long one of the most internationally active of stereographers, Mel Lawson died March 28, 1994. Mel was a member of several stereo organizations, having joined the Stereo Division of the PSA in 1972 on retiring from a military career. He later joined the NSA, the ISU, the British Third Dimension Society, the Stereoscopic Society of America, and the Potomac Society of Stereo Photographers.

He served as treasurer, vice-chairman, and chairman of the PSA Stereo Division; USA representative for the Third Dimension Society; and vice president, president and bulletin editor for the FSSP. While his stereos were to be seen in both PSA and Stereoscopic Society folios and in most international
This may be the first time many current NSA members have ever seen some of these early issues of *Stereo World*. Most of them are now available only as reprints, and despite the use of the best available copy machine the stereographs lose some of the quality seen in the initial reproductions.

From the 12-page Vol. 1 No. 1 that went to the 110 first NSA members in 1974, *Stereo World* has grown considerably in size, scope and coverage as well as appearance. The 20th anniversary seemed like a good time to show that growth by including each of the 120 covers. Only the feature articles are indicated here, but there are plenty of gems among the regular columns and short items in each issue.

To order back issues, write for a current price sheet/order form from NSA, Box 398, Sycamore, OH 44882. Original copies will be sent as long as supplies of each issue last, as indicated on the order form.
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Mounting Card Views;
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A Pseudoscopic Viewer;
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September/October 1979
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People Pictures of
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For many amateur athletes, going to the Olympics is the highlight of their sporting careers. For amateur sports photographers, photographing the Olympics can create the same type of fun and enjoyment that the athletes feel. Photographing the Olympic games is an experience that should be done at least once in a photographer's lifetime.

We started planning for this trip in 1989, three years ahead of time. We wrote numerous letters to the International, U.S. Olympic, Albertville Organizing Committees and several of the U.S. sporting federations to get information that would help us plan all aspects, including photography, of this trip. The most helpful information came from the Albertville Organizing Committee and the U.S. Bobsled Federation, which included diagrams of the event courses and spectator areas. This helped us select the equipment to take to each event.

We tried to get press credentials for the Olympics. Press credentials are handled by each country's national Olympic committee. We had two magazines with a total circulation over 100,000, but were turned down by the U.S. Olympic Committee because these magazines did not fit their profile. This meant buying tickets and all photographs would be taken from the spectator areas. We spent close to $5,000 on tickets. That seems like a lot, but it was for four people going to 17 events in 14 days. The tickets for most of the events cost between $16 and $63. Only the opening and closing ceremonies (up to $500 a ticket), hockey finals and figure skating cost more. Top seats at three of the five figure-skating events we attended cost $204 per person for each event. For the other two figure-skating events the cost was $104 and $63 for the cheaper seats.

Equipment

Film was all Kodak Ektachrome; 100, 200, 400 and the Professional P800/1600 rated at 1600 and 2400 for indoor use. The 100, 200 and 400 speed film was carried into France in 100 foot rolls and loaded into 36 shot cassettes about every other evening. The P800/1600 came in 36 shot rolls.

The cameras were two spliced Ricoh stereo cameras and two Canon A-1s synchronized to 1000th of a second with a "black box." (See the September 1993 issue of the PSA Journal or the December 1993 issue of Stereoscopy for more information on synchronizing two cameras.) The A-1s were mounted on a bar that allowed us to adjust the lens separation from six to twelve inches. The spliced Ricohs were made by the late Peter Kato of Germany and had a lens separation of 76mm and 114mm. Lens ranged from 35mm to
The captain of the French Women's Curling team sliding a stone down a sheet of ice 37.86 meters long. An exhibition sport in 1992, Curling will be a competitive event in the 1998 games.

The Women's Slalom was held on the Roc de Fer mountain outside of Meribel. The slalom course is only 350 meters long, but drops down the mountain 140 meters.

The Men's Downhill took place on a 2,905 meter run on the Face de Bellevarde mountain in the town of Val d'Isere.
We had three sets of zoom lens: 35-70mm for the 76mm Ricoh, 35-135mm for the 114mm Ricoh and 70-200mm for both the twin A-1s and the 114mm Ricoh. We also had a pair of 50mm f1.4 lenses that were used on the 114mm Ricoh for some night photography.

Our 80-200mm zoom lens were used for the alpine skiing events, and indoors for figure skating. For the luge and bobsled events every lens was used. People and scenic photos were more than likely to have been taken with 35-70-mm or 35-135mm lens on the 76mm Ricoh.

Before we left, we were worried about how our cameras would work in the cold and snow. We did not take the cameras in for any cold weather servicing. How would the batteries hold out in the cold was our first concern. We put brand-new lithium batteries in all the cameras before we left. Lithium batteries work best in cold weather and we had temperatures ranging from 10 to 55 degrees Fahrenheit. We used the cameras for two weeks in Paris and the two weeks, of the Olympic and had no problems with weak or dead batteries. Brand-new regular AA batteries in the motor drives of the Canon A-1s, and a 6 volt battery in the black box held up for the entire month also.

Our second concern was condensation. Would condensation occur on the inside of the equipment after using it in the cold for several hours and then bringing the equipment inside? We were outside for up to six hours at a time. We took plastic bags to keep our cameras in, but never used them to protect the cameras from condensation. A lot of condensation occurred on the outside of the cameras when brought inside a warm building, however condensation never got inside the camera or lens.

We did carry several hand towels with us to dry off the cameras and lens. They were for both condensation and the wet snowfall we had on three different days. When not using the cameras on snowy days, we covered them with plastic bags or the towels. However, when using the cameras, we did not do anything to protect the cameras from the snow or cold.

With all the white snow and ice, the exposure was determined by using a seven step zone system. A normal exposure reading against a gray card is step four in this zone system. Caucasian skin is step five and the exposure is increased with an extra stop. Step six is white with detail, which would be snow with shadows. Step seven is white with no detail. Each step increase in the zone system has a corresponding one stop increase (i.e. f8 to f15.6). The large amounts of snow on the mountain side and the ice on the bobsled run were rated between steps five and six. The exposure was adjusted for an extra 1½ to 2 stop increase. The figure skating rink was rated between steps six and seven, so the exposure was adjusted for and extra 2 to 3 stop increase. Both the Canon and Ricoh cameras have exposure compensation dials on them which made this adjustment very easy.

The Events

For the alpine skiing events, the best photography locations were up the sides of the mountain. That meant climbing. We climbed a third of the way up the 2100 foot Face de Belvarde mountain, in four feet of fresh snow, carrying four cameras and lens, for the men's downhill skiing event. As hard as it was going up, it was even more fun going down. Not only were our cameras covered with snow, but we were also. It was a good thing we...
had carried the hand towels to wipe off the cameras and lens. The spectator fence was only about 25 to 30 feet behind where the press photographers could go. With the press photographers only 20 to 25 feet from the course, that put us 50 to 60 feet away from the skiers. At that distance, we used the zoom lens at 200mm on the Canon A-1s and the 114mm Ricoh. We were kept farther away from the fast downhill course than the slower slalom course, where we used the zoom lens between 135 to 200mm on the 114mm Ricoh.

The luge and bobsled events were the best for spectator photography. You could stand a foot away from the track and lean over the track to get a picture of the bobsled or luge coming straight at you. We used everything from a 35mm to a 200mm lens to get the pictures. Only at the start of the bobsled and luge runs were the spectators kept back any distance. Here we need our 200mm lens for the luge start and wished we had two 300mm or 400mm lens for the bobsled start. There was only one chance per run to get the photo. You picked a spot in a straight or curve and waited. The sound of the sled would get louder and louder as the competitor got closer to you. Then in a split second the sled went by at over 80 miles per hour. You had to be ready.

The only problem we had was when a group of press photographers, during the women’s luge event, took over the area at the last turn in the course. They had the security guards run the spectators out of that area, even though we had paid extra for tickets to that area. The luge and bobsled were still the best and easiest events to photograph.

The figure skating arena was very small in that it held only 9,000 people. The first ten rows were for the Olympic committee staff and VIPs. We ordered tickets to five skating events and were very lucky to get all of them. The seats ranged from the first row of spectator seats to two rows from the very top. We needed very fast film (Kodak Professional Ektachrome P800/1600) with our f4.0 200mm lens and again wished we had two 300mm lens. Because of the distance from our seats to the ice, we were only able to get one or two good 3-D shots of the skaters when they were at our end of the arena. However, we also cheated by looking for empty seats up close. During the ladies event, we moved down closer and, as it turned out, right in front of gold medal winner Kristie Yamaguchi’s parents. After the event we got to talk with them, but forgot to take their picture.

With the other indoor events, short track speed skating and curling, we faced a similar situation as in figure skating. Fast film (ISO 1600) was exposed to a zone system rating of six to seven. The only thing we did not have to deal with were the crowds. Curling is not the most popular sport in the Olympics. The curling match we attended was between the French and Japanese ladies. There were many empty seats and the ushers allowed us to move around.

There were trails you could hike to watch the cross country skiing and the biathlon events. We went to the women’s 15K biathlon on the tenth day of the Olympics. After shooting 11 events in nine days, we need a break. Rather than hike along the trails to get close-up shots of the skiers, we just sat in the main grandstands and shot a few stereo photographs with the 114mm Ricoh. We did not even take the twin A-1 rig.

The spectator area for both the 90 and 120 meter ski jumping was on the sides, at the bottom of the ski jumping ramps. Spectators were not allowed to climb the sides of the mountain along the ramp, as this space was for officials and the press. Photographs from the spectator area were head-on shots looking up to the skiers in the air and on landing. The background was the sky as they took off from the jump ramp or the snow on the ramp as they landed. 300mm and a 500mm lens were perfect for the landing. The take-off and flight required the 500mm lens and we wished we had an 800mm or larger lens at times. We took many 2-D photographs, but no 3-D pictures.

The worst event to photograph, both in 2-D and in 3-D, was speed skating. The spectator seats were right above the starting side of the oval track. You had to have seats in the first two rows or you could not even see the competitors on that side of the track. The far side of the track was too far away for even a 500mm lens. We could not get any pictures of the skaters in the turns, which we feel are the most dramatic. Plus the event started at 5:00 pm and was run under the lights. This meant we had to use fast film and our fast lens. To get any pictures at all we would go down to the front row and take one or two quick pictures, then return to our seats. A few minutes later we would repeat the process. The spectators in the first two rows were very helpful and understanding, especially when an American skater was racing. Because of these problems, we did not shoot any stereo photographs of the speed skaters.

We had a lot of fun at the Olympics, and over all were very happy with all the photographs we took, especially the stereo photographs. Photography at some events was better than at others. It took a little planning and practice, but great stereo photographs were possible at the Winter Olympics.
More and more people are displaying interest in producing stereo views using matched pairs of 35mm transparencies. They fall into two main camps. First are those who use a single camera and one of several time-lapse/shift procedures to produce the stereo pairs. Secondly we have a growing number of stereographers who are joining two matching cameras, synchronizing the shutters, and obtaining the desired stereo halves in that manner. (As well of course, as those using spliced cameras like the RBT reviewed in NewViews, Vol. 20 No. 6.)

There are difficulties to overcome in either case, but two formidable advantages also. Foremost, one is freed from 1950s technology and can use state-of-the-art equipment with all of its niceties. The other advantage is that the full 35mm standard frames are available for use in the stereo views, giving an impressive wide angle panorama. One drawback is the need for a reasonably priced (2x2)x2 format viewer with all of the desired features one would expect in 1994. There is continuing hope that one will appear in the marketplace in the meantime we are making do with what is available and improvising.

I would encourage anyone working in the matched pair format to consider joining our (2x2)x2 circuit. It is always a lot more fun to share activities with others of similar interest and there is much to learn from one another. Currently we are able to accept several new members without overloading the circuit and would welcome hearing from potential applicants (who should write to the address in the box on the following page).

C Print Secretary

After four dedicated years as secretary of the C Print Circuit, Dale Hammerschmidt of Minneapolis, MN, has passed the reins over to Tim White of Verona, WI. Tim is a four-color pressman in the printing industry and an outdoor activity enthusiast. He was introduced to stereo photography by his father who recorded family doings with a View-Master camera. Tim's wife Karen is also a stereo photographer and shares his outdoor interests as well as his vocational field (in the plate making department).

We are indebted to Dale Hammerschmidt for all that he has done for the Society and look forward to continued enjoyment of his skillfully crafted stereo views in both print and 2x2 matched pair formats. Dale was especially effective in carrying out the division of the old print circuit into two parts (a confusing and tedious procedure at best) and in guiding the new C circuit thereafter. Dale is an MD, a hematologist, a professor at the University of Minnesota, and Senior Editor of the Journal of Laboratory and Clinical Medicine.

1993 Voting Results

Voting results for the 1993 calendar year have been released for several of the folio circuits. In each case the leaders are listed below. The method of assigning points varies from circuit to circuit.

OP Print Circuit Voting Leaders

<table>
<thead>
<tr>
<th>Member</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Lee</td>
<td>423</td>
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<tr>
<td>Michael Pierazzi</td>
<td>347</td>
</tr>
<tr>
<td>Judy Profitt</td>
<td>259</td>
</tr>
<tr>
<td>Dennis Ellingsen</td>
<td>251</td>
</tr>
<tr>
<td>Brandt Rowles</td>
<td>211</td>
</tr>
</tbody>
</table>

Favorite Views

"Hi Roller" by David Lee
"Idyll of Rackwick" by Michael Pierazzi
"Butler Amusements, the Giant Wheel" by David Lee

CP Print Circuit Voting Leaders

<table>
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<tr>
<th>Member</th>
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<tr>
<td>Ken Carpenter</td>
<td>647</td>
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<tr>
<td>Dale Hammerschmidt</td>
<td>630</td>
</tr>
<tr>
<td>Richard Twichel</td>
<td>623</td>
</tr>
<tr>
<td>Craig Daniels</td>
<td>569</td>
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<tr>
<td>Joel Matus</td>
<td>555</td>
</tr>
</tbody>
</table>

Favorite Views

"Contested Real Estate" by Craig Daniels
"Creek in Foothills" by Ken Carpenter
"Cindy's Diner" by Thom Gillam

"Stairs to Venus" by Larry Moor of Atlanta, GA topped the Favorite Slide voting in the Beta Transparency Circuit for 1993. The view of Chichen-Itza, Mexico was also selected for Honorable Mention in the 1993 PSA Slide of the Year competition and has qualified for the current PSA "Hall of Fame" program. © 1992 Larry S. Moor
Promoting various aspects of 3-D debate, is the true test of success in imaging! Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. Rather, we have presented reporting "novelty" as your reviewer so smugly states. "Mississippi River Lock and Dam With St. Anthony Falls, Minneapolis, MN" by Steve Trynoksi of St. Paul, MN. This excellent example of sequential, single camera stereography was a popular entry in the Alpha Transparency Circuit. At first glance it may look as if this 1986 hyper was done with two synchronized cameras, but the blurred post and rail in the foreground and the fluttering flag reveal that it was taken from a moving vehicle. The full-frame 35mm pair was cropped for 7-sprocket mounting.

The Stereoscopic Society of America is a group of currently active stereo photographers who circulate their work by means of postal folsos. Both print and transparency formats are used, and several groups are operating folio circuits to meet the needs in each format. When a folio arrives, a member views and makes comments on each of the entries of the other participants. His or her own view, which has traveled the circuit and has been examined and commented upon by the other members, is removed and replaced with a new entry. The folio then continues its endless travels around the circuit. Many long distance friendships have formed among the participants in this manner over the years.

Stereophotographers who may be interested in Society membership should write to the Membership Secretary, E. Jack Swarthout, 12 Woodmere Dr., Paris, IL 61944.

Beta Transparency Circuit Voting Leaders

<table>
<thead>
<tr>
<th>Member</th>
<th>Total Points</th>
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<tr>
<td>Mark Wilke</td>
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<td>Dave Hutchison</td>
<td>109</td>
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<td>Larry Moor</td>
<td>86</td>
</tr>
<tr>
<td>Russ Young</td>
<td>71</td>
</tr>
<tr>
<td>Richard Twichell</td>
<td>67</td>
</tr>
</tbody>
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Favorite Views

"Stairs to Venus" by Larry Moor
"Vanishing Lot" by Dave Hutchison
"Morning Fog" by Mark Wilke
"After the Rains" by Mark Wilke

Gamma Transparency Circuit Voting Leaders

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<td>Alan Roe</td>
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<td>Jeff Wentworth</td>
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<tr>
<td>LeeRay Kuipers</td>
<td>72</td>
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<tr>
<td>Franklin Flocks</td>
<td>51</td>
</tr>
<tr>
<td>Dennis Ellingsen</td>
<td>48</td>
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</tbody>
</table>

Favorite Views

"Hang On" by Jeff Wentworth
"A Real Cliff Hanger" by Allan Roe
"Water Balloon #4" by Franklin Flocks
"Balloon Silhouette" by LeeRay Kuipers

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**Letters**

(Continued from page 3)

...novelty" as your reviewer so smugly states. Rather, we have presented it as art. The results of our efforts have been (thus far) six weeks as a number 1 New York Times best seller. That, more than any pointless debate, is the true test of success in promoting various aspects of 3-D imaging!

Tom Baccei
President, N.E. Thing Enterprises, Inc.
Bedford, MA

Fine points about differences between reporting and reviewing aside, you are quite right that such a guess concerning credit for the stereograms should never have been committed to print. I can certainly appreciate the images in MAGIC EYE being a collective effort, and it is encouraging to notice that the people involved in their creation and publication are credited in N.E. THING's latest book, MAGIC EYE II Now You See it. I was the author of the combined review and preview of the three books, which would have been a signed, separate item if it had been a single review. Nowhere in the review is it suggested that MAGIC EYE should have expounded on the theory or history of 3-D imaging. A 32-page book devoted to the images themselves would only limit its appeal if it tried to double as a textbook. The criticism was directed at a far simpler omission — just a few lines of small type providing those intrigued by this "new way of looking at the world" with two or three sources of additional information about 3-D imaging. I can't imagine that allowing those most turned on by your books to learn more about 3-D and the organizations devoted to it would spoil their appetites for such impressive published art. I'm confident that just the opposite would result.

The N.E. THING books are not alone in this omission. Contrary to advance information from the publisher, STEREORAM (previously in the same NewViews column) also failed to provide any organizational or printed sources of further information for its readers. (See review in this issue.)

- Ed.
For the first time in Scandinavia, a permanent 3-D multimedia theater opened in February, 1994. The facility is in the Norwegian Forestry Museum in Elverum, about a one hour drive from the Winter Olympic site in Lillehammer. The auditorium is equipped with 14 slide projectors for 3-D rear projection onto a triple screen, multi-track sound, and active wind machines which incorporate smell! A shorter program opened in 1992 paving the way for the present 18 minute show, The World of Winds.

Basic criteria for the optimum design of a 3-D show-room was presented at a 3-D demonstration at the museum, prior to construction of the theater itself. This provided comfortable viewing conditions for all 67 seats, with the minimal light fall-off of the rear projection screens allowing a wider auditorium, preventing the increased stretch of 3-D images at the rear of a long and narrow room.

Very comfortable plastic polarizing glasses are handed out for each screening. These are reused after proper cleaning and inspection for each show. A guide welcomes the audience and gives a brief introduction. This personal touch is considered important, even though the extent of automatic control makes this very close to completely unsupervised projection. The guide is also present in the theater during the show to assist or help if necessary. For foreign visitors, headsets at each seat provide narration in English, German or French. There is no cover charge, as the show is included in the ticket that covers the whole museum. The indoor and outdoor exhibits easily take a whole day if you want to see the entire facility.

A Windy 3-D Butterfly Ride

The whole story of The World of Winds is a fantasy journey made for children and adults alike. We take a trip with an old couple, a teenage pair and two children, riding on the back of an Admiral butterfly. The butterfly swiftly moves from one national park to another.
A stand-in for the famous Norwegian reindeer hunter Jo Gjende, who lived in Jotunheimen a century ago, is seen here with his real cabin and rifle at Gjende Lake. Since the story is fantasy, it moves backward in time to encounter Jo on his hunt.

A view of Norway's highest peak as it would be seen looking up from the passing butterfly. To get this shot in Jotunheimen National Park, I had to stand less than a meter from the edge of a 300 meter drop to the glacier below. Heavy wind and snow showers prolonged the work at this location, which we had to reach by crossing another glacier with ropes due to hidden crevasses beneath the fresh snow.

almost magically bringing the audience into places they might never be able to visit in the real world. A heavy steel model of a butterfly with movable wings was positioned in selected scenery in several of Norway's national parks for this effect. To make it look like the butterfly was hovering in mid air, it was necessary to hide both the support and any shadow it might cast. Images in the show include cave interiors, glaciers, mountain climbing, lake and river fishing, and more. (Some of the stereo scenic views incorporate superimposed 3-D drawings by noted French 3-D artist Jaques Perrin.) We see the ground from far above (as seen from an airplane) right down to the macro-world looking at monster insects which appear full screen size in 3-D close-ups. They could easily compete with Jurassic monsters, in appearance if not in size. Happily, things calm down and we safely return to the site of take-off. Part of the rear wall automatically opens at the end of the show to let the audience out.

**Projection Features**

The 14 Kodak Ektapro 5000 projectors are fitted with Schneider 45mm PC lenses and cover the three screens in clusters of 4, 6 and 4. The multi-track sound is provided by a DAT tape deck, and all control is run by DATATION hardware and software. A single 2-D video projector provides short sequences on the central screen.

All projection equipment is in a separate room, behind the three inter-linked rigid translucent screens. The screens are in a semi-circle covering the front of the theater. This gives an aspect ratio of 1:4.5. The actual dimensions are 1.6 x 7.2 meters. Each segment measures 1.6m vertical and 2.4m
horizontal. The screens are separated by 50mm strips of black cloth which cover the vertical supports. The screens can be used for separate images, animation sequences or panoramic views covering all three screens. The 4mm thick polymethyl methacrylat (PMMA) rear projection material has a milky appearance, with light transmission value of about 66%. It distributes light more evenly than reflective silver screens, and unlike other PMMA material, maintains effective polarization even at extreme viewing angles.

The built-in wind machine system makes possible very effective quick release and withdrawal of the different smells associated with various segments of the show. The air is filtered through active charcoal before being recycled back into the museum.

The equipment room has space for the addition of other sensory systems in future development. In its existing form, the theater could present other 3-D shows in the future, as only the cost of program production itself would remain. It is also a showplace that hopefully will encourage other museums to consider 3-D projection systems. In this relatively small scale, installation cost can be moderate without sacrificing image quality or apparent screen size.

The triple screen array in the 3-D theater, here showing three different images. This shot with a 20mm wide angle lens minimizes the apparent size of the screen as seen from the seats.

Editor's View

(Continued from page 2)

Yet to appear is a basic 35mm stereoscopic camera in the seven-sprocket to full frame format, somewhere between a point-and-shoot and a sophisticated SLR camera, and somewhere in the $200 to $300 price range. The closest thing yet has been the FED from Ukraine, which could evolve into what is needed with a few changes, better quality control, and larger scale production and marketing.

N.E. THING for 3-D

N.E. THING Enterprises has followed up the history-making success of MAGIC EYE by producing three new books that build on the amazing popular response to single-image stereograms. A book of MAGIC EYE posters on heavy, coated stock allows buyers to remove their favorites for mounting on the wall or giving to friends. A book of tear-out post cards makes it easy to send 3-D messages anywhere. After MAGIC EYE sold over a million copies and spent several weeks on the New York Times best seller list, N.E. THING and publisher Andrews and McMeel have released MAGIC EYE II Now You See It.

The new collection of stereograms matches the first in size and format, but includes some more complex images that use combinations of techniques and multi-plane detail that overlaps itself in ways no other art form could reveal. Other stereograms in the new book are fairly basic and easy to grasp but show the same attention to quality as those in the first book. One graphically simple stereogram uses carefully controlled color rivalry to provide an enhanced 3-D effect. Others include surrounding art as a frame that sets off the 3-D image. Unlike the first book, MAGIC EYE II identifies the people at N.E. THING behind the generation and publication of the images.

Whether or not this book will match the success of the first remains to be seen, but N.E. THING’s images are already appearing in a variety of other mass markets, including neckties and pencil tins in Japan. In the U.S., their stereograms appear on calendars and on a line of greeting cards aimed more at the humor market than the slightly larger (and more expensive) stereogram cards from Blue Mountain Arts. (See NewViews in this issue.) And for those not quite ready to spend money on them, N.E. THING single-image stereograms are distributed in a weekly newspaper feature that could become the crossword puzzle of the ‘90s. (Did I read something about this becoming a visually oriented culture, or was that on TV?)

What's Next?

Some predictions for the coming months and years: The popularity of free reviewed stereogram art will lead to actual, intentional “wallpaper effect” 3-D wallpaper that will truly expand the dimensions of any room. Stereogram gift-wrap paper will closely follow or maybe precede this. Animated single-image stereogram sequences on TV seem a natural development, at least for Saturday morning shows, if not for things like soft-drink commercials. Longer sequences for people who really want to get into the screen could be marketed on tape or as computer games with an interactive element that would give a whole new meaning to hand-eye coordination.

Corrections:

In “Catching Stereo in the Internet” (Vol. 20 No. 5) the address for subscribing to Photo-3D is incorrect. It should be listserve@csg.lbl.gov.

In the article, it was given as listserve (with an "e"), which is wrong.

In “The Visual Field in 3-D Viewing” (Vol. 20 No. 6) the three-dimensional analogy to angular measure in radians is given as “steradians” but the correct spelling is steradians.
3-Disasters

The Mask - Hosted by Elvira (1961/1990)
Cat Women of the Moon (1953/1991)
Robot Monster (1953/1991)

Review by Ron Labbe

I
t was so exciting to see that Rhino Home Video had released these 3-D titles. In the early to mid ‘80s, when anaglyph had been attempted on broadcast TV, the FCC ruled that there had to be visual compromises so that the images were not unacceptably distorted if viewers weren’t wearing the red and blue glasses. Now there’d be no such restrictions.

Unfortunately, these videos are BEYOND terrible! Not only were all hopes for decent anaglyphic video dashed, but most of Robot Monster and Cat Women were in plain old black & white! In the portions that were blue and red, I could not perceive any appreciable stereo effect – as much as I played with my color and tint controls, I could not separate left from right. In addition, many segments had vertical error. I won’t even comment on how terrible the films themselves are – that’s what they’re known for! I will mention that one video was red/right and the others red/left!

At least The Mask provided a lead-in segment with a white/blue grid that allowed “correct” color adjustment. There are three 5-minute anaglyphic segments and though they are quite well done (“...regarded as one of the best anaglyphic film presentations ever.” – Amazing 3-D, 1982), you’d never know it from this tape version.

There were fleeting moments when I thought there was some depth – I think because I really WANTED to see depth...

Perhaps anaglyph just doesn’t work on NTSC (the U.S. video standard). However, I once saw part of The Inferno on a studio monitor at a broadcast facility (from a ¼” master?) and the anaglyph 3-D worked pretty well. In 1991 FOX broadcast a full-color anaglyph version of Honda. I found the 3-D very poor, but some seemed to think it worked well. (Personally, I find full-color anaglyph uncomfortable.)

In any case, these new Rhino home videos aren’t going to do much to dispel 3-D’s murky reputation. In fact, at the end of The Mask, Elvira announces that she now knows why they call it 3-D: “Dopey, Dull and Dorky.” Too bad.

Ron loaned me the three tapes mentioned here, and Cat Women of the Moon must be singled out for the worst anaglyphic treatment ever. It’s as if someone had tried to outline the images with dark, red and blue marker pens, missed the vertical alignment even then, and given up trying during most of the scenes. One could almost suspect intentional sabotage, but that would probably have been less obvious than this mess.

By messing with the contrast control as well as color tint and intensity, I was able to see a few seconds of fine 3-D in The Mask, between the parts dominated by ghosting. What surprised me the most was the amount of 3-D (fleeting as it is) in Robot Monster. For those of a certain perverse turn of mind, it may be worth the color (or head) adjustment effort to see the worst non-spoof movie ever made in 1, 2, or 3-D. (See SW Vol. 10 No. 5, page 35.)

For a catalog of available tapes, contact Rhino Home Video, 2225 Colorado Ave., Santa Monica, CA 90404.

– Editor

Al Meyers: 1925-1994

A
tive stereo photographer and Stereo World contributor Albert Meyers died March 16, 1994 at his home in Joliet, IL. Retired from a career as Senior Photographer for Argonne Lab, Al was the type of stereographer never satisfied with commercially available equipment whether new or antique. He designed and constructed his own – and made the designs available to others through articles in Stereo World. (See “The Meyers 120 Stereo” providing his plans for a medium format stereo camera in Vol. 17 No.6 and “A Precision Camera Shift Platform” illustrating his elegant but inexpensive hardwood platform for virtually any size camera in Vol. 15 No. 6.)

Although he was battling cancer, his wife Shirley mentioned that “...he never did quit taking pictures.” Those who combine interests in collecting and taking stereo photos with creating stereo equipment and writing about it are among the most rare and valuable people in the NSA. It’s exactly that kind of sharing that makes the organization what it is. The generous enthusiasm and expertise of Al Meyers will be missed by thousands of people who never met him, with the sense of loss even stronger and more immediate among those who had more personal contact with him.

– John Dennis
Dinkelsbühl, Germany is a name well known to tourists as one of the few remaining towns left intact from the middle ages. The history of this small town goes back to the era of Barbarossa and it is first mentioned in records dated 1188. Bordering the Wornitz River, today’s Dinkelsbühl encompasses the surrounding area and is home to about 11,000 people.

As with most medieval towns, a never ending building and rebuilding of the city walls occurred for hundreds of years. Around 1422 a grain mill was added as part of the city near the Nordlinger Tor at the south end of the city. The mill was in continuous operation until 1970.

Following 20 years of disuse, the mill was offered to Mr. Gerhard Stief for his use, if he would provide the upkeep for the building. And what does one do with a 500 year old mill, you ask? Well, if you are Gerhard Stief you open the world’s first museum of 3-D and optical effects!

First opened in 1990, the Museum has become a popular attraction to Dinkelsbühl’s many visitors. Since the mill itself is directly outside the city wall, it was necessary to protect it in some way. During the middle ages, a sentry walk was created to conceal the entrance of the mill wheel. This walk became the entrance to Museum 3-D. Unfortunately, due to hundreds of years of use, the age and condition of the walk was such that the entrance had to be moved to the front of the building and this is where today’s visitor has their first glimpse of the 3-D wonders inside.

The Museum is very well laid out and is planned so that visitors can enjoy the various exhibits at their leisure. To the left of the entryway are several fascinating rotating...
optical illusions that are operated in a "hands on" fashion.

Next is a huge 12-position round stereo viewer featuring a 24-view panorama of German scientific subjects. Sitting and viewing each image is a must for every visitor. (An accompanying 3-D book is available in the gift shop. Yes, they have a GREAT gift shop with many 3-D goodies!)

Also located on the ground floor is a Wheatstone mirror stereoscope, featuring a view of the mill before its restoration in 1988. The restoration of the old mill was extremely well done and there is quite a change from the stereoscopic image shown and how the mill looks today.

All of the stairways contain various optical effects such as infinity mirrors, random dot stereos, anaglyphs, etc.

The Museum collection of anaglyphs is contained on the next floor. This is a very large grouping which is extremely well displayed and presents an interesting variety of subjects including everything from cows to Levi Jeans commercials. Museum Director Stief also features works of art done in the anaglyph format by Dietz, Karg, Sharp and a number of others. Jim Sharp's Manhattan is especially impressive.

View-Master has a prominent display with a large variety of both U.S. and Belgium made equipment. The display features viewers from 1939 to the present as well as some of the View-Master oddities such as the Piremido Game that was produced in Belgium in the 1980s. Included are some of the "improved" viewers that have been modified for larger magnification. One of the examples features a completely hand-made stainless-steel body and is quite impressive.

Random dot stereo is also well represented, featuring a quantity of limited edition prints. Again, Director Stief is showing that this is not just 3-D illusion, but true art.

The lenticular 3-D collection was one of our special favorites. A large number of lenticulars are on display representing everything from 3-D stamps to a full set (36) of the Perry Rhodan science fiction book covers, a very rare set indeed!

(Continued on page 47)
The Enertopia Symphony is a film unlike any other. It literally begins with a bang - the Big Bang - a colossal explosion that arguably is the definite moment of creation when the universe came into being 10 to 20 billion years ago. This theoretical phenomenon is a natural for a 3-D experience. Thanks to the realistic computer-generated images by Angel Studios in California, we are transported into vast, deep space where we dodge thousands of particles and bands of energy that rush from the center of the screen. We are then swept down the whorled path of a black hole, through the fiery, gaseous surface of the sun and through to the core of a star. Our attention never waivers. The animation then shifts to the creation of energy on a galactic scale and eventually we witness the birth of Earth. This depiction of time zero and the immediate aftermath clearly illustrates director Wayne Lehrer's knowledge of physics (a science he majored in, along with art and cinema). It is a remarkable film achievement.

The dual-camera 70mm film (also known as Enertopia) cost over $2 million and was produced by Lehrer, along with Ock-Ju Noh and Brian Rogers for the Korea Electric Power Corporation (KEPCO) at the Electric Energy Pavilion at Expo '93 in Taejon, Korea. The film, which is still running, was one of the most popular attractions at the exposition and attracted lines up to five hours long each day.

The theater in the pavilion where The Enertopia Symphony is presented was designed by IWERKS Entertainment in California, a company that's world-famous for the creation of special-venue motion picture experiences. A huge 54 x 75 foot screen, 8-track Dolby surround sound and many in-house effects complement and magnify the realistic you-are-there 3-D film experience.

In addition to directing, producing and writing multi-media films and video presentations for theme parks and world expositions, Lehrer has conceived and designed many pavilions and their attractions. His Voyage to Toi, a 12-minute 2-D film/3-D laser "ride" was voted best film at Sendai Garden Expo in Japan in 1989.

Lehrer conceived The Enertopia Symphony as a symphony with three movements. Each movement advances the storyline in a logical progression of thought from the Big Bang and the birth of Earth (first movement) to the depiction of Universal Man who is born out of the Earth and out of energy to become master of nature (second movement). In the third movement, the voices of children - our hope for the future - beckon Universal Man to see the world anew with the futuristic metropolis of Enertopia, KEPCO's vision of the energy-conscious city of tomorrow.

The 13 minute film combines 6½ minutes of stereoscopic animation with 6½ minutes of live action. The latter sequences were filmed in Yellowstone National Park, Northern California and Los Angeles by Peter Anderson.
was the director of photography. His long list of DP credits includes many of the world’s most successful special-venue 3-D films: *Haunts of the Olde Country* at Busch Gardens in Williamsburg, *Muppet Vision* at Disney/MGM Studios and *Captain EO* at EPCOT Center. The HinesLab StereoCam™, today’s preferred mount for dual-camera 3-D photography, was used in filming the live-action scenes.

Without question, the star of this film is Angel Studios’ high-resolution (over 2000 lines) computer graphic images. The studio’s work is even better — and certainly more advanced — than their highly acclaimed images in *Lawnmower Man* a few years ago.

In a film packed with so many visual pleasures, it’s difficult to choose one that may be the best. The Big Bang by simulation director Brad Hunt is complex and brilliant in its execution. In the Man Energy sequence, which was visualized by production designer Peter Lloyd and brought to life by animation director Jill Hunt, we watch spellbound as Universal Man, embodying the energy of the earth, comes to life. In a clever transitional sequence, two kinds of bubbles appear on the screen: live-action bubbles and animated bubbles created by animator Jim Polk and orchestrated by simulation director Brad Hunt. At one point, some transparent animated bubbles even contain live-action scenes. A close-in zoom to one of the final bubbles reveals an animated city scene and triggers a transition to an elaborate city animation sequence. The addition of in-house bubbles during this section is magical and mesmerizing.

Lehrer and Angel Studios saved the best for last. The continuous, single-take fly-through of the simulated Enertopia, KEPCO’s city of tomorrow, is so realistic it looks and feels like a natural experience. Extensive pre-production work was required for this “symphonic movement” in the film. It was a mammoth undertaking. According to Lehrer, futurists were consulted to study philosophical theories about city planning. “Every single element in the city had to be designed,” says Lehrer. “A plan of the city was drawn up that included a business hub, a technology center, parks, suburbs, sports facili-

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The visual perspective shifts from a galactic scale down to the subatomic energy level of a single quark. Individual atomic structures with transparent nuclear shells and random electron paths form. © 1993 KEPCO

Inside the nucleus an energized coil of inert gas suddenly triggers a vibrancy in interior texture and motion. This is followed by many ions with marbledized dynamic surfaces being drawn together in a gravitational pull. Their orbits bond tighter and tighter until they seem to melt in a blur of energy which emerges as Earth rotating in space.

A human form takes shape, born out of the earth and out of energy. The digitized representation of “Universal Man” was created by applying a grid pattern to the body of a live Korean actor who was then simultaneously photographed from the front and side to provide accurate proportions and movements for computer generation of the sequence. © 1993 KEPCO
ties, toll-air stations, monorails, everything – including a nuclear plant which KEPCO requested." Some of the best designers in the business worked on this brief sequence. They included concept designer Ron Cobb, who handled the primary design for The Abyss, and created the vehicles in Blade Runner as well as the endearing grotesques in that unforgettable cantina scene in Star Wars. He provided Angel Studios with sketches of buildings, transportation vehicles, landscaping and natural phenomena.

Production designer Peter Lloyd, a concept designer for Tron, worked with Lehrer to make Cobb's creations "sweet and beautiful with just the right color tones and textures." Lloyd added a few other buildings to the cityscape, including a theme park and a museum of modern art. "Filmmakers seem to dwell on dark futures, probably because this look seems to be the one that is done so well, like in Blade Runner," says Lehrer. "That dark look is the one we didn't want, simply because our film's theme is positive and upbeat. It was a challenge to accomplish this look without being cartoony."

Enter animation director Michael Limber. His job was to supervise blueprint construction of over 150 unique buildings along with a variety of transportation vehicles. "Limber's knowledge of architecture was a big plus in helping us make Enertopia plausible and buildable," says Lehrer. In only one viewing of the breathtaking fly-through of the city, most people in the audience really don't get a chance to discover and appreciate all of the minute details and the split-second action-within-action bits that constantly fill the screen.

Lehrer is generous with praise to David Bartholomew, the film's post production and optical supervisor. "He supervised every technical stage of the film and made sure everything turned out nothing short of perfect at every step of the way."

3-D computer-generated images have come a long way since Expo '85 in Tsukuba, Japan (see SW July/Aug. 1985) when Murray Lerner's 3½ minute, 35mm StereoVision film Space Fantasy, which was shown in the Hitachi Pavilion and billed as the world's first 3-D color-computer graphic film, premiered along with the OMNIMAX anaglyphic presentation We Are Born of Stars. Viewed today, both films stand the test of time and are considered major film achievements. But technology changes, and changes and changes. Today,
Stereogram (previewed in the NewViews column in Vol. 20 No. 5) is found on the shelves of large chain bookstores, often positioned next to N.E. Thing’s top selling Magic Eye which was reviewed in the same column. But only in the most basic sense are the two books similar.

Like Magic Eye, Stereogram presents an absorbing collection of impressive single image stereograms. But added to these are sections of explanatory text introducing each chapter covering various 3-D formats and techniques. More detailed essays appear near the back of the 96-page book discussing the significance of random dot stereograms to the future of art and technology and examining the work of some contemporary stereo artists producing both computer and photographic images.

Stereogram credits the artists under each published image and provides fusion spots for not only the single frame stereograms but even the numerous stereo pairs reproduced. Near every image is a symbol indicating whether it is designed for parallel or convergence free viewing or both.

Newly edited and translated from CG Stereogram and CG Stereogram 2 from Shogakukan Inc. of Tokyo, this 8 inch square paperback more than lives up to expectations. The color field stereograms and “wallpaper” pattern manipulations beat anything sold by shopping mall poster outlets in both artistic imagination and technical quality. Some (like “Aster” by Shiro Nakayama) become brightly colored folds of soft fabric inviting you to touch them when fused, while others become complex objects seemingly made of pure frozen light. The true “random dot” stereograms are less complex than some of the best of recent years, but they are well done and go beyond simple floating shapes.

Separate sections at the front and back of the book provide extensive instructions for both parallel and cross-eyed free viewing. Best of all, Stereogram includes 40 actual stereo pairs that demonstrate to readers how this new-found visual skill is good for more than staring at dots and splodges. Several choice Underwood views and three stereo daguerreotypes of the Crystal Palace by Negretti & Zambra are joined by some of David Burder’s best Scanning Electron Microscope pairs. Following these are stereo pair photos and drawings by other contemporary artists, revealing (literally) the depth and breadth of what is being done in stereo imaging and how free viewing can provide access to a whole world of depth.

Also among the pairs are five stereo paintings by Salvador Dali – rarely seen reproduced as full stereo pairs and even more rarely in such quantity. For stereo enthusiasts who have only heard about Dali’s 3-D work, or have only seen black & white reproductions, this chapter alone is worth the price of the book. If Dali’s images of surrealistic religious themes are too stifling, you may find a whole new dimension of mythological symbolism in the 3-D Tibetan mandalas on page 49. Computer shifted into multiple planes, the intricate patterns draw you into a whole self-contained universe of ordered spaces and colors – as if a complex temple and garden was being seen in an aerial hyperstereo.

Christopher W. Tyler, inventor of the computer generated single image random dot stereogram in 1979 (see Stereo World Vol. 19 No. 6, page 35) is recognized with an illustrated chapter on his work. He also wrote one of the essays at the back of the book describing the

(Continued on page 49)
NewViews

Wheatstone Recycled

The latest reincarnation of Charles Wheatstone's original stereoscope has recently been introduced by Les Devenirs Visuels, a Paris-based book producer. The Mirror-Album® is a folding viewer designed for viewing separate pairs of images which are slipped into clear plastic corner holders on removable cards. Available in two sizes, the viewer is made of sturdy, 100% recycled cardboard. Drawings, computer pairs or photos could also be printed on pages matching the dimensions of the Mirror-Album for 3-D publishing projects.

A cardboard hinge and strings hold the mirrors and ends at angles that allow viewing of fairly large pairs without the need to extend the end flaps out past the user's ears. The resulting keystone distortion is the price for any such compact mirror arrangement, but takes an effort to notice in images with a strong center of interest. As can be seen in the photo, the plastic mirrors are hardly optically flat, and flex along with other segments of the viewer. The surprise in actually using the Mirror-Album is how little distortion is seen once your eyes are close enough to fuse the images. The over-all distortion is actually less than in many viewers using plastic lenses, and the bright, direct viewing is easier on the eyes.

The flexibility of the viewer becomes an advantage when viewing poorly mounted, trimmed or printed pairs. Ends can be twisted and mirror angles altered to help align and fuse even hastily inserted pairs. With a little effort, this is one of those stereoscopes that virtually anybody could successfully see stereo in.

The Mirror-Album does of course share the disadvantages of all Wheatstone viewers. Separate right and left images must be labeled and kept carefully together in a file or book. More importantly, they must be "flopped" when printed in order to be correct when viewed via single sets of mirrors. This probably gives the viewer more potential for specific projects than for use in casual viewing. The small format (shown here) is for images up to 130 x 180mm. The large format is for images up to 240 x 260mm.

Contact Les Devenirs Visuels, 56, rue du Faubourg Poissonnière 75010, Paris, France - or Cygnus Graphic, PO Box 32461, Phoenix, AZ 85064.

Minox Twin Camera Rig

For those interested in a synchronized combination of modern 35mm cameras and who cringe at the price of an RBT or the wiring involved in assembling something like the “Spice Rack”, there exists a factory-synchronized alternative. The Minox company is now mounting two Minox 35 GT-E cameras on an aluminum bar for stereo use. The electronic control in the slave camera is disabled and wired to the control module in the master, giving highly accurate and reliable shutter synchronization for flash and action stereo. The two lenses are focused separately.

The Minox 35 GT-E is a standard format 35mm camera with an f/2.8, 35mm lens. It features aperture priority automatic exposure, with shutter speeds from 8 seconds to 1/500 second. The combined pair weighs less than an RBT or a Realist, and cameras can be separated for synchronized hyperstereo. However, the minimum base possible with the rig is 108mm and the lenses, besides focusing separately, are not interchangeable.

For more information, the Minox distributor in the U.S. is H.P. Marketing, 16 Chapin Road, Pine Brook, NJ 07088, 201-808-9010. They can provide the name of your nearest Minox dealer. In Germany, the system is being sold by Stereooptic Renate Grosch, Mainstraße 13, 63128 Dietzenbach, Germany, 49-6074-27-222.
Energy Conservation in Depth

Conserva-Cat Comics in 3-D, published by the Southern California Edison Company, is among recent titles from 3-D conversion artist Ray Zone. Drawn by noted prehistoric wildlife painter William Stout, the book is intended to educate children about conserving energy in their own homes.

According to Stout, “This comic book has the absolute finest 3-D ever achieved in the history of comics. Ray Zone has even topped Ray Zone this time. I counted at least 11 levels of depth in the first panel alone.” Stout designed each panel with 3-D effects in mind, making this one of those rare books specifically designed for the medium.

For a catalog of 3-D comics, send $1 to The 3-D Zone, PO Box 741159, Los Angeles, CA 90004.

Kodak Stereo Guide Available From NSA

The 1955 Kodak publication Picture it in Stereo is now available from the NSA Book Service thanks to the discovery of a box of unopened, mint-condition copies. This is NOT the Kodak 35mm Stereo Camera Manual, but one of the series of instructional texts published by Kodak over the years on specific aspects of photography, with holes for binding it into a collection of other such reference works.

While Kodak equipment is shown in all the example photos, Picture it in Stereo is really a text covering the basics of stereo photography — in effect a very condensed version of Morgan and Lester’s famous Stereo Realist Manual, published a year earlier. Many of the photos and illustrations in this 34 page book are in full color, but only two actual stereo pairs are included. Completely oriented toward stereo slides, the book covers all the basic do’s and don’ts as well as tips on “Interesting Pictures”, exposures in various conditions, flash situations, and the use of multiple planes and converging lines for stereo effect. Besides the usual exposure tables for various films and flash bulbs, the book includes tips on “Ultra-close-ups” through special masking in the mounts or the use of close-up lenses combined with sequential exposures and camera shifting devices.

Kodak packed quite a bit of very clearly presented information into this introductory text, which may have been responsible for creating many new stereographers (and who knows how many good stereographs) in its day. Most of the information remains pertinent, and the book is a must for any complete collection of the stereo literature of the 1950s.

Original, mint-condition copies of Picture it in Stereo are $12.95 post-paid from the NSA Book Service, 4201 Nagle Rd., Bryan, TX 77801.

Print Pairs Only, in New Salon

The Chesapeake Stereo Salon for stereo card pairs (3½ x 7 inches) will be held on October 8, 1994. No longer will stereo cards have to compete against slides. Just card vs. card. The exhibition has received PSA recognition and will count for star ratings and who's who. Over 10 medals and plaques, including PSA gold and silver medals. For more information and entry forms write to Ronald Leonard, 5895 Rockhold Creek Road, Deale, MD 20751-9620.

(Continued on page 41)
Vibeke Sorensen's
MAYA
Stereo Drawing in Cyberspace

Vibeke Sorensen is a video and computer artist living and working in San Diego, California. She has been on the faculty in the School of Film and Video at the California Institute of the Arts in Valencia since 1984, when she founded the Computer Animation Laboratory. Her work has been exhibited in museums, galleries, print and television internationally.

Her stereoscopic computer animation MAYA was exhibited in the "Perspectives, Proximities, Perceptions: Expressions in 3-Dimensional Graphic and Electronic Media" show at the Strong Museum in Rochester, NY in July and August, 1993, as part of Montage '93. (Stereo World Vol.20 No.3 page 38.) MAYA was used to specify perceptual parameters and test the Interactive Stereoscopic Animation System (ISA) built at the San Diego Supercomputer Center.

Sorensen mounted an installation of the ISA system at Montage '93 in which the audience was invited to draw and paint directly in stereo by using a digitizing mouse or pen and tablet. The visual effect was that of making lines and paint appear to hang in space as one worked. Her installation allowed users to scan in stereoscopic video images of themselves (using a standard camcorder with a beam splitter on it), and then use original software she created to paint on their stereoscopic portraits directly. The program displayed side-by-side pairs and was viewed either by free-viewing or by wearing customized glasses modified from inexpensive parallel viewing lenses. Her software also allowed a user to enter test files such as poems, place words at various depths, and then save the stereo-pairs in PICT2 format for use in other applications. The images could also be printed from within her program in a variety of formats, including side-by-side pairs. Interestingly, one feature of her software was that when a user stored a painting made with her program, a history of the gestures was stored, not just the final image. That meant that when reading it in...

Sorensen's work with abstraction in MAYA allowed her to focus on the exploration of perceptual issues unique to interactive, stereoscopic cyberspace. This exploration was central to the development of the Interactive Stereoscopic Animation System (ISA) at the Advanced Scientific Visualization Laboratory at the San Diego Supercomputer Center. The ISA project was a collaboration between Vibeke Sorensen, X-ray crystallographer Dr. Lynn Tenevck, and computer scientist Phil Mercurio, supported by the National Science Foundation. © 1993 Vibeke Sorensen

A frame from a three-dimensional, stereoscopic animation called MAYA, the word for the conflict between illusion and reality in Indian philosophy. The piece explores perception, illusion, space, and time, and pays homage to abstraction in art and music, and in the development of language. © 1993 Vibeke Sorensen
Vibeke Sorensen comments on 3-D animation in MAYA: "...I worked with abstraction to focus my exploration of the perceptual issues of working with interactive stereoscopic computer animation. In addition, there are other issues at work, including illusion, and the recognition of the technology being developed, as well as the recognition of my own spirit. The 'maya' or illusion of my work is manifest through light by technology, yes, but more importantly by the will of my soul and dances from moment to moment in an experience reflective of life, like cycles repeating, but never exactly the same."
© 1993 Vibeke Sorensen

again, a time-lapse movie of the history of making the painting was played back – in stereo. Participants at Montage '93 made color printouts of stereo poems, computer-hand-painted stereo portraits of themselves, stereo collages and abstract drawings. They viewed them in a turn-of-the-century stereoscope, and were able to keep their own stereo prints.

Sorensen's software, currently called "Drawstereo," runs on all Macintosh computers. Her program reads and writes PICT2 files, and is therefore compatible with applications such as Adobe Photoshop, Macro Media Director, and others. For further information on the software, please write to Vibeke Sorensen, 232-2-D La Costa Avenue, Carlsbad, CA 92009.

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NewViews

(Continued from page 39)

5-D Greeting Cards

Single-image stereograms have migrated from posters to everything from calendars and books to glossy, full color greeting cards with the 5-D" line from Blue Mountain Arts of Boulder, CO. The work of Dr. Stephen Schutz, these 7" square cards retail for $3 each and include images of cities like New York and Los Angeles as well as a special series of "Earth Cards" featuring stereograms of endangered animal species.

Dr. Schutz is a pioneer in the technique of computer-shifting portions of existing art and photos to produce multiple planes of fully rounded 3-D images which float off the card when fused. From what looks like a tree-lined swamp full of flamingos, a menacing alligator suddenly appears when the card is free viewed. The cards also include what may be the only 3-D image of a manatee, gently swimming out of a field of fish and underwater plants.

Instructions for viewing appear in four languages on the back, with poetry or general greetings inside. The images are relatively simple and easily fused with most having a flat background to emphasize the subjects. An initial printing of 1 million cards is said to have sold out in three weeks. The company also offers 5-D posters ($7.95) and 1995 calendars ($11.95).

Check out your local specialty card shop or write to Blue Mountain Arts, Box 4549, Boulder, CO 80306 for availability.

Fuji's Snap-on 3-D

Readers of the May, 1994 Popular Photography got a look at Fuji's folding, dual-mirror frame-splitter attachment for shooting stereo pairs with the company's QuickSnap 800 single-use camera. The device attaches to the camera with plastic straps and includes a mask in front of the viewfinder. Images are paired on the film so that they appear on a normal 4x6 print from any lab ready to view without needing to be transposed or mounted. The splitter can be removed for flat shooting at any point on the same roll. A very basic folding cardboard viewer is included with the device, which is so far available only in Japan.

The Pop Photo item, on page 21, even reproduces a sample stereo print from the camera and urges Fuji to export it with the optimistic observation, "We can't believe U.S. amateur photographers wouldn't snap these up by the crate-load!" Such enthusiastic coverage of a stereo device should probably make up for the magazine's use of the term "stereopticon" (twice) and for its failure to mention that the similar but very reusable Loreo camera has been available in the U.S. for years. In fact, the more exposed mirrors on the Fuji device could cause more problems with stray sidelight than in the Loreo.
In place of the usual information about recent acquisitions or other activities at the Oliver Wendell Holmes Library, this installment of the Report presents some of the most rare stereographs in the Library’s collection.

One-of-a-kind, unpublished, original views made by dedicated amateurs in the 1950s and 1960s have to qualify as rare and valuable images despite their lack of current market value. The stereos most in need of preservation, in fact, are those with the least “collectibility.” In many ways the stereo slides made in the ’50s and ’60s are in the same situation of marginal collecting appeal (and face the same risk of disposal) as antique views in those same decades. Only recently have some collectors paid attention to amateur slides, and most people looking through boxes of them are in search of commercially produced advertising slides.

**TOP**
“Ferris Wheel, Near Nasik (India)” by Wynn Stephansen, who traveled with her husband Paul during the 1950s and ’60s through 50 countries, taking about 10,000 Realist slides. They weren’t members of any stereo organization, but donated the collection to the Holmes Library where it could be preserved for both research and entertainment.

**CENTER:**
“Barban, An Old Medieval Town” by Helen Erskine is a scene of more peaceful days in the Yugoslavia of 1965. Helen and Henry Erskine both stereographed the country during a three week tour and assembled a presentation of slides that would have tempted any National Geographic photographer to swap Nikons and Leicas for a Realist.

**BOTTOM:**
“Autumn” by Marjorie Lewis is from the collection of Hoyal Lewis, FPSA, and his wife Marjorie of Blairstown, NJ. They were active members of the Photographic Society of America Stereo Division, and both produced some spectacular scenic views.
The 3-D boom of the 1950s produced more than movies, comic books and cameras. A surprising number of people with genuine skill and interest documented the world of the mid 20th century in stereo. In fact they easily outnumbered the stereographers active in the 19th century during any given year. And thanks to convenient transportation, small cameras, and relatively cheap film, they took far more pictures per day as well.

The sad truth is, most of those images probably no longer exist. In some cases the photographers themselves failed to see the value of their stereos and didn't arrange permanent storage. But in most cases, their families eventually disposed of the slides for lack of interest or a viewer or storage space or all of the above. In a sense, the Holmes Library wants to end up with the most unique stereo collection of all – one that preserves the stereoscopic record on through the entire 20th century. These images are a tiny sampling of the slides donated so far. There are plenty of true gems that would fill an entire issue, some dated and identified better than others.

If you know of ANY stereographs in need of a good home, please contact the Library. Images in any format of any age by any photographer and of any subject and quality (within reason) are welcome. And keep the Holmes Library in mind when you plan for the eventual disposition of your own images. Stereographs recording the 1970s, ’80s and ’90s will be even more scarce than those of earlier years, making it just that much more vital that you label them accurately and carefully record who is to care for them after you’re gone.

The NSA has established the Oliver Wendell Holmes Stereoscopic Research Library, located at Eastern College, St. Davids, PA 19087. This library offers to researchers a large body of information on the history, development, and continued applications of stereoscopy. It contains early catalogs and trade lists of stereo photographers and publishers, a collection of books and periodicals (both antique and current) on stereoscopy and related photographic techniques, and a large study collection of both antique and modern stereo images.
Pretend for a moment that it is August 17, 1661, and you are the 23 year old Louis XIV, King of France. Your carriage is traveling down a country road to a party given at the chateau Vaux-le-Vicomte, home of Nicholas Fouquet, your Superintendent of Finances.

Nicholas Fouquet was a young man on the way up. He was born to a family of magistrates. By the age of 20, he had become a member of the Paris Parliament and later Attorney General of Parliament. Nicholas chose a squirrel as his emblem. His motto was *Quo non ascendam* (How high shall I not climb?). His climb continued when he was made Superintendent of Finances for the state and became a close assistant of Cardinal Mazarin, the regent and first minister to young Louis. Fouquet even hoped the King would choose him as Cardinal Mazarin’s successor.

In 1656, Nicholas decided to build himself a chateau, one worthy of his rank, fortune and social success. He selected an area to the southeast of Paris near the town of...
During the Villars period (1700-1764).

When he hired as builders, the famous architect, Louis Le Vau, decorator/painter Charles Le Brun and landscape gardener, Andre Le Notre. The three men were given carte blanche. The building of Vaux-le-Vicomte took five years, with over 18,000 workers. Three villages and a small medieval castle were demolished to make room for the chateau and gardens. However, owing to the customs of the time and his close association with Cardinal Mazarin, Nicholas acquired a dangerous habit of confusing the credit of the state with his own.

Approached from the north, the Chateau is an impressive sight. The building, surrounded by a moat, was built on a terrace above the gardens. The entrance hallway opened up into the Grand Salon and a view to the formal gardens. Three reception rooms are on each side of the Grand Salon. On the southwest corner is the Room of the Muses named after nine muses as shown on the painting by Le Brun. On the other south corner is the King's Room with its Louis XIV decor of stuccos, gildings and ceiling paintings. This painting, also by Le Brun, is Time and Truth.

The second floor contains Fouquet's antechamber and bedroom on the north side. Madame Fouquet's boudoir, the Louis XIV study and bedroom and the Louis XIV bed chamber (added just before the French Revolution) overlooks the gardens on the south side of the chateau.

The gardens by Le Notre shows the mastery of perspective, with several optical illusions. Only part of the garden is visible from the Chateau. There are three main water perspectives – the moat, two rectangular canals and the Grand Canal. Starting from the south side of the Chateau is the bowling green with hedges trimmed into a lace motif. Next, the two canals with the circular fountains comes into sight. Then, down a steep flight of stairs, with a small cascade, to the Grand Canal. Across the Grand Canal are the grottoes with statues of river gods at each
end. The gardens continue back up a hill to the statue of Farnese Hercules, which offers a wondrous perspective back to the gardens and Chateau.

Now you, Louis XIV have arrived at Vaux-le-Vicomte. It was truly a feast fit for a king and his court. The reception was one of dazzling splendor. La Fontaine became at the poet in residence and the famous chef Vatel was hired for this feast of Vaux. The King’s table featured a service in solid gold. Unknown to Nicolas, this detail annoyed the young King intensely, as the King’s own silverware had been sent back to the smelting works to help meet expenses of the Thirty Years War. The King was further alienated when Fouquet made advances to one of the Louis’ favorites, Mlle de la Valliere.

After dinner, the guests could feast their eyes on the garden entertainments, enhanced by 1,200 fountains and cascades. The program covered country ballets, concerts, aquatic tournaments and lottery games, where all tickets won a prize. Les Facheux, a comedy ballet by Moliere, premiered and was performed by the author and his troupe. This banquet even surpassed the pomp and luxury of the King’s own royal court.

The young King’s first impulse was to have Fouquet arrested immediately, but the King’s mother, Anne of Austria, succeeded in appeasing young Louis’ spirits. However, nineteen days later, Nicholas Fouquet was arrested by the King’s Musketeer d’Artagnan. At the end of a three year trial, in which evidence was partly falsified by Jean-Baptiste Colbert (the new Minister of Finances), Fouquet was banished from court. The King felt this sentence was rather light and altered it to life in prison. Fouquet spent the next 16 years, until his death in 1680, imprisoned in the citadel of Pignerol.

But what of the artists, Le Vau, Le Brun and Le Notre, who had designed and built Vaux-le-
Vicomte. They all had much better luck. All three entered the King's service and were later to produce the Palace of Versailles.

Because of her dowry, Madame Fouquet was able to reclaim ownership of Vaux-le-Vicomte. She sold the Chateau in 1705 to the recently created Duke, the Marechal de Villars. Voltaire was a frequent guest at the Chateau, now called Vaux-Villars. Villar's son sold the estate in 1764 to the Minister of the Navy to Louis XV, the Duke of Choiseul-Praslin. The estate remained in the Choiseul-Praslin family for six generations. The inside of the Chateau was redesigned by both the Villars and Choiseul-Praslin families. Many of the changes by the Choiseul-Praslin family took place in the years just before the French Revolution and luckily the Chateau and gardens survived the Revolution with little damage.

In 1875 the great industrialist, Mr. Summier, brought the property and originally was going to divide up the estate. After a chance visit to Vaux, he decided to restore the Chateau and gardens to the splendor of the 17th century. Mr. Sommier devoted the rest of his life to the repairing the building and redesigning the gardens. He had to replace just about every piece of furniture as only two tables and six paintings were in the Chateau in 1875. He died in 1908 with the restoration almost complete. During World War I, his daughter-in-law, Mrs. Edme Sommier converted the Chateau in to a hospital. After the war, she opened the gardens to the public, and the Sommier family opened the state rooms of the Chateau in 1968.

**Photographing the Chateau**

It was on our February, 1992 trip to the Winter Olympics where we also spent sometime in and around Paris. It was a cool, but bright and sunny day that we picked to go to Vaux-le-Vicomte. We spent the morning at Versailles and after lunch drove to the Chateau. We arrived around 2:00 pm and started with the inside of the Chateau, since it closed before the gardens. This was our second trip to Vaux-le-Vicomte, so we knew just where and what to shoot. The cameras used to Ricohs were made by the late Peter Kato of Germany and had lens separations of 76mm and 114mm. The 76mm Ricoh had a pair of 35-70 f3.4 zoom lens, while a pair of 50mm f1.4 lens were used on the 114mm Ricoh. Film was all Kodak Ektachrome; 100, 200 and 400. The 100, 200 and 400 speed film was in 100 foot rolls and loaded into 36 shot cassettes as we needed it each night of our trip.

Indoors we would use faster speed film, generally 400 ISO. We photographed the inside of Vaux for about an hour starting around 2:00 pm. Most of the important rooms faced the south and the window curtains were open. This let in a lot of beautiful sunlight, so with 400 speed film, most of the indoor photographs of Vaux would be easily hand held. We could shoot with both cameras set at a 60th of a second at f3.5-3.6. We used flash in only one room, facing the north, and a few of the basement rooms.

Outdoors, we generally used 100 or 200 speed film, especially with the bright sunny day we had. We spent about two and a half hours, from about 3:00 to 5:30 pm, photographing the outside of Vaux-le-Vicomte. Only at twilight, which came about 5:30 pm in February, did we need to go to 200 or 400 speed film for hand held outdoor shots.

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**View-Master**

(*Continued from page 33*)

Also very seductive are the examples of anamorphized drawings. These distorted drawings, when viewed with the aid of a circular reflector around a cylinder, are seen as normal drawings. These were so fascinating to us that we bought the matching book in the gift shop so we could create our own.

The next flight of steps lets us view many other fine 3-D illusions before bringing us to the holography collection. There is only one word which can be used to describe the quality of this exhibit: FANTASTIC! Our favorites included the holographic hammer hovering over a real nail - the illusion was wonderful. And the Russian icon was so realistic it was hard to believe that the icon was not really there on display behind the glass.

Here, one can see anything imaginable in holograms: fish swimming, a grinning skull, a kiss from Miss America, and a telescope (which you can look directly into) just to name a few. Unfortunately, photographs do not give you the scope and wonder of these truly outstanding images. However, the Museum has gone to great pains to properly display these images in order to provide the best holographic effect.

Any member of the NSA who has a chance to go to this Museum should not miss the opportunity. It is without a doubt the finest collection of 3-D effects and optical illusions we have ever had the privilege to see.

To Museum Director Stief we can only say, “BRAVO! and keep up the great work.”
Just how long it took free viewing to catch on with the public is one of the interesting things to be learned from the new facsimile edition of Theodore Brown’s 1903 Stereoscopic Phenomena of Light & Sight. Buyers (and some publishers) of stereogram posters and books who think they’re onto something new should read page 80, where Brown explains the concept and its advantages and provides illustrated instructions for learning the skill.

Brown’s “Stereophotoduplicion” adjustable-mirror frame splitter for taking stereo pairs with an ordinary camera is shown on page 22 with its optional shutter attached. Several other similar devices are included in the same section of the book.

Theodore Brown is one of the less well-known pioneers of stereoscopic theory, viewing, and accessory devices, being more known for his experimentation and publishing work related to magic lantern and early cinematography equipment. Some readers may be familiar with his one-eye Pocket Stereoscope, but even a brief glance through Stereoscopic Phenomena reveals his wide and imaginative interest in nearly every aspect of 3-D photography and vision. Included are detailed sections on stereo cameras, dual synchronized cameras, mirror attachments, stereoscopes, binocular experiments, illusions, toys, scientific stereoscopy from astronomy to surveying, and the commercial side of stereoscopy.

In addition to numerous drawings and diagrams, 15 stereo photos are reproduced illustrating the use of particular stereo cameras and devices or the various stereoscopic theories discussed. Theodore Brown never enjoyed great commercial success with his stereo inventions — even his book may have been printed in a quantity of as few as 500 copies — but he was first with several techniques to reappear many years later. One was his publication of anaglyphic postcards with tear-off glasses attached — a concept found now in the 3-D GREETS cards from Baylow Productions. He also anticipated one of the most sophisticated security systems of today with his concept of recording the blood vessel pattern on the eyeball as a foolproof means of identification. The present “Eye-Dent” system goes deeper, using a laser to scan the pattern on the retina, which is less subject to changing or being obscured.

The 144 page, soft cover facsimile edition of Stereoscopic Phenomena of Light & Sight is $14.95 plus shipping from Reel 3-D Enterprises, (310) 837-2368.
A Deep View of Viewing

Review by John Dennis

Sides from the best stereo camera in the world are only as good as the viewer they are placed in. Since far more stereo images are seen through viewers than by projection, this makes these often neglected devices very important. They are in fact the most often used images are seen through viewers and the one seen and used by everyone you share your slides with.

Probably the most popular and well known of the viewers from the 1950s is the Realist ST-61 (red button) illuminated, focusing viewer. Its fame and lasting importance to stereography have resulted in the recent publication of a book devoted completely to its maintenance, repair and modification. Everything You Always Wanted to Know About Your ST-61 STEREO REALIST VIEWER by George A. Themelis explains how to clean, fix, replace or reconstruct nearly every part of this viewer from the lenses to the smallest screws and springs.

The amount of detail and the clarity of illustration in this 52 page, 8½ x 11" book will impress even those who are already familiar with the viewer. For those of us who's viewer maintenance is limited to replacing the batteries whenever people start asking why we take so many moonlight views, this is a revealing look into the most vital link in stereo photography – where the images meet the eyes.

While things like cleaning the battery contacts may seem obvious, the maintenance and repair sections of this book go far deeper – into problems with the focusing shaft and interocular adjustment mechanisms, for instance. The extensive and detailed chapter on Modifications and Improvements covers widening the apertures for 7-sprocket slides, increasing illumination, choosing batteries, installing a halogen bulb, connecting an external power supply, and achieving variable illumination.

The book concludes with an interesting discussion of the optimum settings for focus and interocular adjustments for most viewing, followed by tips on inspecting viewers when buying.

STEREO REALIST VIEWER is available for $7.95 postpaid from Stereo Viewer Supplies & Services, G.A. Themelis, 10243 Echo Hill Dr., Cleveland, OH 44141. For those too squeamish to attempt any of their own viewer repairs or improvements, Themelis now offers such services along with his mail-order selection of bulbs and other replacement parts. For more details and prices, send a SASE to the above address.

3-D Book Deeper Than Dots

(Continued from page 37)

early history of these “autostereograms” as he calls them. His first successful image is reproduced along with his detailed and mostly non-technical explanation of how they are created and why they work.

Sadly, despite its generous information on 3-D imaging and photography the book fails to provide readers any addresses of information sources or organizations involved with stereo imaging. In his introduction, Virtual Reality author Howard Rheingold observes that “...a worldwide fraternity of stereoscopists has kept enthusiasm for 3-D images alive to this day.” But readers newly fascinated with stereo may wonder if that “fraternity” is somehow closed and secretive, with no mention being made of the ISU, the PSA, the SSA, the NSA, or any national or regional stereo related groups. Despite the vital importance of computers to the book's images, not even the Internet “Photo 3D Electronic Mail List” or the Usenet “Alt.3d.” newsgroup are mentioned. Only in Christopher Tyler's section on “Making Your Own Autostereograms” is an address to be found – for obtaining an extended bibliography and reprints of his articles.

The world of single-image stereogram publishing has become highly competitive, with potential sales of posters and books in the millions. These recent “mainstream” 3-D books have avoided mention of any stereo related organizations.

Are publishers convinced that this is another fad with a limited time frame for sales, leaving no reason to identify sources of information, ideas and inspiration? Are volunteer based stereo interest groups seen as some sort of insidious threat to profits? Perhaps there's a clue to the answer on the front and back inside cover flaps of Stereogram where color field stereograms by a team named DIN (Eff Ludecki & Michael Frank) fuse into the words “TRUST” and “NOT.”

Both Stereogram and 3D Wonderland are now available by mail from Reel 3-D Enterprises. 3D Wonderland isn't in the '94-'95 catalog, but it's listed in Supplement List #72. Call 310-837-2368 for ordering information.
As you could probably guess from the cover, *3D Wonderland* from Tokuma Shoten Publishing, Tokyo/Bellevue, WA, takes a somewhat more whimsical approach to single-image stereograms than does the other Japanese import, Stereogram. The range of techniques and formats is just as wide, however, and there are some truly challenging images—especially some of the large computer-manipulated photo pairs.

Like Stereogram, the 55-page *3D Wonderland* includes an impressive number of actual stereo pairs designed for either parallel or convergence free viewing. The single-image stereograms are also done in both orientations, with symbols by each one indicating parallel, cross, or both types of viewing. Most of the images also include fusion spots, and all the artists are credited. Some of the image pairs are presented against a common background or within a single frame and float there when fused, usually through convergence viewing due to their large size.

Among the photographic pairs presented are some good aerial, cloud and ground based hypers. Several of the stereograms include an extreme depth range that could frustrate all but the more advanced free viewers. One, “The Ultra Modern Horror Story” by Kan Dava, has a field of gleaming, sharp knives flying directly at the viewer in very exaggerated depth that provides a very startling effect when fusion is achieved.

Each single-image technique is introduced and named, with familiar styles like color field and wallpaper stereograms joined by multifocus, tessellation pattern, random texture, and photomapping. One gets the impression that a huge subculture exists, centered in Japan, in which the merits of each are discussed in minute detail far into the night while computer graphic fanatics grind out more bizarre images by the hour. Unlike most other books of its type, *3D Wonderland* includes information on a stereo imaging organization. Unfortunately, it's for the NIFTY-Serv network in Japan! The translators and publishers didn't know about or bother to include the Internet “Photo 3D Electronic Mail List” or the Usenet “Alt.3d-U” group.

*3D Wonderland* is available at most chain bookstores or through Reel 3-D Enterprises.

Members of the Stereoscopic Society are saddened to learn of the passing of one of their mentors, Robert O’Brien of Dayton, Ohio. Bob, who served as secretary of the Beta Transparency Circuit from 1981-86, died of congestive heart failure on Dec. 18, 1993, three weeks shy of his 83rd birthday.

From the time he joined the Society in 1980 to the time he left at the end of the decade, Bob had been one of Beta’s top vote-getters. He was the top scorer overall in 1984, along with earning the distinction of submitting the circuit’s favorite slide that year, “Mitten Country.” He also came in second place overall in 1983 and 1986, third place in 1987 and fourth in 1985. He was forced to step down as secretary, and later as a participating member, due to ill health.

Bob had to be one of the most experienced stereographers on the Society’s membership roster. He had been an avid photographer since his childhood, shooting black and white photographs and developing his in his father’s darkroom. He would later become one of the earliest owners of the new Stereo Realist, purchasing one in 1949 after being won over by the 3-D slides that a friend had taken with his.

Bob, who had previously been a fan of 8mm home movies, began to take his Realist (and later, other stereo cameras as well) along on frequent sight-seeing trips with his wife, Arline. Together, the two traveled much of the continent, amassing thousands of 3-D slides, all individually titled as to their date and subject. Arline even joined in as well, acquiring a View-Master Personal in 1958.

Though he didn’t join NSA and the Society until 1980, he had become active in the Photographic Society of America’s Stereo Division in the early 1950s. He quit in frustration a dozen years later, however, after unsuccessfully waging a campaign to switch from glass to less weighty mounting materials for the slides submitted in the PSA folios.

Though he worked for 44 years as an accountant for a local power company, Bob’s real interest was always photography. After retiring from his job in 1974, he volunteered as an assistant to the staff photographer of Wright-Patterson’s Air Force Museum in Fairborn, Ohio. His duties there included copying prints and enlarging them for use as murals. He also researched a 3-D aerial strip camera that had been developed at the Wright-Patterson Air Force Base. That research resulted in a feature article in the Jan./Feb. 1983 Stereo World.

Bob, who began dealing in stereo cameras and related equipment in 1980, retired from his volunteer post in 1986, the same time he gave up his post as Beta secretary. As his health continued to deteriorate, he eventually had to give up stereography itself.

His final battle with heart problems began in September, 1993, when he suffered a heart attack. His final weeks were spent at the health care center in Bethany Lutheran Village, a retirement neighborhood where he and Arline had lived.

His friends will miss him.

- Dean R. Jacobowitz

Assignment 3-D

(Continued from inside front cover)

in black and white.) Include all relevant caption material and technical data as well as your name and address. Each entrant may submit up to 6 images per assignment.

Any stereographer, amateur or professional, is eligible. Stereos which have won Stereoscopic Society or PSA competitions are equally eligible, but please try to send views made within the past eight years. All views will be returned within 6 to 12 weeks, but Stereo World and the NSA assume no responsibility for the safety of photographs. Please include return postage with entries. Submission of an image constitutes permission for its one-use reproduction in Stereo World. All other rights are retained by the photographer.

Send all entries directly to: ASSIGNMENT 3-D, 5610 SE 71st, Portland, OR 97206.

3-DIMENSIONAL VIRTUAL REALITY (IBM-PC): animations and pictures, including Red/Blue glasses, CDROM version, only $30 (650-MB). Figgys $1 (1.2MB). Micro-Mart, 422 Halsey Road, North Brunswick, NJ 08902, (908) 821-6164, Fax: (908) 297-7399; more CD-ROMS: Top-2000 SHAREWARE (681MB), All Beauties For Adults Only, (689MB). (Plus $3 shipping). Dealers Welcome!

ANAGLYPH images produced from your stereo pairs in digital format for viewing on your computer screen. $25 per image + $2.50 S&H. Write Computer Communications services, PO Box 13231, Alexandria, LA 71315. Ph/FAX (318) 442-3582.

ARTHUR GIRLING'S "Stereo Drawing - A Theory of 3-D Vision and Its Application to Stereo Drawing", 100 pages hardbound 8 1/2 x 12. Stereo photographers are finding that the book applies equally to stereo photography and is a mine of information on methods of making 3-D pictures and viewing them. Written in non-technical language and profusely illustrated with 529 drawings as well as 11 pages of superb anaglyphs, this book is a must for the serious stereoscopicist. Now available from NSA Book Service, 4201 Nagle Rd., Bryan, TX 77801. Price (including postage) $19.00 USA, Canada. Overseas add $2.00 surface, $4.00 air.


I have over 1,000,000 high quality stereo card reproductions that I must sell soon. I am asking $1.00 each from any enterprising person who can see the profitability in such a stock. Call Harvey, (212) 431-9358 before Sept. 1, 1994 only if seriously interested.

IVES-KROMSCOP in excellent condition with slides, $3900.00 firm. Sidney Malitz, MD, Box KH, Scarsdale, NY 10583.


KEYSTONE ILLUMINATED STEREOSCOPE. Library model, with gray wrinkle finish, fully adjustable stand and optics. The illumination and high quality optics of this unit provide the best possible viewing of cards. Includes case and lamp, $235. Bill Shepard, 17350 E. Temple Ave. #399, La Puente, CA 91744, phone (626) 810-1203.

KEYSTONE METAL STEREO VIEWER with light and approximately 50 stereo cards $75. Nishika camera, case, flash, video, all in boxes like new $115 plus UPS, (708) 965-6424, 6-9 PM, Morton Grove, IL.

MAIL/PHONE BID AUCTION, coming this Spring, private collection including many nice Dakota (Deadwood, etc.), famous people, etc. Send $3 for catalog. John Waldsmith, 302 Granger Rd., Medina, OH 44256.

NEW CATALOGS! We've got more 3-D publications now than ever before (including lots of random dot stereograms) in our 1993-94 catalog. For a copy, please send $1 for U.S., Canada and Mexico; $2 for all other nations (both are refundable with future order!). Cygnus Graphic, Box 32461-X, Phoenix, AZ 85064-2461.

NEW KEYSTONE STEREOSCOPE Model 3101; the best viewers for people who must wear glasses! Also: hooded Model 3100 for extra wide frame glasses. Excellent optics that easily beat antiques and reproductions. $75 plus $3 shipping (in US). Russell Norton, PO Box 1070, New Haven, CT 06504-(203) 562-7800.


OLD KEY WEST IN 3-D, by Joan and Wright Langley, 62pp. with 52 stereo views and plastic viewer, softbound, 9 x 6", $14.95 plus $3 shipping from Langley Press, 821 Georgia St., Key West, FL 33040.

Q-VU PRINT MOUNTS simplify mounting stereo views. Sample kit $5, includes mounted view. Black or gray #3/100 ppd. Also, King Inn 2 1/4 x 2 1/4 viewers & mounts. Q-VU, 817 East 8th, Hollive, CA 92250.

STEREO CLIP-ART – 50 different clip art images of stereoscopic items (Holmes/Wheatstone viewers, 3-D cameras and more) $15 + $2 S&H. Speedy IBM or Mac. John Williamson, PO Box 145, Emsford, NY 10523-0145.

STEREO FED instruction book (Xerox) with English translation. Learn to use this modern, currently available, Russian stereo camera that has electronic auto exposure. Please send $9 postpaid to: Bruce Hansen, Box 89437, Honolulu, Hawaii 96830-9437.

STEREO SLIDES MOUNTED in any format. Slides duplicated. Sections enlarged (unwanted sections of slides cropped out). Realist format made from View-Master. Stereo cards made from stereo slides or stereo slides made from stereo cards. Title slides made. Call or write for price list: Studio 30, 15 Anson St., Boston, MA 02130 Fon/Fax (617) 824-8154.

STEREO VIEWS AND POSTCARDS, sent mail order to you. Several thousand stereo views, and over 100,000 postcards. Send me your want list. Spedding, 2 Tanglewood Rd., Sterling, MA 01564.
STEREO WORLD March/April 1994 83

For Sale
STEREO VIEWS AND STEREOSCOPES. Also buying same. For current catalog, send $2 to: The Great American Stereograph Company, PO Box 381771, Cambridge, MA 02238.

SUPERCHARGE your Stereo Realist red button viewer! Send $7.95 for booklet loaded with viewer maintenance, repair, and improvement tips. Supplies, transformers, and repair services also available. SASE to G. Themelis, 10243 Echo Hill, Brecksville, OH 44141.

TWO STEREO REALIST 4-Drawer slide storage cases, VG condition. One Drumberger viewer with a metal storage box, VG condition. Photos available. Make an offer. Y.C. Susse, 9020 Powell, Brentwood, MO 63144, (314) 962-4204 evenings.

VIEW-MASTER WITH SOUND. Amazing difference, send stamped SASE for information. Walter Sigg, 3-D Entertainment, Box 208, Swartswood, NJ 07877.

"VIRTUAL DIALOGUES" – a full color holographic stereogram in a limited edition of 100 nickel plates 220 x 240mm (like high tech daguerreotypes) – $550 each (framed). Contact Holograms-3D, 4 Macaulay Road, London SW4 0DX U.K. Fax (44-81) 622-5306.

WE NOW STOCK the "VIRTUAL DIALOGUES" – a full color holographic stereogram in a limited edition of 100 nickel plates 220 x 240mm (like high tech daguerreotypes) – $550 each (framed). Contact Holograms-3D, 4 Macaulay Road, London SW4 0DX U.K. Fax (44-81) 622-5306.

TRADE
VIEW-MASTER. I have about 75 reels for trade for a lighted, focusing, stereo viewer of European format or dual 6x(28x30)x2. Eventually a King-in or a Wray. Please write for reels list. Salam Chehade, Kildebakkegardsalle, 126 B, STV, 2860 Soborg, Denmark.

WANTED


ALASKA, Klondike stereo especially Maybridge, Maynard, Brodeck, Continent Stereographic, Davidson. Any old Alaska photographs. Also stereo of Pike County, Pennsylvania/Orange County, NY by Hensel, Masterson, etc, Wood, Box 22165, Juneau, AK 99802, ph/fax (907) 789-8450.

ANTIQUE STEREO VIEWS of Thousand Islands or Key West. FL Edith Amsterdam, 511 Caroline St., Key West, FL 33040, (800) 252-3466.

ARIZONA stereographs wanted for major Arizona research facility. Please contact Photo Archivist Heather Hatch, Arizona Historical Society, 494 E. Second Street, Tucson, AZ 85719, phone (602) 886-6767.

ATHLETICS. Photos in any format of track and field subjects (runners, jumpers, etc.) of period 1875-95. Keith F. Davis, 51 W. 53rd Terr., Kansas City, MO 64112. (816) 444-0667.

BISHOP. Stereo Views or xerographs and information for research. H. Bishop, Bishop and Son, Bishop Brothers, Bishop and Zimmerman, Bishop and Kaufman. PA, MD, Minnesota. Alice Bamton, 31 Pine Tree Drive, Aubudon, PA 19403.

Bi-unial Magic Lantern for the projection of dissolve views. Must be complete, have original pre-electric mounts, and be in good working order. Send photo, description of any significant flaws, and price to: P. Barresi, PO Box 381771, Cambridge, MA 02238.

Cape May, NJ photos (esp. stereos), all formats considered (including real photo post cards). Also, any US outdoor CDVs (1860-70 + excl. cond. only). Richard Rydell, PO Box 132, Thomaston, ME 04861, (207) 372-8523.

Carlo Ponti, anything about or made by him. Pontoscopes, stereograms, megaethoscopes, historical material, etc. Dr. Malitz, Box KH, Scarsdale, NY 10583.

Central Pacific Railroad stereographs (also Union Pacific): Alfred A. Hart, C.E. Russell, Houseworth, Savage, Maybridge, Pond, Reilly & others. Dr. James Winter, 15145 Mulholland Drive, Los Angeles, CA 90077, (818) 784-0619, fax (818) 784-1039.


Color stereo stock photos, prints or slides for educational flash cards. Pay $50 to $100 per photo used. Contact: Rachel Cooper (212) 255-1326 for submission guidelines.

Contact with serious collectors of New Jersey stereos. 750 worldwide views for trade for Jersey views by most photographers/publishers. Exchange information and want/trade lists. George Mosey, Box 3336, Sea Bright, NJ 07760.

CONTURA STEREO CAMERA, stereo subminiatures and early Milwaukee views wanted. Dave Gorski, 244 Cutler St., Waukesha, WI 53186, evenings (414) 542-3069.

CRAWFORD, J.G. or Crawford and Paxton, Crawford Bros., Crawford and Little. Looking for photos of any kind and information for biography of this Oregon photographer. Eric P. Gustafson, 1795 W. 17th, Eugene, OR 97402.

A part of their membership, NSA members are offered free use of classified advertising. Members may use 100 words per year, divided into three ads with a maximum of 35 words per ad. Additional words and additional ads may be inserted at the rate of 20¢ per word. Please include payments with ads. We cannot provide bills, Deadline is the first month preceding publication date. Send ads to the National Stereoscopic Association, P.O. Box 14801, Columbus, OH 43214, or call (614) 927, 2930. A rate sheet for display ads is available upon request. (Please send SASE.)


Film Pressure Plates for Belplasca (or entire camera back). Paul Rumsey, 6809 Hunkdale St., Song Beach, CA 90080.

German (Raumbild) 3-D books. Especially need the one on "Hitler-Mussolini". These books contain text, double image cards and expandable stereo glasses. Ron Martin, 244-04 249th Ave. SE, Maple Valley, WA 98038, (206) 432-3282.

Golf stereo views, Corte-Scope views, Tru-Views, sets or individual cards, any old golf films or ephemera. George Lewis, PO Box 291, Mamaroneck, NY 10543, (914) 690-4579, all letters answered.


Muybridge Views – Top prices paid. Also Michigan and Mining – the 3 Ms. Many views available for trade. Leonard Walle, 47530 Edinborough Lane, Novi, MI 48374.


Permanent Want: Stereo Views of Boulder, CO. Also misc. views by Boulder Stereographers: Alan Ostlund, 479 Sapho Place Ave., Boulder, CO 80302, (303) 444-0645.

(Continued on next page)
Wanted

REALIST 1525 Accessory Lens Kit for Macro Stereo Camera.; Realist 2066 Gold Button Viewer; Realist 8-drawer stereo slide cabinet in Exc. or better condition (with Realist logo); Baja 8-Drawer stereo slide cabinet with plastic drawers marked "Versatile." Mark Willke, 200 SW 89th Ave., Portland, OR 97225. (503) 267-7653.

SHAKER PEOPLE, any format image. Also, photos with guitars - acoustic, American-made, identifiable. Please send Xerox with price to: Richard Brooker, 16 Fishkill Ave., Cold Spring, NY 10516.

SINGLE VIEWS, or complete sets of "Longfellow's Wayside Inn" done by D. C. Osborn, Artist, Assabett, Mass., Lawrence M. Rochette, 169 Woodland Drive, Marlborough, MA 01752.

STEREO CARDS (views) from Wisconsin, cities of Milwaukee, Waukesha, Templetont, Pewaukee, Oconomowoc, Watertown, Hartland, Sussex. Send Xeroxes to Rick Tyler, 115 W. Newhall Ave., Waukesha, WI 53186 or phone (414) 549-0478.


STEREO VIEWS of the Vickers Vimy aircraft and crews in the 1919 North America-England and England-Australia flights. John Alcock and Arthur Brown, 14 June 1919 flew from St. John's Newfoundland to Clifden Ireland in 16 hours and 27 minutes. Brothers Ross and Keith Smith, first flight England-Australia, 12 no. to 10 Dec. 1919, 136 flying hours.) Would like to buy, borrow, copy any old views for use in stereo slide presentation in conjunction with current project building a replica of the VIMY for duplicating the London-Australia flight in September, 1994, 75 years after the original flight. There was also a Vimy from London to South Africa in 1920. Two South Africans, Pierre van Rynvel and Quintin Brand, made the successful flight using two Vickers Vmys. Matt Rebhoiz, 3401 Gold Country Dr., Placerville, CA 95667, (916) 626-8410.

THE "REALIST MANUAL" wanted. Please send me your offer to: Klaus Kemper, Kommerscheidt-Str. 146, D-53355 Nideggen, Germany.

TOY TRAIN views, any vintage format. Ron Antonelli, 76 Bay St., City Island, NY 10464.

WHALES, WHALING OR BOSTON HARBOR stereo views, including views of dolphins or the harbor islands. Send photocopies of front & back to: P. Barnes, PO Box 381771, Cambridge, MA 02238.

WILD WEST WANTED! Buffalo Bill, Annie Oakley, Indians, Cowboys, outlaws, lawmen. Wild West Show performers. Western town views. Stereos, cabinets, CDVs, large photos. Please send xerox copy and price, serious buyer. Art Sowin, 8436 Samra Dr., West Hills, CA 91304, (818) 346-2171.

YOUR BEST STEREO VIEWS. Views needed for a new computer based viewing program promoting the NSA, ISU and general interest in stereo photography. Views must be in print format, no slides. For more information please Doug Martin at (206) 885-9658.

The NS–What?
The non-profit National Stereoscopic Association was founded in 1974 to promote the study and preservation of the stereoscopic images and equipment of the past and to encourage the growth of all aspects of stereo viewing in the present. Besides publishing the bimonthly Stereo World, the NSA hosts regional and national meetings featuring collector's trade fairs and 3-D projection programs.

If this issue of Stereo World is the first you've heard of the NSA, we invite you to write for more information. Send a SASE to NSA, PO Box 14801, Columbus, OH 43214.
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Calendar

June 26
San Diego Camera Show & Sale, Al Bahr Shrine Temple, 5440 Kearny Mesa Rd., San Diego, CA. Contact Anton at Bargain Camera Shows, PO Box 5352, Santa Monica, CA 90409. Call 310-396-9463.

June 26
Barone Camera Swap Meet, Holiday Inn Crystal City, Arlington, VA. Contact Camera Swap Meet, c/o Barone & Co., Box 18043, Oxon Hill, MD 20745. Call 703-766-2231.

July 3
Chicago Fantastic Camera Show, Chicago Marriott Schaumburg, Schaumburg, IL. Contact Fantastic Photo Flea Market, 20219 Mack Ave., Grosse Pointe Woods, MI 48236. Call 313-884-2242.

July 9-10
24th Detroit Summer Photorama USA, Southfield Civic Center, Southfield, MI. Contact Photorama USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236. Call 313-884-2243.

July 10
Pasadena Camera Shoe & Sale, Pasadena Elks Lodge, 400 W Colorado Blvd., Pasadena, CA. Contact Anton at Bargain Camera Shows, PO Box 5352, Santa Monica, CA 90409. Call 310-396-9463.

July 10

July 17
Buena Park Camera Expo, Sequoia Club, 7530, Orangethorpe Ave., Buena Park, CA. Call 714-786-6644 or 714-786-8183.

July 23
"F-Stop Swap" Duluth, Holiday Inn Downtown, Duluth, MN. Contact Doug Erickson, 2200 West 66th St. #204, Richfield, MN 55423. Call 612-929-5245.

July 24
"F-Stop Swap" Minneapolis, K.C. Marian Hall, 1114 West 79th St., Bloomington, MN. Contact Doug Erickson, 2200 West 66th St. #204, Richfield, MN 55423. Call 612-929-5245.

August 7
Philadelphia-Trevose Camera Show & Sale, Ramada Inn-Bucks County, 2779 Old Lincoln Hwy, Trevose, PA. Contact Photorama USA, 20219 Mack Ave., Grosse Pointe Woods, MI 48236. Call 313-884-2243.

August 21
Buena Park Camera Expo. (See July 17.)

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• Mounted slide pairs

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• Close-up attachments 6", 12", 30" dist's (ea) .... $29
• Opti-Lite flash ............... $29
• Eveready case ................. $12
• Teco 3-Viewer ................ $87

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per 100: $8 case of 1000: $70
POSTCARD PAGE 4-pocket top load
per 100: $16 case of 600: $70
4" X 5"
per 100: $6 case of 1000: $20
STEREO / #6 3/4 COVER (3 3/4" x 7")
per 100: $18 case of 1000: $50
STEREO POLYESTER
per 100: $12 or 3-mil $30
CABINET / CONTINENTAL (4 3/8" X 7")
per 100: $10 case of 1000: $90
#10 COVER (4 3/8" X 9 3/4")
per 100: $10 case of 500: $45
2" X 7"
per 50: $7 case of 200: $25
BOUQUET (5 1/2" X 8 1/2")
per 25: $6 case of 500: $80
9" X 10"
per 25: $6 case of 200: $40
11" X 14"
per 10: $8 case of 100: $45
16" X 20" (unsealed flag)
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