A stack of View-Master Personal reels made by an unknown photographer provided some fun shots of outdoor activities for this issue's column. The reels are unlabeled, so the locations, dates and people included are unknown.

The first two golf shots may show the same woman in both views, but in different outfits, so probably on different days. I really enjoyed seeing their orange and black vehicle, and although I'm not a golfer, I found their golf bags and carts interesting to see in stereo as well.

The third view has some exposure problems, but I decided to share it here anyway, since it is such fun. She looks like she's pretty serious about her hula-hoop, and yet she's dressed a bit more formally than I would have expected. Maybe she's just showing her kid how it's done!

This column combines a love of stereo photography with a fondness for 1950s-era styling, design and decor by sharing amateur stereo slides shot in the "golden age" of the Stereo Realist—the late 1940s through the early 1960s. From clothing and hairstyles to home decor to modes of transportation, these frozen moments of time show what things were really like in the middle of the twentieth century.

If you've found a classic '50s-era image that you would like to share through this column, please send the actual slide or a high-resolution side-by-side scan as a jpeg, tiff or photoshop file to: Fifties Flavored Finds, 5610 SE 71st, Portland, OR 97206. You can also email the digital file to strwfd@teleport.com. If the subject, date, location, photographer or other details about your image are known, please include that information as well.

As space allows, we will select a couple of images to reproduce in each issue. This is not a contest—just a place to share and enjoy. Slides will be returned within 6 to 14 weeks, and while we'll treat your slide as carefully as our own, Stereo World and the NSA assume no responsibility for its safety.
Volume 37, Number 2 • September/October 2011

2 Editor's View
Comments and Observations
by John Dennis

4 Mile High 3-D at NSA 2011
Part 1
by John Dennis

12 Giants in the Sky: Zeppelins
Part 2; 1919-1940
by Ralph Reiley

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

26 Viewing a River's Playground Islands
review by John Dennis

28 More Famous Artists
View-Master Packets
review by Mary Ann Sell

30 The Society
News from the Stereoscopic Society of America
by Ray Zone

32 Get Lost in Zion's Canyons
Without Leaving Home
review by John Dennis

34 Classified
Buy, Sell, or Trade It Here

Front Cover:
Coleen Murray pets a dog popping up from one of Barry Rothstein's phantograms in the Art Gallery at the 2011 NSA convention in Loveland, Colorado. More from the convention appears in "Mile High 3-D Part 1" in this issue, with the balance of the coverage to appear in the following issue. Stereo by John Dennis

Back Cover:
Covers and Books

We opened our coverage of the 2011 NSA convention in Loveland, Colorado with a cover image capturing the power of a good phantogram to lure even adults into grabbing at the anaglyphic image emerging from the paper. Barry Rothstein, an artist and publisher responsible for these and many other delightful phantograms, has just published another of his large format books filled with them. Eye-Popping 3-D Bugs has exactly that, jumping and crawling from the surface of the pages. A review will appear in our next issue, but more about the book can be found at www.3DDigitalPhoto.com.

Several of our covers in recent years have featured images from World War One related articles by Ralph Reiley. With the 100th anniversary of that “War to End All Wars” coming up soon, it’s tempting to imagine a book that assembles the best of the stereos and texts from his articles. Each of them includes a sources list, forming a useful compilation of books on that war for those wanting to go deeper into its history. Recently, a new book looking into the political history of the war’s effects on British society has provided an interesting addition to the more technical histories of the hardware involved. To End All Wars: A Story of Loyalty and Rebellion, 1914-1918 by Adam Hochschild studies the often underground British opposition to the war at a time when patriotic fervor ruled the day over much of the world.

Did the Rats Just Win Again?

Panasonic provided a glimpse of its prototype 3-D camera at Europe’s biggest technology show, IFA 2011 in Berlin, September 2-7. The Lumix compact camera, according to a brief item in Popular Photography’s on-line First Look, will have 25-100mm equivalent zoom lenses and shoot stills or videos, which can be viewed via SD card or HDMI on a Panasonic 3-D TV. (See www.popphoto.com/gear/2011/09/first-look-panasonics-prototype-3d-compact-camera.

The page includes two photos of the prototype, which the Panasonic people at the IFA would not allow out of a secure glass case, but if you saw the photos of the 3Dinlife SDC820 or the identical Rollei 3-D camera on page 2 of SW Vol. 36 No. 4, you saw a camera quite similar in exterior design to the Panasonic prototype. The biggest difference is that the lenses of the Panasonic appear much more closely spaced than those of the SDC820, as close looking as those of current 3-D cell phone cameras, in the 20mm to 25mm range.

In fact the flash, while between the lenses, is very slightly above the openings because it literally would not fit in the tiny space left, they’re so close. Its position remains unfortunate, since opposite side shadows will appear on walls behind people. (The close lenses may minimize the effect somewhat—one bad design element limiting another?)

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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 97206.
3-D cameras—basing the interocular spacing on that of a sewer rat, and positioning the flash in the worst possible place, the rat's nose. It's as if stuffy corporate resistance to the whole idea of entering the stereo camera market is so entrenched that designs intentionally diminish the 3-D effect while sabotaging with obnoxious shadows what survives, so the whole fad will just go away. (You'd think their 3-D TV division would complain!)

As paranoid as the above may be, note the relatively close spacing of the lenses even on the Sony digital 3-D recording binoculars in this issue's NewViews. The big advantage of binoculars used to be that widely spaced objective lenses preserved some of the depth lost to telescopic viewing. At least binoculars don't have flash units. I think we know where Sony would stick it if they did!
As with last year's, coverage of the 2011 convention will be split into a two-part article in order to include as many aspects of the increasingly complex extravaganza as possible.

The 37th annual NSA convention in Loveland was the first ever NSA convention in Colorado and attracted 347 stereography enthusiasts to all or part of the busy week-long event. The location 50 miles north of Denver between the Rocky Mountains and the plains of Colorado proved to be as exciting as anticipated, if not more. Hot, clear days were followed each evening by thunderstorms, a pattern that had been affecting north central Colorado for about a month.

Inside, the new Embassy Suites Hotel offered a world of its own with the conference center just down the hall from the daily free breakfasts and evening happy hours in the atrium dining space. The facility stands nearly alone in an area just outside Loveland, waiting for the probably slower than expected development to fill in the mostly vacant streets and lots surrounding it. Loveland itself, while beyond walking distance, was a short drive away and offered a busy and tempting mix of cafes, shops, art galleries and public art on nearly every street.

The scheduling of 115 Stereo Theater shows, 24 workshops, eight interest group meetings, four excursions, the Awards Banquet, Art Gallery, Spotlight Auction and other activities with minimal overlap was nothing less than a work of art in keeping with the sculptures lining the streets of Loveland. Adding to the complexity of the schedule was the fact that there were presentations by two other special guests in addition to the keynote speakers at the Banquet.

Awards Banquet

Saturday evening's Awards Banquet drew 194 members to hear NSA President Lawrence Kaufman announce the various 2011 NSA,
A long table between the lobby entrance and the atrium dining area provided a popular perch for laptops as people gathered to share stereos just shot or on line. The hall in the background leads to the conference center rooms.

The eighth floor provided a good vantage point for capturing the hotel's open interior, but Mark Willke relates an unexpected challenge: "This sequential Fuji W3 hyper was made after midnight, when the chances of someone wandering through between shots was minimal. But when attempting to position the right-most elevator at the second floor as you see here, I discovered that if I pushed the "2" button and then hurried back to my vantage point, the elevator would stop there as directed, but then stay only briefly before zipping back up to the seventh floor, completely out of view! Apparently it was programmed to return to 7 when not in use, but that only gave me time to fire off the first of the two shots. I finally ended up sending the empty elevator to several different floors, with 2 being the final destination. That gave me time to get back into position, shoot the first shot as soon as the elevator arrived at 2, and still allowed me time to move and fire off the second shot before the elevator headed back to the seventh floor!" (Stereo by Mark Willke)

Stereo Theater, feature article and image awards. Two awards, one for a new competition this year, were accompanied by corporate cash prizes for the winners. These were in addition to drawings held throughout the convention to give away Fuji W3 digital stereo cameras and an NVidia 3D Vision system.

NSA Awards

THE WILLIAM C. DARRAH AWARD for Distinguished Scholarship and Extraordinary Knowledge of Stereoscopy went to Al Sieg.

THE ROBERT M. WALDSMITH AWARD for Meritorious Service and Extraordinary Contribution of Time and Effort to the NSA went to Ray Zone.

NSA Board Chairman Al Sieg receives the The Darrah Award for Distinguished Scholarship and Extraordinary Knowledge of Stereoscopy from President Lawrence Kaufman at the annual Awards Banquet.

A clearly astonished Lome Shields receives the NSA Award for Best Stereo World Article on Historical Stereoscopy for his feature "Early Cycling in Stereos" in Vol. 36 No. 6.


SPECIAL AWARDS went to Tanya Alsip and Ken Burges for their exceptional work as co-chairs of the 2011 convention.

Stereo Theater Awards
THE PAUL WING AWARD for Best Show Overall went to Josephine DeRobe for "Diary of A Fridge."

THE BEST STILL-PHOTO BASED SHOW AWARD went to Simon Bell for "Fresh Perspectives."

THE BEST 3-D CINEMATOGRAPHY AWARD went to Nat Bartholomew for "Make Every Second Count."


THE BEST COMPUTER-GENERATED IMAGERY AWARD went to Joonki Park for "Friday Night Tights."

THE JUDGES' ARTISTIC ACHIEVEMENT AWARD went to Bob Venezia for "Animated Amsements."

HONORABLE MENTIONS went to:
- Passmore Lab for "Waiting for the End: Linkin Park."
- Amanda Tasse for "The Reality Clock."
- Joy Park for "My Dream."
- Ryan Suits for "De-Vision 3D."
- Barry Aldous for "Caithness Glass Close Up."

Several people dressed up in their own special ways for the Awards Banquet. Left to right: convention Co-Chairs Ken Burgess and Tanya Alsip, Ron Labbe, Phyllis Maslin and Rich Dubnow. They're posed here for a line of stereographers who had initially gathered to document the Civil War era costumes worn by Phyllis and Rich in honor of their collaboration on the award winning Stereo Theater show "Two Wives - A Civil War Story."

David Kesner's "Gathering Pollen" was awarded First Place from among the 148 entries in this year's On-Site Image competition (Shooting Loveland), which included cash prizes provided by Fujifilm. The image was taken with a Fuji W3, Cyclopital3D Macro Adapter, and +3 diopter.

"Grain Scales" by David Kesner was awarded Second Place in the On-Site Image competition. The stereo is a five exposure (each side) High Dynamic Range image taken with a Pentax K10D on a Jasper Slide Bar. More of his NSA 2011 images can be seen at www.dddphotography.com/gallery/thumbnails.php?album=164.
“Dark Stars” by Bob Venezia received an Honorable Mention in the On-Site Image competition. At least two other people entered close-ups of this same light fixture, but only he converted the image to black and white and reversed the tones to a negative image.

This Rainforest image by Simon Bell is from his Stereo Theater show “Fresh Perspectives” which won the award for Best Still-Photo Based Show. A 3-D version can be seen on YouTube at www.youtube.com/user/snapperbell/p/u.

“This Child’s Play” by David Kuntz won First Place in the 3D Digital Image Showcase.

- Robert Bloomberg for “Wish You Were Here: Postcards From Somewhere Else.”
- Rehala Jagric for “Coming Home.”
- Eric Kurland for “White Knuckles 3D by OK Go.”

Exhibits – Vintage
FIRST PLACE went to Ed Bathke for “Topeka Photographer J.R. Riddle’s Views of Estes Park.”
SECOND PLACE went to Joel Alpers for “Estes Park and Rocky Mountain National Park.”
THIRD PLACE went to Ed Bathke for “Loveland Colorado.”

Exhibits – Modern
FIRST PLACE went to Robert Bloomberg for “Getting the Bugs Out.”
SECOND PLACE went to Linda Nygren for “Wildflowers.”
THIRD PLACE went to Robert Bloomberg for “Trains of Thought, Flights of Fancy.”
HONORABLE MENTION went to Terry Wilson for “Eastern States Penitentiary.”

Exhibits – Other
FIRST PLACE went to Eugene Mitofsky for “Don’t Bump the Table.”
SECOND PLACE went to David Going for “Soledad Canyon.”
THIRD PLACE went to Ed Bathke for “Colorado’s Sweet Tooth, the Sugar Beet Industry.”

Artists’ Choice Award
Since its establishment in 2007, participating artists in the NSA Art Gallery have selected the winner of the Artists’ Choice Award. This year’s award, voted by the 16 Art Gallery participants, went to David Lee for his large stereo print pairs.

3D Digital Image Showcase Awards
In May, John Hart of Colorado invited stereographers to send digital entries to a new competition scheduled for NSA 2011 in Loveland. Six stereos from each participant were shown in the 3D Digital Image Showcase segments of the Stereo Theater, with judges selecting the top three images for cash prizes donated by 3-D technology company NVidia. All 300 entries were shown in two shows at the beginning of the convention, and on Sunday the top 70 images were shown in the Stereo Theater. In addition, the images were posted on the
NVidia 3D site and shown on an active glasses large screen 3-D TV in the hall near the hotel lobby. Every time you walked from the conference center to the hotel atrium, some of the images you'd seen earlier in the Stereo Theater were there to be seen, often with a few people (not necessarily NSA members) checking them out in 3-D. See http://photos.3dvisionlive.com/dn/awards.

GRAND PRIZE went to Oleg Vorobyoff
FIRST PLACE went to David Kunz
SECOND PLACE went to David Kesner
THIRD PLACE (tie) went to John Stuart and Chris Reynolds

On-Site Image Awards

Winners of the “Shooting Love-land” On-Site Image Competition this year received cash awards provided by FujiFilm, with amounts ranging from $250 to $50. This year’s competition drew 148 entries from 39 participants.
FIRST PLACE went to David Kesner for “Gathering Pollen.”
SECOND PLACE went to David Kesner for “Grain Scales.”

HONORABLE MENTIONS went to:
• Bob Venezia for “Dark Stars.”
• Simon Bell for “Marmot.”
• David Kesner for “Morning Bird.”

Keynote
NSA members Susan Pinsky and David Starkman spoke to those gathered at the Awards Banquet in what was more like a stereo family album than the usual address devoted to a single topic. Projected images assembled over the couple’s past 35 years of active participation in stereogra-
Busy appraiser, auctioneer, dealer and PBS TV "History Detective" Wes Cowan attended his first NSA convention in several years with this table at the Trade Fair.

Peter Sinclair of Snap 3D turned more than a few heads (and stereo cameras) when he wandered through Saturday’s Trade Fair taking photos with this 15-lensed multi-camera rig. His company specializes in lenticular products and services, where an outfit like this would provide plenty of levels of depth. (Stereo by Mark Wilke)

phy provided the framework for an informal account of their introduction to 3-D, the publication of Reel 3-D News, and the establishment of Reel 3-D Enterprises and the 3-D supplies catalog so vital to the stereo community from 1984 to 2004. David observed that “If there’s a theme here, in putting this together thinking about the last 35 years, obviously there’s been a big change going from Stereo Realist and View-Master cameras to twin cameras to twin digital cameras, and now we’ve got Fuji cameras and 3-D TVs. In our wildest dreams, we never would have believed that 3-D would actually reach a point where it’s no longer a boom. I think it’s finally something that’s here, something that’s permanent. It’s going to be part of our lives.”

Questions following the narrated slide show revealed more interest in

Friday evening’s guest speaker Rob Engle of Sony Pictures (right) with Ray Zone holding a strip of IMAX film from the influential 2004 3-D movie The Polar Express, for which Engle supervised the 3-D adaptation.
the personal history of this true “stereo pair” than in technical or business matters. Asked how they met, the couple revealed that David went to an antique shop Susan was running to buy earrings for a woman he was dating at the time. He ended up staying for three hours, and they were living together about three weeks later. In answer to a question about their first stereo camera, David described finding an original 1952 ad for the View-Master Personal camera in the box with a Model C viewer, concluding “that was the turning point” with Susan adding, “That’s what did it.” They looked at the ad and decided it would be “a cool idea” to make their own View-Master reels and from then on they were hooked, to the eventual delight and benefit of thousands of 3-D enthusiasts around the world.

Guest Speaker

The full size stereo projection needed to illustrate 3-D movie techniques and developments required that the presentation by Rob Engle of Sony Pictures be scheduled in the Stereo Theater on Friday evening. Since supervising the 3-D adaptation of The Polar Express in 2004 (the success of which helped inspire serious attention to 3-D from major studios), Engle has been involved with the continuing progress in stereoscopic film technology and art that has made possible some of the best and biggest 3-D films of recent years.

His projects have included films as varied as Beowulf, Cloudy With A Chance of Meatballs, G-Force, The Green Hornet, Pirates of the Caribbean: On Stranger Tides, The Smurfs and The Amazing Spider-man. Clips from some of the above were shown to illustrate stereoscopic animation, conversion and photographic techniques that have evolved since the hurried learning experience of Polar Express. An exciting sequence from Beowulf demonstrated “animated” interaxial values for adjusting lens separations.
within shots. A clip from *G-Force* demonstrated the use of a masking technique that allows an image to seem to actually crawl around and beyond the “edges” of the window, in this case the bottom. Without even moving an image beyond the screen plane, this “breaking the mask” technique gives the appearance of an object existing not just in the audience space, but completely outside the frame of the screen. With people now so familiar with TV images that change sizes and ratios depending on format, most probably don’t notice that the subtle masking has reduced the effective image size somewhat, while of course the entire screen remains in use. To read details of many techniques covered by Rob Engle in his presentation, see the interview by Ray Zone in *SW* Vol. 36 No. 2, page 38.

**Charles Phoenix and the Third Dimension**

Professional entertainers have appeared at NSA conventions in the past, but their performances have never been based on stereoscopic images, hardware and the people who love them. That is, not until pop-culture humorist Charles Phoenix showed up. By adding 3-D images to his already huge collection of retro color slides from the 1950s, Susan Pinsky and David Starkman provided another dimension from which he could mine a near infinity of outrageous comments as each Realist or View-Master stereo was projected in a special, FujiFilm sponsored event following the Awards Banquet.

The fashions, products, people, situations and the generally tacky were ripe subjects for humor, often with a 3-D slant that kept the delighted audience laughing. Few of them will ever again be able to look at a View-Master 500 projector without seeing the personality on its face identified by the anaglyphically attired humorist. Some of his funniest comments were actually in response to a vintage black and white stereoview of a small child sitting on a chamber pot while holding a stereoscope. Maybe someday a period Realist slide of a kid similarly seated while using a View-Master will turn up and provide material for another show.

Charles Phoenix has done numerous “Big Retro Slide Shows” in venues across the country, as well as appearing on television with Conan O’Brien and Martha Stewart, on NPR, and in print through his books. See www.charlesphoenix.com. He also does guided field trips to locations rich in potential for the humor in aspects of their cultures. (One tour treats downtown Los Angeles as a Disneyland of its own.) NSA members were treated to a special Sunday evening Charles Phoenix field trip to two “colorful” Denver locations, the Casa Bonita restaurant and Lakeside Amusement Park, to be covered in part two of our convention coverage next issue. ☑

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**A Lucky Cycling Find**

Fans of the feature “Early Cycling in Stereos” by Lorne Shields in *Stereo World* Vol. 36 No. 6 should enjoy a short article he wrote for the Sept./Oct./Nov. 2011 issue of *Photographic Canadiana*, the magazine of the Photographic Historical Society of Canada. “Better Lucky Than Smart” describes his acquisition of a rare 1869 Eadweard Muybridge photo of velocipede riders in front of the Velocipede Training College in San Francisco. It also illustrates Muybridge stereoview No. 443 showing riders in front of the same establishment, which helped identify the photo.

Copies of *Photographic Canadiana* are available from the PHSC, (416) 691-1555, www.phsc.ca e-mail info@phsc.ca.

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**The Civil War in 3-D**

**Rare Stereographs of ABRAHAM LINCOLN & Civil War Battlefields**

**Presented by: BOB ZELLER**

**Center for Civil War Photography**

**November 11, 2011**

**8:30-12:00 p.m.**

University of South Carolina Beaufort
$25 adults
$15 students
(843) 838-2432 info@penncenter.com

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**Stereo World** September/October 2011 11
Giants in the Sky:
Zeppelins
Part 2, 1919-1940
by Ralph Reiley

The use of zeppelins in the First World War was only partially successful. As strategic bombers they proved miserably inadequate for the task, but were quite effective as a terror weapon. As long range scouts for the navy, they were unequalled by any other aircraft. They could stay aloft for days at a time, and at a fraction of the cost of operating a navy cruiser. As scouts, they were underutilized during the war. The Germans never used the zeppelin for spotting enemy supply ships for the U-boats, a job they would have done very well. The Allies did use smaller semi-rigid airships for anti-submarine patrols, a job they performed to deadly effect for the U-boats.

The victors of World War One dictated harsh terms to Germany. These terms included turning over all completed airships, and the Zeppelin works dismantled. For the French this was revenge, for the British, it was to eliminate a rival in the future airship passenger business they hoped to monopolize. England, Belgium and Japan each received a zeppelin, and broke them up into scrap metal. The zeppelins earmarked for the United States were destroyed by their former crews, who could not bear to see their beloved ships fall into the hands of their enemies. This act of defiance indirectly saved the Zeppelin works from being closed down by the Allies.

In 1920, DELAG, Deutsche Luftschifffahrts-Aktiengesellschaft, German Airship Travel Corporation, started flying LZ-120, the Bodensee, a small commercial passenger zeppelin which included a first class section. In 1921, it was confiscated by Italy and renamed Esperia. It was mainly used by the Italian military, and occasionally for passenger service, until 1928, when it was scrapped.

Keystone No. 33371, "Friedrichshafen, Germany, is the Home of the Zeppelin." The tail of Graf Zeppelin, LZ-127. Taken after 1933, when Germany was under Nazi rule. A law had required all civilian aircraft to have the swastika painted on the rudder. Dr. Hugo Eckener thought this would damage the reputation of his airship and airline. He argued publicly against this order issued by Dr. Goebbels, the Nazi Minister of Propaganda, which lead to Eckener being removed as head of the Zeppelin works. (Larry Moor collection)
In 1921, DELAG flew LZ 121, the Nordstem, to Stockholm. Upon its arrival back in Germany it was confiscated by the French and was renamed Mediterrane. In 1920, the French received LZ-114 as war reparations. It was a long range zeppelin, and originally intended to bomb New York City, but the war ended before the airship was fully constructed. It was renamed Dixmude, and the French operated it successfully from 1920 to 1923. One night in 1923, it disappeared over the Mediterranean without a trace. No survivors, bodies, or wreckage were ever found, although fishermen reported seeing a very bright glow in the sky the night it disappeared. The French continued to fly Mediterrane until 1926, when it was decommissioned and scrapped, ending their airship program.

The British had been working on airships since 1909, initially with poor results. During the war, LZ-76 came down in England with punctured gas cells. By the time it hit the ground, virtually all its hydrogen was lost, and the crew was unsuccessful in destroying the wrecked zeppelin by setting it on fire. Although the airframe was damaged in the crash landing, the airship was nearly intact. It was closely copied, and airships R-33 and R-34 were the result. Both were ready to fly in 1919. On July 6, 1919, the British stunned the world when R-34 arrived in Mineola, on Long Island, making the crossing in 108 hours. It was an amazing feat of aeronautics, but nearly ended in disaster, as there were only a few gallons of gas left in the fuel tanks when the ship arrived in the United States. The return trip took just 75 hours, making this flight the first successful double crossing by air of the Atlantic Ocean. Both the R-33 and R-34 were damaged in storms and scrapped. With the lessons learned from R-33 and R-34, the British began work on more airships. The most well known of them were R-100 built with private funds, and R-101, built with government funds. They are also known as the Socialist and Capitalist Airships. On July 29, 1930, R-100, the Capitalist ship, set off to Canada, making the rounds over Canadian cities and Niagara Falls. It returned triumphantly to England on August 13, 1930. The R-100 proved that airships could deliver passengers throughout the British Empire, at speeds unmatched by the passenger ships, and with the same level of lavish comfort and style.
The R-101, the Socialist Airship, was to fly Lord Thomson, the new Viceroy, to India. Lord Thomson was also the Secretary of State for Air, a cabinet post in charge of the Air Ministry. The shake-down flight had been delayed, and the engines were not fully tested. The few short test flights indicated the ship was under-powered and overweight. The British Viceroy demanded that he fly to India with no delays, and ignored all concerns raised about the condition of the airship, as nothing was to interfere with his schedule. The R-101 set off on its maiden flight to India and on October 5, 1930, crashed over France. It was caught in a storm, and had come down very low to the ground. It unexpectedly dived, hit the ground, and then caught fire. There were only six survivors of the 54 crewmen and pas-
At Los Angeles by August 1929, Graf Zeppelin Air Cruise Around the World. From Friedrichshafen, the zeppelin flew across Siberia, and the next stop was Tokyo, where the passengers and crew were treated to a lavish celebration lasting several days. From Tokyo the airship made the first crossing by air of the Pacific Ocean. Three days later, the Graf made landfall near San Francisco, turned south and headed to Los Angeles. Then it headed to Lakehurst, making a circle over Chicago and New York City on the final leg of the Hearst funded trip. The cruise ended when the Graf flew back across the Atlantic, circled Berlin then landed at Friedrichshafen. Larry Moor collection.

Americans and Germans flying giant airships. During the First World War, the United States became interested in airships. Both the army and navy wanted airships, but congress voted for funding for one airship program, and the navy won out. Work was begun on the navy airship facility at Lakehurst, New Jersey, and Goodyear built a shed for blimps in Akron, Ohio. In 1919, work began on ZR-1, the USS Shenandoah. The US government also had the British building them an airship, a copy of R-34. The Americans maintained that Germany's. The crash of R-101 marked the end of the British airship program. The R-100 was put in a hanger and was found to have a number of structural problems requiring extensive repairs. Rather than spending money on repairs, the airship that cost more than £1,000,000 to build, was scrapped in 1931 and sold for less than £600. This left only the Keystone No. 32415, "At Los Angeles 1 August 1929, Graf Zeppelin Air Cruise Around the World." From Friedrichshafen, the zeppelin flew across Siberia, and the next stop was Tokyo, where the passengers and crew were treated to a lavish celebration lasting several days. From Tokyo the airship made the first crossing by air of the Pacific Ocean. Three days later, the Graf made landfall near San Francisco, turned south and headed to Los Angeles. Then it headed to Lakehurst, making a circle over Chicago and New York City on the final leg of the Hearst funded trip. The cruise ended when the Graf flew back across the Atlantic, circled Berlin then landed at Friedrichshafen. Larry Moor collection.

Stereo World September/October 2011
owed them an airship as war reparations, but the crews had destroyed the airships earmarked for the USA. Neither the British or French were thrilled with the idea of the Germans again building zeppelins, but the US Navy worked out a deal for the Zeppelin works, with Dr. Eckener at the lead, to build a passenger airship with the German Republic paying for its construction as war reparations. Dr. Eckener set to work designing LZ-126, later to be named ZR-3, USS Los Angeles. Eckener believed LZ-126 might be the last German airship ever built, and decided that it might as well be the best airship ever built by the zeppe-
lin works. Every detail of the design and construction of LZ-126 was given lavish attention. Eckener was also hard at work developing the world wide airline network, just in case the zeppelin works would be allowed to remain in operation.

In 1923 the US navy finished ZR-1, USS Shenandoah, a close copy of LZ-96, which had come down in France after having lost its hydrogen from punctured gas cells. It was one of the super height climber zeppelins and proved to be a poor choice of airship to copy. The airframe of LZ-96 had been lightened so the ship could fly high with a large bomb load only in extremely good weather conditions. No German advisors were used during design and construction, so this detail was unknown. The Shenandoah was the first airship to use helium in place of highly flammable hydrogen. Helium is a by-product of oil production, and the USA had a monopoly on the gas. It does not burn, has 92% of the lifting capacity of hydrogen, and in 1923 was very expensive. On September 3, 1925, after 57 very successful flights, Shenandoah was caught in a storm with wild air currents over central Ohio. The storm began twisting the airship, and it broke up into three pieces. The wreckage was spread out over several miles. Twenty-nine of the forty officers and men of the crew survived the crash. Most died when the control gondola fell from the airship frame when it started to come apart. The use of helium in place of hydrogen prevented an explosion, which resulted in more survivors than was usual in an airship crash. The next morning, souvenir hunters were at the wreck, and the dazed survivors could do little to stop them. It was pillaged and reduced to such a state that investigators could not determine the cause of the crash, with even the dead robbed for souvenirs.

The British built R-38 for the United States, basing it on R-34, which was copied from the German airship, LZ-76, another airship with a lightened frame. In 1921, R-38 was the largest flying machine in the sky and was intended to patrol for six days before returning to base. It had been painted in US Navy colors, and was to be ZR-2. On August 23, 1921, it was on its shake-down flight before being turned over the US Navy. The gas cells had been filled with hydrogen, as the British did not have helium. A sudden storm came up, and the ship was caught in wild air currents. It began to twist and break apart, then caught fire and crashed into the Humber River. Only one of the seventeen American sailors and four of the 32 British airmen on board survived the crash. They were in the tail section, which came down slowly with a leaking gas cell that did not explode.

In October of 1924, LZ-126 left Friedrichshafen piloted by Dr. Ecken-
er. It was re-named ZR-3, the USS Los Angeles, and landed at the new Naval Air Station at Lakehurst, New Jersey. Upon his arrival, Eckener and his crew were given a heroes' welcome in New York City, complete with a ticker tape parade, gala dinners, and nights out at the theater, where they were brought up on stage between acts. Eckener's delivery of USS Los Angeles greatly mended Germany's reputation with the United States, and the world. The Los Angeles was the most successful airship of the US Navy. It was the only one that never crashed, and was used extensively for nine years. It flew a total of 4,398 hours, covering a distance of 172,400 miles, and served in both the Pacific and Atlantic fleets. The British and French refused to allow the Germans to build war ships, so USS Los Angeles was built as a passenger zeppelin, complete with sleeping rooms, a passenger dining room, and a first class galley. It served as an observatory and experimental platform, as well as a crew training airship. It was retired in 1932, and was briefly re-commissioned in 1933.
Akron, after the crash of USS Akron, Ohio, Aug. 8, 1931.* Ceremonies christening USS Akron, which was begun in 1929 as a joint venture of Goodyear and the Zeppelin works. Zeppelin contributed engineers and craftsmen to Goodyear for construction of American zeppelins. (Eckener hoped teaming up with Goodyear would allow sales of US helium to Zeppelin.) At the end of the ceremony, a flight of doves was released from the nose of the airship. Mike Griffith relates that John Waldsmith's mother Lois, a young girl at the time, was there. Much to her dismay, her friend was chosen over her to hand Mrs. Hoover a bouquet of flowers during the ceremony. (Larry Moor collection)

After the crash of USS Akron in 1939, it was dismantled and sold for scrap metal.

The USS Akron, ZR-4, was completed in 1931. It was built in Akron, Ohio, with German advisors from the Zeppelin works. Tests with USS Los Angeles and a parasite scouting aircraft proved very successful, so USS Akron was built to carry four F9C Sparrowhawk biplanes that were specially designed by Curtiss for the airship. The aircraft were used to further extend its scouting range, making it a flying aircraft carrier. The airship took flight without the aircraft on board. They were loaded in the hanger bay. The biplanes had a hook mounted on the top wing and the airship had a "trapeze" on the end of a crane. The aircraft latched the hook onto the trapeze, then the crane raised the aircraft into the hanger bay. The crane was also used to lower them out for takeoff.

The USS Akron had a history of unfortunate ground related accidents, but flew well for two years, including a number of trans-continental flights. On April 3, 1933, with a new captain in command, the airship was caught in a severe storm off the coast of New Jersey. The ship was caught in a strong updraft, followed almost immediately by a strong downdraft. Rudder controls became unresponsive, and ballast was dropped, but it did not stop the descent. The last emergency bow ballast was dropped, and the ship nosed up. The tail hit the ocean and was torn away. This was fatal damage to the structural frame, and the ship quickly broke up, settled into the ocean and sank. Only three of the 89 officers and men of the crew survived. Most who had survived the crash drowned in the heavy seas, as no life jackets or life rafts were carried.

The USS Macon, ZR-5, was the last US Navy airship. It was also built in Akron, Ohio and was commissioned in 1933, a sister ship to Akron. It carried five Sparrowhawk aircraft, life jackets and life rafts. While crossing the continent, the top rudder fin and the structural ring it was attached to were damaged by strong turbulence encountered in passing over the mountains in Arizona. Temporary repairs by 2x4 planks and rope were used while awaiting proper replacement parts. In February, 1935, USS Macon was ordered out for a fleet maneuver exercise, after the replacement parts had arrived but had not been installed. On February 12, 1935, off Point Sur, California, USS Macon was caught in a storm and winds tore the top rudder fin off the ship, causing a failure of the structural airframe where the rudder fin was attached. The loss of the rudder fin crippled the ship's steering system, plus rear gas cells were damaged and started to leak. There was some confusion in communications between the crew in the tail section and the commander in the control gondola. The order was given for all engines to stay at full speed, and ballast to be dropped. The loss of helium in the tail section caused the nose of the airship to rise, and with the engines at full speed, it quickly reached pres-
sure height, where the gas expanded so much it had to be vented to prevent the gas cells from bursting. When some measure of control was regained, the ship started a shallow dive. With the loss of most of the ballast, the crew could not stop the ship from descending. Despite the best efforts of the crew to save the ship, the damage to the frame and loss of ballast was fatal. The airship settled into the ocean, and despite a rough sea, it held together long enough for the crew to abandon the ship in good order. The life jackets and life rafts allowed 69 of the 71 officers and men of the crew to survive the crash. The Germans were now alone in flying airships. After 1925, the strict conditions of the Versailles Treaty were relaxed in some areas. One area was zeppelin construction, which allowed Dr. Eckener to begin work on passenger airships without the threat of having them confiscated. A grand airship was planned, LZ-127. It was named Graf Zeppelin, in honor of Graf Ferdinand von Zeppelin, the airship's inventor. Building LZ-126 for the USA did much to help the zeppelin work stay in business in the chaos of postwar Germany, but money was still tight, and work on LZ-127 was slow, even with Dr. Eckener scouring Germany for money. Finally, in September, 1928, LZ-127 was ready for its first flight, and DELAG was back in business. There was only one airship, but a number of airship captains and crews were on standby from former DELAG employees to former navy and army airship crewman and officers. Dr. Eckener chose to fly to the United States to publicize his new airship and airship travel. He knew the future for airships was with helium, and helium was in America. The cooperation of the USA was vital to the future of German airships.

The Graf Zeppelin was a marvel. (See SW Vol. 23 No. 5.) It had 20 rooms to accommodate 40 passengers, a dining room/lounge, a tiny all electric galley, and a state of the art radio room. The food was simple, but good, there was a well stocked wine cellar, and the rooms, while not as large as a cabin on an ocean liner, were as comfortable as a Pullman railroad car, and most of the rooms had a window. The Graf was the size of an ocean liner and carried just 40 passengers, but carried them in first class style and comfort. The passengers on the first flight included a number of government officials, US Navy airship officers, and newspaper reporters, including Lady Grace Drummond-Hay. She was a reporter for Hearst news, who became the first woman to travel by air across the Atlantic. She would become a frequent flyer by zeppelin, and very important in promoting airship travel. The Graf Zeppelin had nine years of continuous service. It made 590 flights, traveled over one million miles, carried 13,110 passengers, and never suffered a serious accident, or caused injury to a passenger.

On October 11, 1928, Graf Zeppelin arrived at the new airship base at Lakehurst, New Jersey, the first aircraft to carry paying passengers across the Atlantic Ocean. Commemorative airmail letters were carried for stamp collectors, and some cargo, including a live crocodile. In 1928, an aircraft crossing the Atlantic was still a major event, and Eckener and his crew were given another ticker...
tape parade in New York City. They were treated to more gala dinners, nights out at the theater, and then Eckener went to Washington D.C. to meet with President Coolidge to negotiate airship landing sites and helium.

To create more publicity for his airship, and the idea of airship travel, Dr. Eckener planned a round the world flight in 1929, with 39 paying passengers. The tickets for the round the world trip only paid for part of the cost of the flight. Hearst offered to fund much of the cost in exchange for exclusive rights to the story for his reporter, Lady Grace Drummond-Hay, who had a room to herself, as she was the only woman on board. Stamp collectors also financed a portion of the trip with airmail letters, and the German government contributed the rest. The round the world trip would be the first with paying passengers, the first to fly over the length of Siberia, and the first non-stop flight across the Pacific. The flight was headline news for its duration of 21 days, 5 hours and 11 minutes, of which 12 days and 11 minutes were spent in the air. The flight around the world went east, opposite the rotation of the earth. At each city where the airship landed, the crew and passengers were treated as honored guests, with each celebration lasting for several days. The stop in Tokyo was especially lavish, and included a dinner with the Japanese emperor. The Graf Zeppelin received constant weather reports during its flight, greatly aiding Dr. Eckener in adjusting his flight path, catching tail winds, and determining which storms to avoid and which were safe to fly through.

In 1930 a regular passenger service route opened for Graf Zeppelin. The zeppelin left Germany for Spain and picked up passengers bound for Brazil. From Brazil, the ship headed for Lakehurst, New Jersey, and then back to Germany. Eckener’s dream of a fleet of airships was starting to come together, although helium from the USA was still in negotiation, and fixed wing aircraft were catching up to the zeppelin’s ability to cross the oceans with passengers. The Graf made 64 successful flights to Brazil before the Hindenburg disaster ended all passenger flights.

In 1931, an arctic flight was planned and carried out. There was a rendezvous with a Russian icebreaker and sacks of airmail were exchanged, as stamp collectors financed a large portion of the flight. Large areas of the arctic were photographed and mapped for the first time. This was a very successful flight, in contrast to the disastrous Italian expedition lead by General Umberto Nobile in the huge semi-rigid airship, Italia, a few years before. Airmail was always an important funding source for Graf Zeppelin, and lead to several flights to Egypt and the Middle East, for publicity and airmail letters. On one of these flights Keystone photographer George Lewis was on hand and made well known views of the airship from the top of the Great Pyramid in Egypt.

In 1933, political events in Germany altered Eckener’s plans dramatically. Adolf Hitler and the Nazi party came to power. Eckener had been on Hitler’s enemy list since the 1920s. Hitler had wanted to use the Zeppelin shed at Friedrichshafen for a Nazi rally, and Eckener had refused him. He had little regard for the Nazi cause, and was very public with his views. One of the early Nazi laws required every civilian aircraft to have the swastika painted on the rudder, for Nazi propaganda. This included Eckener’s Graf Zeppelin. He protested very publicly about the order, but in the end, he had to comply, and the swastika was painted on the left side of the upper and lower rudder fins. He was successful in refusing Dr. Goebbels’ request to have huge swastikas painted on the sides of the zeppelin. Eckener was too popular to be murdered or put in jail just for the crime of being so publicly ornery and contrary, so Goebbels issued orders that Eckener was to be a non-person. His name and photo would not appear in German newspapers or magazines. He was not be mentioned on German radio, or seen in German newreels.

Eckener and his airship had been invited to Chicago to participate in the Century of Progress Fair of 1933. (SW Vol. 33 No. 2, page 29.) Eckener was allowed to pilot the ship, although his name was never mentioned in the German Press. His reception in America on this trip was very different than his previous journeys. Tensions were building against Nazi Germany, and the swastikas painted on the rudder of his airship only aggravated anti-German sentiments. He met with President Roosevelt, and did his best to finish negotiations regarding a supply of helium, but he returned to Germany without a signed agreement. The US government had enacted laws to prohibit the sale of helium to any
foreign nation, reserving it for its own airships. While the law was not specifically anti-German, by 1933, the Germans were the only other nation with airships.

Work had started on LZ-128, as a hydrogen ship like Graf Zeppelin, but stopped in 1935 when work began on a new helium ship, LZ-129. This ship was designed to use helium even without a commitment for a supply of the gas from the USA. The LZ-129 was the largest and most lavish airship ever built. Dr. Goebbels hoped Eckener would name the airship after Adolph Hitler, but he chose to name it after the late Paul von Hindenburg, a man who Eckener greatly admired. The new airship was 800 feet long, 135 feet in diameter, and held seven million cubic feet of gas in its lifting cells. It had a dining room, a lounge, a reading room, and 25 rooms for 50 passengers on the upper level. The lower level had a bar, showers, and a smoking room, luxuries Graf Zeppelin did not have. The passenger rooms had heat and running water, more luxuries not found on Graf Zeppelin. The Hindenburg began flying to the United States in March of 1936. It made the flight in two and a half days, while ocean liners took five days or more for the trip. All cigarette lighters and matches were confiscated before takeoff. Passengers could smoke in the pressurized smoking room, where a steward lit all cigarettes, cigars and pipes. The lighters were returned as the passengers left the ship.

Also in 1935, Eckener was removed from his duties at the Zeppelin works, DELAG was disbanded and reorganized under the state sponsored Deutsche Zeppelin-Reederei, DZR, German Zeppelin Transport Co. One of his subordinates, Max Pruss, a highly decorated zeppelin commander from the First World War, and a Nazi party member, took his place. Hitler, Goebbels, and Goering all thought the zeppelins were obsolete and dangerous. They all refused to fly in them, but their majestic presence created too much good propaganda to waste.

The Hindenburg had made 10 trouble free crossings to Lakehurst by May, 1937. On May 6, 1937, the airship was coming in at 6:00 pm, 12 hours late, at sunset, and it was coming in fast, as a thunderstorm was approaching. The airship had dropped the landing lines, and the ground crew was assembling under the airship to walk it to the mooring mast. A fire broke out just forward of the top rudder fin, and 34 spectacular seconds later, the largest airship ever built was a smoking pile of twisted metal.

The actual cause of the fire has never been determined. Sabotage is a popular theory, as there had been a number of bomb threats, but security was very tight. All passengers and crew were searched before the airship left Friedrichshafen. All baggage had been carefully searched before the flight, and the ship had been inspected from end to end before take-off. Several crewmen who survived the crash were lowering landing lines at the tail end of the ship. They heard a loud whoomp, the sound a gas oven makes when lit, then they saw the glow of a fire inside the airship. Their testimony was basis for the sabotage theory. The idea of a zeppelin man sabotaging his own ship was unthinkable to
The dining room was on one side of the airship, and on the other side was the passenger lounge seen here with the reading & writing room beyond. Passenger rooms were in-between the dining hall and lounge. Note the light weight aluminum baby grand piano built especially for the Hindenburg by Bluthner, a well known piano manufacturer. On inner walls are murals of famous explorers, their vessels, and maps of their voyages.

View No. 29 from a German series, “Hindenburg, Rauchsalon.” (The smoking room on the Hindenburg.) The smoking room always maintained positive pressure so no hydrogen could ever leak in. Smoking on a zeppelin was quite a novelty and it was a very popular room, usually quite crowded. The small Hindenburg Bar is visible through the door.

View No. 27 from a German series, “Hindenburg, Halle mit Blüthnerflügel.” The dining room was on one side of the airship, and on the other side was the passenger lounge seen here with the reading & writing room beyond. Passenger rooms were in-between the dining hall and lounge. Note the light weight aluminum baby grand piano built especially for the Hindenburg by Blüthner, a well known piano manufacturer. On inner walls are murals of famous explorers, their vessels, and maps of their voyages. The surviving crewmen, and the passengers had little access to non passenger areas of the airship. While sabotage was an unlikely cause, it cannot be totally ruled out, as it was by the official investigation committee. A static electric discharge setting fire to leaking hydrogen was the official explanation, although this had never been the cause of a fire on a zeppelin before. The official explanation was politically expedient for the United States and Germany, but left many people unsatisfied, as politically motivated government investigations usually do.

The coating used to waterproof the airship’s fabric covering contained aluminum powder and iron oxide, both used in solid rocket fuel, and both very flammable. There is a theory that a static discharge was the cause. Landing lines were dropped and as they hit the ground, the static electricity built up on the airship was harmlessly discharged into the ground. It is possible that some fabric panels discharged and some did not. This could have generated a static spark between a charged panel and a discharged panel. This spark could have ignited the fabric skin of the airship, and the burning fabric ignited the hydrogen. Eckener wrote later on that he thought that the upper tail rudder fin was damaged in the tight turn onto the landing field, causing damage to the airframe like the USS Macon, and that lead to a hydrogen cell leak, and then the fire. With a number of plausible causes to choose from, no surviving witnesses or confessions, and the evidence destroyed with the burning of the ship, the exact cause will probably never be known.

The crash was caught on film, and was reported live on the radio. It was one of the first modern great disasters to be recorded in progress. The Hindenburg had a crew of 61 men and officers, and was carrying 36 passengers. The captain, Ernst Lehmann, is credited with saving lives by his actions in keeping the airship just off the ground in the final few seconds, allowing more time for people to escape. He survived the crash, but died shortly afterwards from the burns he received. Max Pruss, Eckener’s successor as head of DZR, was also in the Control Cabin. He survived the crash, but was horribly burned. The death toll was high, 13 passengers, 22 crewmen, and 1 ground crewman, a total of 36 fatalities. Most survivors had severe burns, but a few had only bumps and scratches. These were the first fatalities and injuries of any zeppelin airship passengers since DELAG/DZR began in 1909. The wreck of Hindenburg marked the end of airship travel. The Graf Zeppelin was over the Atlantic, in route from Brazil to Germany when it received the news of the Hindenburg. The captain kept the news from the passengers until they were on the ground in Germany. Afterwards, Graf Zeppelin flew a few propaganda flights in Germany before the Second World War began. The new war put an end to its flying days.

One more airship was completed after the crash of Hindenburg, LZ-130, Graf Zeppelin II. Its first flight was on September 14, 1938, and its last was August 22, 1939. It was the same size as Hindenburg, but was configured for 40 passengers, in larger rooms. It flew a few propaganda missions (Continued on page 33)
Head mounted displays have appeared in various incarnations over the years, from interactive Virtual Reality helmets attempting immersive, real time 3-D imaging to less ambitious devices concentrating more on image quality than on filling the visual field. These were generally aimed at specialized markets, with none breaking into the mass consumer marketplace.

That may change with Sony's HMZ personal 3-D viewer, or HMZ-T1, which is claimed to provide an "immersive" viewing experience combined with high definition 3-D movie and game images, along with sound from integrated stereo headphones. At the heart of the device are two 1280 x 720, 0.7 inch OLED panels, one for each eye. The Sony OLED screens provide better resolution, contrast and color than liquid crystal or plasma panels, and could bring personal viewing of digital stereo imagery to the consumer market from a major source. Any 3-D film available on Blu-ray could be viewed in private without a chance of ghosting or flicker, and with virtual surround sound via Sony's proprietary signal processing technology.

The viewer uses HDMI input and is intended to work not only with Blu-ray media but PCs, game consoles like the PS3, content recorded using Sony's 3D-capable camcorders and cameras, as well as others. (No word yet on compatibility with W1 or W3 stills or videos.) The release date in Japan is scheduled for November 11, and in the U.S. and Europe soon after. The estimated price ranges from $784 to $799, but like many other products that could drop after a few months.

Some have speculated that the HMZ comes close to the "digital Realist Red Button" viewer of their dreams. In fact, it's more of a cross between that and a digital version of the immersive Leep viewer (SW Vol. 34 No. 3 page 22). A big difference is that the Leep's exotic optics only had to cope with a pair of medium format transparencies. The HMZ lenses must enlarge roughly View-Master size images to something resembling theater screen size. While not technically immersive, that's still a real challenge if distortion free stereo viewing is to be presented with reasonable eye relief for most of the population, including those who wear glasses.

One difference between the HMZ and a Red Button viewer (or a good full frame 35mm slide viewer, which is closer to the HMZ in field of view terms) is that the HMZ apparently needs to be worn rather than casually picked up or handed to someone for a quick look. More people will need to get their hands on one before we can 1) learn if those head straps are a serious obstacle to "quick peek" viewing and 2) judge how well the resolution of those tiny OLED screens survives such ambitious magnification.

The side view in this promotional illustration shows the placement on the HMZ-T1 of the Sony Virtualphones, providing a theater-like surround sound experience without the people talking behind you.

One lens from a Sony HMZ viewer. Much of the expense of the viewer may be due to the necessary sophistication of its optics.
Digital Binoculars Record in 3-D

While not the first to capture 3-D images, the new Sony DEV-3 and DEV-5 digital binoculars can record stereoscopic video footage for playback on most 3-D HDTVs. Both models have variable zoom, which can reach 20X in the DEV-5, although their maximum magnification in 3-D recording mode is 5.4X. Electronic autofocus holds moving subjects in focus while fingertip manual focus corrects any situations where the autofocus picks out a tree branch instead of that charging rhino. In 3-D mode, the autofocus can hold on objects as close as 32 inches. And, naturally, they record stereo sound as well.

Separate electronic viewfinders provide images for left and right eyes, with image stabilization software included. The binoculars can be connected via HDMI to any HD television with HDMI input and 3-D videos can be played on virtually any 3D-compatible TV. There’s also a USB connection for transferring video clips to a computer for storing, editing and sharing. The new DEV-3 and DEV-5 digital recordable binoculars from Sony will be available in November 2011 for about $1400 and $2000, respectively. The announcement is perhaps less significant for 3-D digital camera technology than for its recognition of the potential uses of 3-D television in the home.

Bullet Aims at More Portable, Affordable 3-D Filming

Two compact, “load and shoot” beam-splitter rigs for professional 3-D filming have been introduced by 3D Film Factory, a company specializing in 3-D camera rigs. The ultralight 3D Bullet Rig and 3D Bullet Lite Rig are designed for handheld or steadicam 3D productions in situations where larger mirror rigs are too bulky or heavy and require a crew to set up. The company claims the Bullet rigs are ready to pick up and shoot with (hence the name, so it doesn’t mean they’re intended just for making westerns or gangster flicks).

The horizontal camera mount provides inter-ocular adjustability from 0” to 3.5” and convergence movement from 0° to 3°. The vertical camera mount adjusts for stereoscopic picture alignment by elevating and performing full x-y-z rotation (yaw, roll, tilt). The mirror box housing is foam core plastic that’s both lighter and cooler than a metal matte box. The entire rig is designed to set-up and break down quickly for packing into a small case.

Weighing under 12 lbs, the 3D Bullet Lite Rig was designed to accommodate the Canon DSLR 5D, 7D, 60D, XF105 (camcorder) and other smaller HD cameras. The slightly larger 3D Bullet Rig accommodates the Canon 1D, 5D, 7D, XF105, XF305, XHG1, 5D, 7D, Sony F3, EX3’s, HDP1, XSU, Z1U, Panasonic AF100, HVX200, HC 1500, HC 1800 and many other professional HD cameras.

At $4,895 the 3D Bullet rig is claimed to be the least expensive rig of its type. That’s clearly in the professional range but it could make 3-D a viable option for more independent producers and documentary filmmakers, thanks to its combined affordability and portability. More can be seen at www.3DFilmFactory.com.
Some of the finest historic stereoview books to be published have been regional efforts, but River Views – A History of the Thousand Islands in 3-D by NSA member Tom French sets a new standard for such efforts. Readers need only refer to his article "A.C. McIntyre – First Photographer of the Thousand Islands" (SW Vol. 36 No. 5, page 18) for a sample of the level of historical research and image selection to be found in the book.

From the over two thousand views available to him, author French chose 110 that best capture the history of this popular stretch of the St Lawrence River. They illustrate in often dramatic depth the landscapes, people, boats and structures from tents to houses to mansions to hotels that drew growing numbers of both residents and tourists to the region starting in the 1870s. Most of the book’s views are by McIntyre from the 1870s through the 1880s with various other photographers and publishers represented as well, including the Anthony’s, George Monroe, George Eastman’s personal photography teacher. River Views is divided into general chapters that cover broad subjects like the early hotels and tourist facilities, “The First Summer People” and their private camps and homes, and “Religious Camp Meeting Grounds” involving both tents and cabins.

Within each chapter are subheadings for the various islands illustrated, and whenever possible a historical sequence of views tracking changes to a pictured landscape or structure. Whenever needed, these details are shown in enlarged sections of the images beside or beneath the views with as many as three enlargements sharing a page with one stereoview. In some cases, enlarged sections compare details from views on other pages to follow changes over time or to compare views taken from different angles with the help of impressively researched captions.

Sections of text appear mainly at the chapter and subhead introductions, providing historical background about islands, buildings, photographers etc. A deeper treasure trove of information is contained in the extensive captions accompanying each view and detail enlargement. Beyond the historical and photographic information the captions provide, I’ve seldom found any book of this sort in which relevant material to be found in captions or images on other pages is so consistently referenced by page number. The page flipping this inspires could make your arms tired, but tying together so many bits of history is worth the effort.

Even those with little interest in the Thousand Islands beyond something they put on their salad should find enough exceptional stereographs in River Views to make it a worthwhile choice. If too many distant shots of 19th century resort hotels make your eyes glaze over, worry not—there are close and dramatic views of rocky shores with the exotic homes of people rich enough to buy their own islands perched on them, fanciful and unlikely bridges, boats of all descriptions and people gathered in tents for religious retreats. I keep returning to three fascinating views of a private bridge connecting tiny Spencer Island to Manhattan Island, itself a speck compared to the one in New York City. The almost theme park designs of walkways, bridges and houses with their elegant porches and observation towers contribute to a dreamlike atmosphere in these exquisite views, most of them seen for many years by only a few collectors until now.

Among the more intriguing examples is a James Esson view (page 47) of a rustic, gazebo style pavilion atop Lookout Point on Bostwick Island. One of the few stereographs from the Canadian side of the river, it has a magic appeal encouraging extended study. I don’t know which I’d like more—the view or a whimsical play structure like the one shown, hanging over the edge of a rock above a river. Another Esson view from the same island (page 49) is almost as enchanting. A couple stand on a bridge over a tiny channel between...
James Esson No. 860, "Cottage, Little Lehigh" from page 35. Mary Packer's cottage on Little Lehigh Island is also visible in three other views in the book. It was connected by a bridge to Sport Island, where the family had a tennis court and another cottage. With a fortune from the Lehigh Valley Railroad in Pennsylvania, the family also owned Idlewild Island and a private side-wheeler steamboat.

islands as a man in a rowboat passes under it. If the image doesn’t have a match among 19th century romantic paintings, there must at least be something close on a calendar or sheet music cover.

All the views are reproduced at 275 lines per inch in full color. Detail is excellently preserved under

the magnification of the Loreo Lite viewer provided, and in fact the images stand up reasonably well even under the higher magnification of a viewer like the OWL. Drop shadows around the edges accentuate the cards nicely on light tan pages. (An added “age darkened” tone out at the edges of the pages themselves is an unnecessary embellishment to an otherwise superbly designed and printed book.)

Prior to publication, I talked with the author at some length about (Continued on page 36)

A.C. McIntyre, “Mr. Wick’s Camp Thousand Island Park” from page 51. The tent is typical of those in several views in the book, accommodating families attending religious camp meetings on various islands. In 1877, estimates of the number of such tents on Thousand Island Park ranged from 150 to 500 in different area newspapers.
Many people are saying View­Master is dead. Well that is not the case with Snap 3D. Earlier this year Peter Sinclair launched the first in his successful series of famous artist packets with the release of “Norman Rockwell – American Illustrator.” Now there are two more wonderful packs featuring iconic artists August Renoir and Winslow Homer.

Pierre-Auguste Renoir (1841 - 1919) was a French artist who was a leading painter in the development of the Impressionist style. Renoir's paintings are notable for their vibrant light and saturated color, most often focusing on people in intimate and candid compositions. The female nude was one of his primary subjects. In characteristic Impressionist style, Renoir suggested the details of a scene through freely brushed touches of color, so that his figures softly fuse with one another and their surroundings. Some of his most famous paintings are featured in the three-reel set. One of my personal favorites is “Girl with Watering Can” which is housed in the National Gallery of Art. Another is “Luncheon at the Boating Party” which is housed in the Phillips Collection (both institutions located in Washington, D.C.).

A prolific artist, he made several thousand paintings. The warmth and sensuality of Renoir's style made his paintings some of the most well-known and frequently-reproduced works in the history of art. The single largest collection of his works, 181 paintings in all, is at the Barnes Foundation near Philadelphia. Since his death two of his paintings have sold for over $70 million. Here is a chance to own 3-D renderings at a mere fraction of that sum.

The converted images of Renoir's work have been done with precision and care. Taking a 2-D painting and converting it into a 3-D image takes time and patience. The 3-D images make you feel like you are standing there looking into the actual painting.

The third artist in this series is American Landscape Painter Winslow Homer (1836 - 1910). His artistic life consists mainly of landscapes and marine subjects. He is considered one of the foremost painters in 19th century America and a preeminent figure in American art.

His outstanding painting of “Breezing Up: A Fair Wind”—housed at the National Gallery of Art in D.C.—is beautifully presented in this three reel packet. Homer's iconic painting of a father and three boys out for a spirited sail received wide praise at the time it was exhibited. The New York Tribune wrote, “There is no picture in this exhibition, nor can we remember when there has been a picture in any exhibition,
that can be named alongside this.” In 1962, the U.S. Post Office released a commemorative stamp honoring Winslow Homer. Homer’s famous oil painting “Breezing Up”, was chosen as the image for the design of this issue. Other famous paintings by Homer are also depicted in the set. “Canoe in Rapids” and “Snap the Whip” are two of my personal favorites.

These packets are privately produced by Peter through his company Snap 3D as limited editions. They can be ordered directly through Peter at http://snap3d.com/.

Along with the famous painters series Peter has released a series of 3-D Nude Pin-Ups from the 1950s-’60s. These classic nude shots are manufactured by Image 3D. There are three different girlie reels and they come custom packed with a View-Master viewer. The viewers are available in a range of four colors—Red, Blue, Black & White. There is a unique feature to these reels in that there is an anaglyph 3-D nude image in the center, making them a “must have” for collectors. With Peter’s continued interest new View-Master products are coming to the market. This keeps the spirit of 3-D and View-Master alive today.

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The judging of the entries for the 15th SSA Stereocard Exhibition was held at the NSA convention in Loveland, Colorado, July 2011. The Award Winners and Accepted Entries were exhibited at the Convention, initially in the Stereo Art Gallery and then subsequently at the Trade Fair. Exhibition Co-Chairs David Goings and Dennis Green did a fine job of continuing this annual tradition and an impressive display of stereoview cards was in evidence.

Exhibition Judges for the 15th SSA Exhibition were H. Lee Pratt, FPSA., Ernie Rairdin, and Barbara Gauche. Assisting in the judging were John Bueche, Andrea Shetley and Ray Zone as David Goings oversaw the proceedings.

The Best of Show Award went to Chris Reynolds for his stereoview card “The Apparition.” Chris also won the Best Scenic Award for “Moran Point – Approaching Storm.” The Award for Best Architecture was presented to Klaus Kemper for “Thirsty.”

Other Award-winning entries were as follows:
Best Humor Award – “Blue” – Robert Leonard
Best Hyperstereo – “Wintery View” – Wojtek Rychlik
Best Photojournalism – “Budget Protest, Madison, WI 6-16-11” – Michael Pecosky
Best SSA Member – “Willamette Snow” – Linda Thompson

The Stereoscopic Society of America is a group of currently active stereo photographers who circulate their work by means of postal folios. 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.

Stereoscopic photographers who may be interested in Society membership should contact the Membership Secretary, Les Gehman, 3736 Rochdale Dr., Fort Collins, CO 80525, (970) 282-9899, les@gehman.org.

**How to Join the SSA**

To join the SSA one must first, of course, be a member of the NSA. For placement in a stereocard, transparency or digital folio of their choice the new SSA member must send $10 to Treasurer Les Gehman at 3736 Rochdale Dr., Fort Collins, CO 80525 (970) 282-9899, les@gehman.org.

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If you're among those who enjoy studying maps even when you're not on the road, or those who do most of their world traveling via Google Earth, there's a new book that combines aerial photography with topographic maps of the same places with the added feature of both photos and maps being impressive 3-D anaglyphs. 3D Atlas of Zion National Park by Steven L. Richardson and Benjamin M. Richardson covers every foot of the park's 407 square miles with 3-D aerial photos on the left hand pages and 3-D topographic maps of corresponding sections of the park on the facing right hand pages. A wire binding allows the book to lay open to easily compare the two images.

The park has been divided into 39 map sections and 39 corresponding color aerial photos (each identified using the name of a prominent feature within the section), for a total of 78 large anaglyphs, all at a scale of one inch to 2,000 feet. At a normal viewing distance of about ten inches, the introduction explains how this makes the reader a giant with eyes 5,000 feet apart, looking down at a distance of 20,000 feet above the highest peaks. At this scale, details down to the size of individual trees can be seen in the 11 x 8 inch aerial photo anaglyphs, and the book's high quality screenless printing even rewards the use of reading glasses along with anaglyphic glasses for just such intense examination.

It's hard to emphasize just how sharp and clear these photos and maps are. Both the photos and maps in the book are conversions, made by draping existing images over digital elevation models with the help of software like GIS Microdem, Adobe Photoshop and Illustrator, Corel Paint Shop Pro, and Stereo PhotoMaker. You could probably spend months flying over the park taking traditional aerial hypers and not end up with stereos containing this much information, although a side-by-side comparison would be interesting to see.

The quality of the 3-D in both the photos and maps is astounding. To detect the slightest ghosting in the photos requires closely studying the sides of the brightest cliffs, and it doesn't affect the fusion of the image at all. In the maps, even that degree of ghosting can't be found. The photos do require strong light for the best viewing while the maps work well in even relatively dim light. Like the best phantograms (as
Topographic map of the Bear Trap Canyon area near the north end of Zion National Park.

The contour maps, originally created using stereoscopic photogrammetry, have been returned to their three dimensional state, but remain topographic maps complete with elevation lines, numbers and names of features. "Adapted from 7.5 minute quadrangles of the US Geological Survey and US Forest Service. Using GIS and other software, the image was draped over a 7/8 arcsecond digital elevation model to get shaded relief. The map was then displaced by the digital model to make the anaglyphic image." ©2011 3D Stereo Imaging

demonstrated on this issue's cover), the squarely viewed anaglyphs in this Atlas can prompt even the most stereographically experienced reader to try touching some of the higher peaks or reaching into the deepest canyons.

As in the earlier 3-D atlas by Steven and Benjamin Richardson, 3D Atlas of Salt Lake Valley's Tri-Canyon Area (SW Vol. 35 No. 2 page 11), the Zion atlas provides a small map beneath each image identifying its location in the section grid.

Many of us who have visited Zion National Park only saw Zion Canyon (pages 67 and 59) and some other points nearby. The 3D Atlas of Zion National Park provides a chance to discover how much more this amazingly complex park has to offer, and to pick at least a few destinations for our next visit. In the meantime, we can be that Giant, checking it all out from 20,000 feet.

Zeppelins

(Continued from page 23)

before moving into the shed next to Graf Zeppelin. The airships were too slow and vulnerable to risk using them in the new war, and if they were lost to enemy action, the propaganda backlash would be immense. In April of 1940, Herman Goering, commander of the Luftwaffe, ordered both airships to be broken up for scrap metal, and then the zeppelin sheds were torn down.

Dr. Eckener survived the war, and hoped to revive his dream of airships carrying passengers around the world. It was not to be. By 1945, fixed wing aircraft were carrying passengers across the oceans, not in the same style or luxury as airships, but with greater speed. The jet airliner was in development, promising even greater speed. The dream of zeppelins filling the skies lives on in the hearts of zeppelin enthusiasts around the world, and there is some very interesting and promising conceptual work being done with large airships today. But, for most us, seeing blimps covered with advertising, is all that reminds us that Giants once flew the skies.

As stated in Part 1 of this story of zeppelins, I have received an amazing amount of help with this article, from an international group of collaborators; Larry Moor, Mike Griffith, and Steve Hughes from Georgia, Robert Boyd from Virginia, John Waldsmith from Ohio, Bill Wissel from California, Didier Reboul from France, and Martin Kohler from Germany. All of them have all been very generous with photographs from their collections and their knowledge of the history of airships and stereo photography.

Sources

The Zeppelin In Combat, by Douglas H. Robinson, Univ. of Washington Press, 1980

The Story of the Airship, by Hugh Allen, Goodyear Tire & Rubber Co., 1931


The Great Dirigibles, by John Toland, Dover Publications, Inc., 1972

Puget Sound Airship Society: www.pugetairship.org/

Zeppelin im Raumbild: www.zeppelin-3d.de/
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Possible digital restoration, cleanup and color balancing before the image files were sent to the printer. His eventual decision was to reproduce the views just as they exist today, following the philosophy "...there is no photoshopping a card when placed in an antique viewer, and that is the experience we hope to bring to you." With the finished book in hand, I can say that he was clearly right. Of the book's 110 views, I find only three that would have led me into the temptation of photoshopping, and that's not a bad percentage.

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