Swimsuit Encore 2007

Stereographer
Carl Balcomb

G.A.F. Tissues
A taste of the late '40s through the early '60s found in amateur stereo slides

by Mark Willke

The Work of Professionals

I have to confess that I'm bending the rules of this column a little bit in this issue. Although the heading above specifies "amateur stereo slides," both images pictured here are from sets that appear to have been commercially produced, or at least produced with the purpose of commerce in mind.

Our first view, submitted by Lee Laney of California, was part of a set of 11 Realist format slides showing homes and businesses with various styles of aluminum awnings. These slides were tucked into a small leatherette-like box that also holds a small steal-the-light viewer, apparently for use as a kit for awning salesmen to show prospective customers. The slides are in unlabeled heat-seal mounts, and appear to be some type of non-Kodachrome dupes (which explains the slight softness of the images). Although it's a bit distant, I couldn't resist this image that includes some nice old cars parked around some sort of store. The skywriting is an unexpected bonus, but with only the last four letters "REST" visible, I'm not sure what the whole message in the sky is.

The second view also comes from a group of slides that was used as a salesman's tool, this time showing what must have been the latest fashions at the time in dresses. Art Whitehead of Utah submitted this slide, and says that all the slides in the set showed the same model in different dresses and room setups. The set came in a box with a Kodak Kodaslide lighted stereo viewer.

This slide, which also appears to be a dupe that is slightly softer than what I would expect from an original shot, is mounted in a Realist heat-seal paper mask and then taped inside glass. It is labeled "A 'Realife' Photo by Barbizon Studio, Flushing, New York".

These are some fun '50s images, even if they weren't created by amateurs!

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 slide that you would like to share through this column, please send it to: Fifties Flavored Finds, 5610 SE 71st, Portland, OR 97206.

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. Please limit your submission to a single slide. If the subject, date, location, photographer or other details are known, please send that along too, but we'll understand if it's not available. Please include return postage with your slide. 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.
# Contents

## Regular Features

### 2 Editor's View
- Comments and Observations
  by John Dennis

### 3 The Unknowns
- Can You Identify the Subjects of These Views?
  by Neal Bellington

### 6 The Society
- News from the Stereoscopic Society of America
  by Ray Zone

### 28 NewViews
- Current Information on Stereo Today
  by David Starkman & John Dennis

### 38 Classified
- Buy, Sell, or Trade It Here

## 4 Thank You!

## 8 G.A.F. Tissues
- by Robert A. Schreiber and Tex Treadwell

## 14 An Introduction to Carl B. Balcomb
- Stereographer Extraordinaire
  the first of a series by his son Robert B. Balcomb

## 18 A Stereo Time Paradox
- Meet the Robinsons Advances
  3-D Cinema
  by Ray Zone

## 19 Pop! Goes the Phantogram
- by John Dennis

## 20 Swimsuit 3-D Encore: 2007
- by Ron Labbe

## 30 Think "Outside the Window"
- by Michael Beech

## 34 Rebuilding the Z-Axis:
- Stereo Conversion of Motion Pictures
  by Ray Zone

---

**Covers:**
Posting by some rocks on Maui. Model Veronika Varekova tries on glasses to check out the 3-D Sports Illustrated Swimsuit Issue from 2000. For Ron Labbe's behind-the-scenes story of shooting 3-D for the 2007 SI Swimsuit Issue, see our feature Swimsuit 3-D Encore: 2007. (For stereo, cross-view with the back cover.)
(Stereo by David Kluhs)
Stereo Detected, June 25th, 9pm on PBS

That's the day (Monday) and time of the first show of the 2007 season for the hit PBS program *History Detectives*. (Check your local schedule.) Why do we care? Because the opening segment of that show will feature the mystery of the Realist 3-D screen from Ohio first mentioned in a 1983 *Stereo World* article. For the full story of how the screen and the mystery resurfaced at the 3D Center of Art and Photography in Portland to be picked as a hot case for the *History Detectives*, see *SW* Vol. 32 No. 5, page 8.

A Swimsuit Issue???

In case you were wondering, no, this is not a *Stereo World* swimsuit issue, previewed on TV just ahead of its release by a smirking Jay Leno. But when a huge mainstream publication like *Sports Illustrated* prints eight million copies of its annual swimsuit issue featuring an anaglyphic 3-D section (complete with eight million pairs of glasses), the tangled story of how those images went from concept to ink could be intriguing for stereographers accustomed to far less exotic budgets, equipment, locales and subjects. As he did for the previous *SI* 3-D Swimsuit issue in 2000 (*SW* Vol. 28 No. 1), Ron Labbe relates the details of planning and stereographing both the swimsuit models and the ads. *Sports Illustrated* photographer and NSA member David Klutho again shot hundreds of feet of film with his RBTS to provide *SI* editors a huge selection of images for a few 3-D pages, and he again shares some of his best efforts with *Stereo World* readers.

The Cover(s)

It's not our usual cover style, either—not because it features a model in a bikini, but because the front and back covers, when opened up, form a stereo pair for cross-viewing. This is the first time the idea has been tried since we went to full-bleed, color cover images, and stereographer David Klutho was enthusiastic about giving it another try. In fact, all of the stereos illustrating the article are reproduced as pairs instead of anaglyphs, providing *Stereo World* readers better quality images than seen in *Sports Illustrated*. We'd be interested to know if readers would instead prefer stereo pair covers as L/R pairs for viewing with Pokescope type viewers, or if we should stick with flat enlargements of image halves from two different articles.

Explore the World of Stereo Images

Please start my one-year subscription to *Stereo World* magazine and enroll me as a member of the National Stereoscopic Association.

☐ U.S. membership mailed third class ($32).
☐ U.S. membership mailed first class for faster delivery ($44).
☐ All international memberships ($44).
☐ Send a sample copy (U.S. $6.00, all other $7.50).

Please make checks payable to the National Stereoscopic Association. Foreign members please remit in U.S. dollars with a Canadian Postal Money order, an International Money Order, or a foreign bank draft on a U.S. bank.

Name

Address

City State Zip

The NSA Card Exhibition Lives!

Because the entry form didn't get inserted in previous issues, the deadlines for entering and submitting stereoview cards (vintage or modern) in the 2007 NSA Competitive Card Exhibition have been extended. The deadline for submitting the form is now June 22, and mailed-in views must arrive by July 6. The form and rules have been inserted with this issue, or they can be downloaded from http://2007.nsa.org. For information, contact nsacard@dddphotography.com.
The Unknowns

Can You Identify the Subjects of These Views?
Neal Bullington

John Waldsmith came up with an identification for the unknown shown in the March/April 2007 issue. The scene is the Public Square in Cleveland, OH and the event is a balloon ascension. John believes this is the flight of the balloon “Buffalo”, July 4, 1875, flown by Professor Samuel Archer King. The Buffalo was a huge balloon containing 92,000 cubic feet of gas. In 1877 King made an historic flight with the Buffalo from Nashville, TN carrying mail with stamps of his own design, depicting the balloon.

Along with the above information, John submitted his own unknown. It is an unmarked orange card which shows a large stone edifice. In the foreground is a circular fenced-in area with small trees or shrubs. Under magnification it can be seen that each window has four vertical strips that may be bars. Perhaps this is a mental hospital or similar institution. Any guesses?

Correction
The boxed information for ordering the book Old Japanese Photographs by Terry Bennett (SW Vol. 32 No. 5, page 22) contained a typo in the publisher’s email address. The correct address is orders@quaritch.com. The web address given for the book (www.quaritch.com) was correct.

Gone Madd

Is it me or are those 3-D IMAX movies getting a little too real?

by AARON WARNER
3-D by Ray Zone

Now showing: Custer's Last Stand IMAX 3-D

www.rayZone.com
Once again I have the pleasant duty of thanking all of you who have so graciously given of your time and/or money to the Association over the past year. The generous donors listed here have contributed financially (a total of $7,716) to the organization. These donations truly help the NSA continue to be a valuable resource to the stereo community. It is heartwarming to see this level of interest and support from the membership. Thank you for your donations and your continued confidence in the Association.

My heartfelt thanks go out to the many volunteers among you who have contributed and continue to contribute your time and energy to the furtherance of NSA operations, activities and goals. This is truly an association of volunteers, from the Board of Directors, to the Officers, to the Stereo World staff and contributors, who continue to bring you this fine publication with such wonderful content year after year.

Not the least among these volunteers are the members of the NSA annual convention committees. These extravaganzas are the highlight of the 3-D year, featuring the stereo-related trade fair, many hours of great stereo projection programs, educational workshops and social events. I hope to see everyone at the joint NSA/ISU 2007 Convention/Congress in Boise and in the years to come.

I would like to remind you that you can also donate your old equipment and views to the NSA for its annual NSA Spotlight auction. This not only helps out the new collectors/stereographers, but the funds can help finance NSA’s goals and missions.

To all who have helped in any way, my sincere ‘Thank You!’ for your kind support of the Association. To those who haven’t yet contributed, please do consider it, whether an additional $10 or $20 with your renewal (or at any time) or some of your time or talent. Your contribution will be greatly appreciated. Please help spread the word about the NSA and Stereo World magazine. The more members, the better the magazine and organization. Also, let me know if you have any ideas. I do look forward to hearing from you.

Best regards,
Lawrence Kaufman
NSA President
kaufman3D@earthlink.net

2006 Donors

Allison-Claire Acker
Michael Ahl
George V. Allen
Joe Ambrozieh
Ken Anderson
Byron Applegate
Harold R. Baize
John A. Ballint
Don & Sandy Balmer
Alice E. Bampton
Thomas P. Banes
Vincent Barone
Margaret J. Bartlett
Pat Bauer
Mr. & Mrs. Guenther J. Bauer

Keith C. Caylor
Robert W. Chamberlain
Robert A. Chase
Mike Chew
Mrs. Peggy S. Cole
Leo Connahie
Bart Conchar
Peter J. Corbett
C.A. Corson
Douglas C. Couture
Allen Covault
Allen E. Crocker
Dwight A. Cummings
Bob Curtis
George Danielczuk
Huck DeVenzi
Robert Dell
Robert Devee
Carl J. DiDonato
David Elgin Dodge
Bob Dome
Laurence Doyle
Steve Drinkut
Henry A. DuBay
Richard Dubnow
John N. Dukes
Curtis M. Eley

Stephen M. Beisser
Lionel Benning
David W. Bennett
Kermit Berg
Graeme Bicchall
Richard W. Black
Robert Bloomberg
Mark Blum
Stanley Blumenthal
Raymond E. Boudreau
Eddie Bowers
Steven J. Braun
John A. Broadbooks
Harvey K. Brock
Donald Brooker
Joseph P. Bryant
Raymond Bryant
Charles U. Buck
Richard E. Buck
William Burkholder
Paul L. Cabral
John B. Cameron
Michael Canter
Carol Carlson
Jack E. Caverider

Art Elwell
David T. Emlen
Joan Eslinger
James W. Farrell
Joseph Fedorko
Manuel D. Feldman
Harold W. Fisher
Robert P. Fordyce
Pauline P. Fredrickson
Ron Fredrickson
William E. Freisleben
Richard Galbraith
Thomas A. Gentry
Robert E. Gerrie
Mary Laura Gibbs
David C. Glick
Michael Gold
Seymour Gold
Jonathan Golden
Bill & Louise Goldstein
Donald L. Goodman
Russell E. Gourley
Dennis Green
Ralph Gregg
Kim L. Ground
George Gyurik
Caprine Folio Report

“Our folio has been pretty regular this year, with five boxes making the rounds,” writes Caprine Folio Secretary Thom Gilliam. “While I try to keep them spaced out, there is some inevitable bunching up as members are pressed to find time to keep them moving along. We are pretty relaxed about this especially since our membership is small enough that the folios come around pretty quickly. Whenever a folio seems to be stalled, a quick email is usually sufficient to shake it loose! In any event, all our members are conscientious enough that we can enjoy an active folio in the manner in which it is intended, that is to say, as a fun and enriching activity.

“This year, longtime member Bill Kreitzer decided to leave our ranks, and we shall all miss his contributions, particularly his many interesting views of Mexico. Hope all is well with you, Bill.

“As usual, I continue to update the SSA Caprine webpage regularly, so please have a look. I have no way to judge, but I think the website is a severely underused and under appreciated resource. Only the Caprine, Gamma and Alpha Folios show their activity. Those in other folios might urge their secretaries to look into doing the same on their individual pages. Contact Paul Talbot (ptww@rmm3d.com) for additional information.”

Voting Results for Caprine Folio 2006

“I have compiled the votes for 2006 and a pdf file of the results is available on the SSA website,” writes Thom. “Go to: http://ssa3d.org/caprine/tracking/index.html

“This year's top vote getter is Peter Jacobsohn with his view 'Turtles!' His view earned 64 points, besting the number 2 vote-getter, 'Iris and Tulips' by Harry Richards, with 58 points. Next came a two-way tie with 'Kappellenweg' by Quentin Burke tied with 'Life Lines' by Tim White. The number 5 spot was captured by Harold Jacobsohn with 'Fire,' number 6 by Peter again with 'Bromiliad.' Number 7 went to Harold again with his view 'Dancers,' number 8 was taken by Harry with 'Biker Witch.' Tim White came in at number 9 with "The Wanderers" and number 10 went to Thom Gilliam with his view 'Spring Mountain Ranch.' All in all, a well varied representation of our group, although Harry, Harold and Peter do seem to consistently score high marks taking many of the next ten spots. All the viewmakers should be proud of their achievements, and I am sure everyone will continue to delight and surprise us during the coming year. As Bill Walton coined the phrase... 'Keep 'em Moving!'

12th International SSA Stereo Card Exhibition

This is a reminder that stereographers are invited by Co-chairs David and Linda Thompson to submit their work to the 12th International SSA Stereo Card Exhibition. This Exhibition is open to any living stereo photographer. Newcomers to stereography and international exhibitors are especially invited to submit their work. Each entrant may submit up to 4 views in the Holmes format, 3.5” x 7” stereo card only. Entries previously accepted in the SSA Exhibition are not eligible. The original image must be made by the entrant on photographic emulsion or acquired digitally. All images must be original and may not incorporate elements produced by anyone else.

The closing date for the exhibition is July 6, 2007. The cards will be judged on July 12, 2007 at the NSA Convention in Boise with the Awards and Acceptances going on display at the Convention from July 12 to 15. A second exhibition will take place at the 3D Center in Portland, Oregon on July 24, 2007.

Cards not accepted for the exhibition will be returned July 27, 2007. The catalog, awards and all other returns will be mailed September 6, 2007.

Entry fee is USD $8.00 which includes return of entries by 1st Class Mail to US and Canada, and Small Packet Air elsewhere. All entries are to be sent to David and Linda Thompson, 8132 Pudding Creek Dr. S.E., Salem, Oregon 97301. Info: dt4wd3d@msn.com.

A pdf entry form for the 12th SSA Exhibition is at the PSA website and is also downloadable at www.my3dzone.com/SSA12entry.pdf.

Top Vote Getters for Omega Folio in 2006

Omega Folio Secretary Peter Jacobsohn has reported on the highest-scoring stereoviews for 2006 as follows:

Best Images
1. "Heart of the Cactus" by Don Parks
2. "Windmill Wheel" by Dennis Green
3. "Mesa" by Harold Jacobsohn

Top Total Votes
1. Don Parks
2. Lee Pratt
3. Ron Fross

The 2007 SSA Dinner

The 2007 SSA Dinner will take place during the NSA/ISU Convention at Boise on Thursday July 12th from 6:00 pm to 8:00 pm. Cost is $20.00. Signup forms are included with the Convention Registration package. If you are a member of the ISU, the NSA or the Stereoscopic Society of America, are interested in joining, or just want to socialize, this is the place for you. It will be a western style BBQ outside in Julia Davis Park. The park is about three blocks from the convention hotel and an easy walk or about a 1.5 mile drive due to the one-way roads.
How to Contact the SSA General Secretary

Ray Zone is the General Secretary of the Stereoscopic Society and in that position is responsible for production of this column in Stereo World magazine and, according to the Membership Rules of the Society, is also "responsible for trying to keep the Society functioning effectively and harmoniously." Folio secretaries and any member of the NSA interested in the SSA is encouraged to contact Ray via email at: r3dzone@earthlink.net.

An Introduction to Carl B. Balcomb

episode of the season, which is scheduled to air June 25, 2007. [See SW Vol. 32 No. 5, page 8.]

Other articles will be "The Chicago Years," which will include stereo card views Balcomb took at The Century of Progress World's Fair. Another will be on "Aerial Photo Reconnaissance, WWII ETO." The latter will take a closer look at Photo Interpretation. The author served in the PI Section of the 30th Photo Recon Sqdn, using equipment that my father developed.

Notes

1 Henry Solomon Balcomb was a cabinet-maker and contractor for many of the fine Colorado Springs homes built during the silver boom. Carl was nine years old at the time of his father's death.

2 Harriet Amelia Beecher Balcomb was second cousin to Harriet Beecher Stowe.

3 H.L. Standley was among the first to have climbed, and definitely the first to photograph, all of Colorado's peaks over 14,000 feet. He was also a founder of the ADAMAN Club. (www.adaman.org)

4 A forthcoming article "The Chicago Years" will elaborate on Balcomb's Montgomery Ward photo production and stereo of the Century of Progress Worlds Fair.

5 Inducted into The National Aviation Hall of Fame

6 Ibid

7 R. S. Legborn worked for Eastman Kodak, after graduating from MIT. He later became CEO of IF & I who built the U-2. He is a Director Emeritus of Comcast. He was inducted into The Air Force Space and Missile Pioneers Hall of Fame and has been nominated for the USAF Museum Hall of Fame.

8 In the Preface of the 3rd Edition (1950) of Arthur W. Judge's book Stereo Photography, Carl B. Balcomb is one of the "prominent authorities" acknowledged for his assistance and guidance.

9 Program Magazine Oct, 1947 p.54

Thurman Kelso "Tex" Treadwell passed away April 1, 2003. He was a pioneer in the collecting and cataloging of stereoviews. His personal collection contained over 150,000 views. He collaborated with many collectors in compiling lists of card numbers and titles, and his book with William Darrah, Stereographers of the World, remains an important resource. He was a powerful influence in the National Stereoscopic Association, and is sorely missed. I only began corresponding with him in 2002, and we exchanged long letters, cards, and lists. He urged me to write this article, which it is my honor to do. He is deservedly a co-author, since it would not have been written in the first place without his urging and support, and his contributing a good bit of information.

G.A.F. No. 601, "Tombeau de S.M. l'Empereur Napoléon 1er, Hôtel des Invalides." Note that the text around the base is flopped in these prints.
G.A.F. No. 273, "Voiture de Gala Palais de Trianon." This elegant coach was stereographed from four different angles, each version published by Grau as No. 273.

Amazingly little is known about Florent Grau (G.A.F.), a publisher/vendor of beautifully well-composed hand-tinted tissues of Paris and its environs during the years 1855 through 1864. According to Denis Pellerin, in his book, *la photographie stereoscopique sous le second empire*, p. 106, Grau was originally an optician and a fabricator of lamps before he became a stereocard publisher/vendor.

Unfortunately, the names of the photographers who provided the images to him are not known, at least not to us at the present time. Pellerin and Pierre Tavlitski have written a short article for *Stereo World* (May/June 1998, page 26), for their column, "European Gems: Stereoviews from Old Europe and the Stories Behind Them." The article is titled, "The Tuileries: A Lost Palace Revisited." In it, they write that Grau was in fact a photographer himself, and also mention Alexandre Bertrand, Ernest Lamy, Furne and Tournier, Leon and Levy, and Henri Lefort as others who had photographed the Tuileries at approximately the same time. It is probably safe to assume that they knew each other, and that Grau may have obtained images from any or all of them.

These images are all that remain of the Tuileries, which was burned to the ground by the Communards in 1871, rather than surrender it back to the regular troops of the government they were fighting.

Apparently, Grau had tan mounts made especially for him, stamped "G.A.F." in the upper cen-

---

G.A.F. No. 273, "Voiture de Gala (Trianon)."
ter, with the word "PHOTOGRAPHIE" above his initials, and "DÉPOSÉ A PARIS" below, with an oval surround. "Photographie" translates to "photography," not "photographer," and verifies that Grau was a seller of these cards, not necessarily the original photographer, though he may have done that, too.

Others who sold his stamped cards include Henri Guérard (156 rue de Rivoli, a la colonnade du Louvre), A. Hautecoeur (172 rue de Rivoli), and E. Zeigler (35, boulevard des Capuchines). We have also seen tissues in tan mounts without the GAF stamp, many of which have the same look and feel of Grau tissues. Interestingly, we have seen a few of the same images in green mounts, issued by Henriot, a fellow optician, though the tinting is not nearly as well done.

Grau’s most famous output is a series of cards numbered 1 through 700. He also issued a series of at least 60 cards, titled “Paris Instantanée,” of the exteriors of famous buildings and fountains. Another series, with at least 137 cards, was titled “Vues de Paris,” and showed famous monuments. A last series, “Vue Panoramique,” with at least 189 cards, was pictures of parks and gardens. All of these cards were issued with a title strip running from the bottom to the top.
left of each card in his GAF-blindstamped mounts. We are aware of two types of title strips—printed in script, and printed in block type. We have not been able to discern any differences among cards with one or the other title strip. We also have not been able to find any differences among same-numbered cards sold by other vendors. Tissues with title strips and part of a numbered series are generally of very high quality, well composed, and beautifully hand-tinted.

There also exist an unnumbered series of social scenes, an unnumbered series of children's cards (poupee's), an unnumbered series taken in Boston and Washington, DC, and lastly, two numbered series taken in Germany—one of major buildings in Berlin and the other of famous actresses. It is not known if these last five series were in fact part of Grau's work, or if he—or someone—sold his mounts to others, who used them for their own purposes. No one can verify that he ever came to the USA. Two Social Scene cards in our possession are blindstamped GAF, and "E. Linde & Co., Berlin - London, Sophus Williams" on the far sides of each card. William Darrah wrote that Sophus Williams was the greatest German publisher, who was succeeded by E. Linde, and issued views from 1862 until 1895, being most active until 1880.

Linde maintained a London branch from about 1865 to 1875.

All the cards of which we are aware at present are listed in Appendix I of a Monograph to be published by the National Stereoscopic Association, which presents the card numbers, locations, and titles for all the cards of which we are aware at the present time. We have been gathering card titles over the last years, as they appear, whether or not we personally own them. There are obviously quite a few cards yet to surface. The card numbers shown in bold type in the Monograph indicate a number which either has more than one image with the same number, or conversely, a series of numbers with the same image.

Grau's major effort was his series numbered 1 through 700. Interestingly, in all our collecting and gathering of titles, we have never seen cards numbered between approximately 250-260, 280-499, 532-599, 646-660, and 665-689, a total of 339 cards. This leaves 361 numbered cards, at best, in this series of 700, of which we are aware of 353. The difference between the 353 and 361 potential total is because we are not always sure where one card series of locations ends, and the next one starts. As more cards come to light filling in the gaps between series, or as other cards from the missing numbers are found, we will be more precise.

As shown below, Grau published images of at least 10 different locations. Even though he had additional subseries of cards of the same location, the images are all different.
We have discovered that Grau was not always consistent in his numbering, and also used the same number over to indicate the same location and site, but a photograph taken from a different vantage point, so that the image is different. All told, we are aware of 42 cards with the same number, taken of the same subject but from a slightly different angle. It is highly likely that he, or some friend or employee, went back and rephotographed the site if the card was particularly popular.

Grau also used different numbers for the same image (we have 5 examples of the same image but sequential numbers). We also have three examples of three different images of the same site (cards 143, 177, and 528), and two (card numbers 273 and 692) with four different images. Lastly, cards 600, 601, and 602 show identical images of Napoleon's Tomb. We also have one card (#601) which has the image inverted (i.e., the negative was turned over), so that the writing on the floor of Napoleon's Tomb is backward. Card numbers with these anomalies are shown in bold in Appendix I of the Monograph. We are confident that as more cards surface, we will find more to add to this list of repeated numbers and images.

It is highly likely that whoever manufactured these tan blind-stamped GAF mounts for Grau sold them to others, particularly in Germany and in the USA. As men-

G.A.F. No. 143, "Chambre a coucher de Louis XIV. (Musee de Versailles)" shows the king's bed from the left side.

An incendié tissue (fireworks surprise) of the capitol building, Washington, D.C. in a G.A.F. mount. (Front illumination.)
tioned, there is also a numbered series of at least 81 actresses. Of the seven of which we are aware, all the women have German names. Darrah credits Stoltze & Company as photographers, published by Linde-Sophus Williams. There is also a numbered series depicting Berlin, with at least 194 cards. It is highly likely that Charles Pollock, a Boston photographer, received a good number of GAF mounts. There are images of both Boston and also of Washington DC in these mounts, even though there is no evidence that Grau ever came to the USA. Some of the most beautiful USA tissues are incendies (fireworks surprise), of the capitol building in particular, but also of the Boston Public Garden.

We have also seen cards in GAF mounts in other categories: social scenes, poupees (images of dolls with large and what look to be ceramic heads), and incendies and surprises around Paris, usually of one or other of the major monuments, with a hot-air balloon on one tissue. We have never seen any of these with a title strip, and all are unnumbered.

In summary, we have listed all the tissues with GAF stamps known to us to date. Very little is known about the photographer(s)/publisher of these cards, Florent Grau. It is almost incomprehensible that so little is known about someone who produced so much high-quality work. We hope that over the next years more information will surface, and that a much more complete article can be written.

G.A.F. No. 143, "Chambre a coucher de Louis XIV. (Musee de Versailles)". This tissue, illuminated from the rear, shows the bed chamber from the right side.
An Introduction to Carl B. Balcomb

Stereographer Extraordinaire

Stereographic views were hi-tech wonders of the Victorian Age as Carl B. Balcomb grew up on Tejon Street in Colorado Springs. Railroads provided “the Springs” with train service. However, passengers wanting to go on to the silver mines in Cripple Creek or Victor were in for a harrowing stagecoach ride, on narrow roads that clung to the mountainside.

Around the turn of the twentieth century, a trip to a stage performance or a “moving picture show” would be a special occasion. Movies werestill in their infancy. Entertainment centered ‘round “the family parlor.” That was where family and self entertainment held forth. Poetry reading and other cultural pursuits filled the quiet hours. Board and card games (except on Sunday of course) were popular. Families became ensembles. Each member usually would play a different instrument. Sheet music, for popular songs and “old favorites,” were carefully selected, after live demonstrations at the Music Store. The more affluent may have brought home some rolls for their player piano or cylinders for Edison phonographs.

Balcomb had to grow up in a hurry. His father died when he was only nine. Carl and his mother ran a stationery store in downtown Colorado Springs. He became interested in photography, especially stereo. He and his close friend Harry L. Standley learned the trade together. Standley went on to become “the Ansel Adams” of the Colorado Mountains. Balcomb’s interests went toward 3-D photography, and the production and hand coloring of lantern slides, which he used for travel lectures.

William Jennings Bryan, while in Colorado on his 1908 Presidential Campaign tour, met Carl Balcomb. Balcomb had recently completed an illustrated lecture tour of the Southwest and California, for the Colorado Springs Chamber of Commerce. Bryan became interested in some innovative projection techniques.
techniques which Balcomb had perfected, so invited him to be his projectionist as he continued his "whistle stop" tour to St. Louis.

Through the late teens and early 1920s he planned, designed and engineered "special equipment required for rapid quality production of photographic lantern slides," as manager of Victor Animatograph's Photographic and Lecture Department. He also worked closely with Mr. A. F. Victor, "developing one of the first 16mm motion picture cameras." In the mid twenties, Balcomb worked under contract for The Keystone View Company. During this time he gave technical and non-technical lectures on color and three-dimension subjects.

In the 1910s-1920s, Balcomb also became a successful, self employed travel lecturer in the Midwest and Southwest states. Unfortunately, stereo projection was not possible...
then, so he left his stereo camera behind. (Neither Polaroid filters/glasses for 3-D viewing, nor commercially viable color photography was available in those days.) He hand colored glass "lantern" slides of his own photographs. In addition to his beloved Colorado Rockies, he photographed Yellowstone, the Grand Canyon, Zion, Bryce, Yosemite, the Redwoods and many other wonders of the West.

In the late 1920s, Balcomb became Manager of Montgomery Ward's Photographic Department, with a staff of more than fifty. There he introduced the use of stereo cards, which could better show store managers throughout the country, just how their window and store displays should be set up. Mass production photography took the place of catalog drawings, which had dominated their huge catalogs, as Ward's went head to head with Sears for domination of America's retail market.

The War years.

Col. George W. Goddard was trained during "The Great War," to be an open cockpit aerial photographer. However, the Armistice came, just when he was about to be sent to France. He stayed in the Army and later became the head of the "Photo Reconnaissance Laboratory," (U.S. Army Air Corps) at Wright Field, Dayton, Ohio.

As the clouds of war rumbled through Europe, the pressure was on. He had to put together a "brain trust." With them he wanted to make sure that, if America went to war, it would be there with the "firstest and the mostest" aerial intelligence.

He needed the best and brightest optical, chemical, mechanical and electrical engineers and other specialists. One of those he recruited was the mathematical genius Amrom Katz. Another was Richard S. Leghorn, who by then was already an officer and pilot in the US Army.

Goddard realized he also needed a Third Dimension Photography expert. One who could develop the tools and techniques for Photo Interpreters, so they could glean the most information possible from aerial photographs. He found the right man for the job in Carl B. Balcomb, who had a very special combination of experience: 3-D photographer, management of high volume photo print production and imaginative graphic research, as well as the keen eye of an artist. These skills made him the outstanding person to be in charge of the "The Lab's" development of "Ground Equipment" (ground cameras, projectors, film & paper processing equipment and tools for Photo Interpreters).

When approached by Col. Goddard, Balcomb had recently successfully completed a photographic development project for W. P. York...
On Location at the DeMille ranch in San Fernando Valley, shooting The Good Samaritan. (Reel CH47).

Carl & Kathryn Balcomb in second row, behind Crown Prince Akhito (now Emperor) flanked by Merrill Vories Hitotsuyanagi and his wife Maki, who is related to the Prince. (Unidentified Omi Brotherhood officer at left.)

& Co., Aurora Illinois. They were producers of large-scale (life size figures) window and point-of-purchase displays. Balcomb developed a method for reproducing full color photographs for silkscreen production. Screen printers of today find it hard to believe that such "process color" printing was possible in the 1930s. Fortunately, I have samples showing that it was, in fact, done. During the war, W.P. York Co. got out of the screen-printing business to handle war production and never returned to Screen Printing and Window Display production. The process was not patented, so a suitable technique was not redeveloped until decades later.

While at Wright Field, Balcomb again worked with the big names of what became the reemergent 3-D photography "boom," including View-Master, Stereo Realist, SVE as well as Polaroid, Xerox, Kodak, Kalart and others.

Balcomb and Arthur W. "Bill" Judge, (author of Stereoscopic Photography the "Bible" of 3-D photography), became fast friends. They met in England in January 1944, when Balcomb was on assignment as a Tech Rep, visiting American and RAF Photo Reconnaissance bases. They visited each other's homes, in Farnam, Surrey, England and Dayton, Ohio.

In the late 1940s Balcomb photographed Masters for View-Master reels, as a Stereographer for Cecil B. DeMille Productions, Inc., under contract with ChurchCraft. In the 1940s, 1950s and 1960s, he became the "go to" authority during the growth years of 35mm Stereo Photography.

He made five "missionary" trips to Japan. Carl Balcomb was the President of The Omi Brotherhood of America, Inc. Its founder William Merrill Vories was Balcomb's YMCA camp counselor. Vories married Maki Hitotsuyanagi, a graduate of Bryn Mawr. She was the equivalent of a Duchess in the Imperial family. That is how my Dad met the present Emperor, when he was Prince Akahito.

After retiring from "The Lab" at Wright Field, Balcomb traveled around the world alone. He celebrated his eightieth birthday in Bangkok, Thailand, on his way back home, the Long way.

As I researched my father's career, I realized that there was material of interest for several Stereo World articles. The next to publish will return to the subject of "The Cuban Missile Crisis." This article will address the roll played by the "Sonne" Stereo Strip Camera. It is presented out of chronological order, so it could come out somewhat synchronous with PBS's 2007 History Detectives opening its season. The Director has told me, that ours will be the opening segment of their first

(Continued on page 7)
A Stereo Time Paradox
Meet the Robinsons Advances 3-D Cinema

by Ray Zone

On March 16 the very first public screening of Meet the Robinsons was projected in "Disney Digital 3-D" at the El Capitan Theater in Hollywood. It was a combination press and family/friends screening with director Steve Anderson and producer Dorothy McKim in person introducing the film.

Based on the children's book A Day with Wilbur Robinson by William Joyce, the computer-generated movie has, in director Anderson's words, "a whole bunch of other stuff" that has been added to round out the story. Anderson was adopted as a child, so he brings a lot of identification to this story of an orphan and his search through time for a family. The orphan is Lewis, a genius IQ child inventor, who was left at the door of an orphanage as an infant. To find his mother, Lewis invents a memory scanner to retrieve the image of her from his own brain. When Wilbur Robinson, a mysterious young man, appears at a science fair at Lewis's school, the adventure in time begins.

The individual characters in Robinsons are computer-rendered in a cartoon style but they are set within the confines of a very realistic looking world. Throughout the narrative the 3-D effects are pleasing and dynamic, changing with greater or lesser amounts of depth behind the screen, according to the demands of the story. Plenty of elements, particularly an ingenious flying bowler hat of Lewis's invention, fly out into the audience space in a natural, and humorous manner. Stereoscopic elements reinforce the humor in the story in big and small ways. When the bungling "oil can Harry" villain named only Bowler Hat Guy, for example, gets his nose trapped beneath a lowered window, the 3-D tweak lends extra humor to the moment.

When the narrative launches into the future with a flying machine that circles out along the way into the theater space, the richly-colored vistas of the imaginatively rendered city deepen out behind the screen with greater 3-D. The fluid depth effects, created under the guidance of stereoscopic supervisor Phil "Captain 3D" McNally, include techniques such as animation of the stereo window, what Lenny Lipton, CTO of Real D, in a recent paper has designated as "Vertical Surround Parallax Correction." At no time, however, do the 3-D effects call attention to themselves but are consistently used in service of the story. The deepest moments in the movie take place with a rapid thrill ride through a brief but surprisingly dystopian urbanscape inadvertently contrived by Bowler Hat Guy.

(Continued on page 29)
Animals and toys literally pop off the pages of the second phantogram book by Barry Rothstein, Pop-Up 3D. Clearly aimed at kids, this slightly smaller format book features generally simpler, isolated subjects stereographed by Rothstein and Steve Boddy along with phantogram drawings by Steve Hughes.

Two images from Phantograms From Nature, the first book in Rothstein's Phantogram 3D series (reviewed in SW Vol. 31 No. 2), appear in Pop-Up 3D, but the rest are original with the new book and range from teddy bears to lizards, cats, bunnies, ducks, frogs, a Corgi, and a box of nuts and bolts surrounded by snails.

Running across the bottom of each page, below the individual captions, is a sort of mini tutorial text about 3-D photos, anaglyphs and phantograms. The basic concept of the phantogram is explored graphically as well, in two examples that compare images printed for viewing at 90° alongside the same subject in a phantogram to be viewed at 45°. Two other examples present phantograms as both anaglyphs and small pairs for free-viewing, revealing the added impact of the larger anaglyphic images but the unfiltered color and lack of ghosting in the pairs.

The text, in fact, mentions the problem of ghosting as common to anaglyphic phantograms (an almost unheard of admission in any book of color anaglyphs!), and explains how 3-D movies use polarization to separate the images. Some of the book's high contrast, stand-alone subjects exhibit areas of obvious ghosting, unlike most of the subjects in Phantograms From Nature, with their more cluttered natural backgrounds. A plate of chocolates against a stark white background represents an almost insurmountable challenge to even the most skilled phantogram creator (not to mention printer), yet it seems to have evolved into an accepted basis of pride among phantogram artists that subjects should rise from a blank white page in order to qualify for distinction in this exotic 3-D format.

A notable exception to the above are the phantogram drawings by Steve Hughes at the front of the book. Those printed on a mildly textured background impressively escape the usual curse of ghosting suffered by line drawings printed in red/cyan inks.

Pop-Up 3D offers both enticing images and an easy to grasp introduction to various 3-D concepts for those of nearly any age able to hold or wear the included glasses properly. A word of praise must be included here for an often overlooked matter—the sleeve provided to hold those glasses! In Pop-Up 3D, that sleeve is a rugged, clear plastic envelope firmly glued to the inside front cover, containing two pairs of anaglyphic glasses. While nothing will prevent kids from mangling or losing glasses, this sleeve is one of the best yet seen to hold and protect them in an obvious, convenient place.
We were still pretty excited about having just completed a killer anaglyph section for the Dec. 2006 *Sports Illustrated for Kids* double issue when David Klutho calls and tells me that they want to do another *SI* swimsuit section in 3-D—in Maui—and do I want to come?! A tough decision, but I finally gave in! For the first issue, in 1999, I was kept very busy working with the advertisers, converting or shooting their ads in 3-D. This time it was only going to be one advertiser: GMC. It turned out that they came to *SI* looking to do a 3-D ad to promote their new Sierra truck. That meant they would pay for the glasses—a huge expense—considering there would be more than eight million issues printed! And *SI* would again go with expensive full-armed glasses instead of the cheaper perforated tear-out type. Glasses production was finally awarded to John Jerit at American Paper Optics: they would need to be printed, folded and then spot glued in only four weeks! A lot of work considering the 3-D section would occupy a small part of the magazine.

Luckily, Klutho wanted to go and scout Maui locations a week early. Though we had an official "location scout" in Maui, it wasn't practical to ask her to find us good spots for 3-D! So we had the "difficult" job of driving around one of the most beautiful places in the world looking for stereo-friendly settings. Klutho would document these places with his digital camera, and my job was to stand in for the model. Thankfully I didn't have to don a bikini! Many of the shots would need to be done on the grounds of the Four Seasons Hotel, quid quo pro for hosting the crew and models. The promotions director took us around the...
property to show us potential locations, including one suite that went for $11,000 per night (for Eddie Murphy and other celebs). We found a number of spots we really liked, including a cave near the shore where we imagined a One Million Years BC setup. We even got lava stones and sticks to add fire and smoke to the scene. Since we had nothing in the way of guidelines to follow, we hoped we could be adventurous! We'd looked at prior swimsuit issues and knew some ideas would probably not fly—but we were hoping to try new, fun things.

Our scout recommended a location that was owned by a guy named "Mickey Eskimo". Met him for breakfast one morning in the town of Haiku—a displaced Austrian who arrived in the '80s for fame and fortune as a pro windsurfer (the nearby beach apparently has the best windsurfing in the world). He was an aging blonde Neil Young-ish looking guy with an Arnold Swartzenegger accent. After the glowing description of his refurbished sugar mill, we were beside ourselves with anticipation: "You just have to see it, it's really unbelievable—and, I have the sexiest bedroom in Maui!"

Our grandiose visions of a jungle palace quickly dissipated when we pulled up: there were dirty huge stone baths, ("elephant troughs from Bali"), a beat up chandelier ("we can put this over the bed, or anywhere you like!") and then: the bedroom. We were advised to take our shoes off before entering. No wonder—the plywood floor was painted white! The mosquito net flowed “sexily” over the rusty iron bed. "Imagine the model eating fruit like this" he cooed, as he modeled for us. He was sure we’d
be there for three or four days, at least. We did find a mirror that had potential for a reflective shot, and an overgrown outdoor stairway that looked quite nice in backlight. Half day at most! (Little did he know that the art director would stop by to look for himself, and nix the location totally!)

From there we drove up the "road to Hana" and found the Garden of Eden we'd been searching for! It's a tropical sanctuary that offered some potential settings, but the best find there was Bud the Birdman! He had beautiful multi-colored parrots who he claimed were the "world's best trained show birds". I'd seen a photo online of one of the two models we'd be shooting posed with a parrot, and thought that it would be perfect for 3-D! Meanwhile, I was happy to stand in for the model, holding eight of the birds on my arms, shoulders and head! Bud is also a comedian, and gave us other fun ideas including a shot coming up from the ferns in a pith helmet with a bird in hand. Of course, Klutho called Bud's connection and ordered the pith helmet immediately!

We also looked for various other props—the idea was to try and get lots of "out of the window" effects, so leis and a ukelele were a must! Naturally we couldn't just buy any ukelele—we hoped to get one that had some character. Our location scout finally found a great one, as well as a few other props we wanted. One we thought could work was a machete. It could "pop" out as our model hacked her way through a 3-D jungle (with even a bit of dirt on her face, a la the TV show Lost). Unfortunately, this idea—along with a number of others—was later vetoed (too violent!). Our idea of a bathing suit under a fur coat wouldn't fly (PETA!).

Everywhere we saw the Hawaiian carved "Tiki" men, and we really wanted one in a shot or two. We ended up renting one from one of the Big Kahuna natives for $50 (down from his $100 offer). To buy one would have cost $500—$1000! The art director later decided he didn't like "tiki guy" (as we called him), and his opportunity for fame faded away... We bought cute hats, sarongs, shells, starfish, and a kite. The scout found someone who owned a classic beach bug: a restored Volkswagen Beetle with a bamboo roof! We needed to get surfboards to go with it—the rental boards needed to have the wax removed! At an outdoor fair, where we were shopping for cheap Hawaiian shirts, I heard Klutho laughing in the next booth. I came over as he held a sign that said "CLOTHING OPTIONAL BEYOND THIS POINT". At first I thought this would be a little corny, but realized that it would actually be pretty funny! In order to set it up for the shot we had to find the right old post, nails and a sledgehammer: this is real work! Klutho is an absolute perfectionist—every detail is considered.

About a week after we got there, the official assistants arrived. "Nacho" Jim served as main grip, while Todd did some additional 2-D digital photography for the web. They brought all kinds of strobes and some huge reflector/diffusion fabrics—up to 12x12 feet. Not easy to handle when the wind kicks up! One company, California Sunbounce, was donating special reflectors in return for promo shots. One of my jobs would be photographing their stuff in use during the model shoots. Luckily, the weather would be good for all four shooting days—we only needed to use strobes for one sunset shot. None of this stuff is easy to do on sand, which is the arch enemy of camera equipment, along with its ally, salt sea spray! We moved from the Marriott, where we had been staying, to the Four Seasons nearby. Our first five days were not "on the clock", but Klutho anticipated that a day and a half for scouting was just not going to be enough!

The 3-D section of the swimsuit edition looked like it was only going to be six pages, with an additional four pages of ads for GMC. We had hoped to shoot the GMC ad in Hawaii, since we had the equipment, know-how, and location (the ads are somehow supposed to tie-in with the article). For reasons of apparent conflict, the ad would instead be shot by the well-known sports photographer, Walter Iooss, Jr. Of course, Walter had never shot 3-D and had no 3-D equipment! It was worked out that Klutho would rent out his 3-D camera rigs and I would go to Miami for the shoot.
On Friday evening, the night before the shoot, we finally met with the SI editor, Steve Hoffman. We would be showing him the locations we had photographed on David's laptop, many with me standing in for the model. I'm the first to admit I'm not the most photogenic guy in the world, but at least there were a few laughs! (I'd met some of the staff when I worked on the 2000 issue, but that was seven years ago) Overall Steve was pleased with our work, which of course was good news. We had Fed-exed some test rolls back to NYC before the models arrived, but it turned out that the lab that Sports Illustrated told us to use no longer processed E-6! They did find a place that could handle this antiquated process, but SI neglected to get the film back to us before actual shooting began.

Though we would only be working with two models (they had 5 in Mexico for the 2000 edition) they were apparently two of the "hottest". On day one, we photographed the blonde Czech model Veronika Varekova. Call for crew was for 6:30 AM on the beach at the hotel—the first hour of sun is what we wanted.

I was to document the shoots, mainly equipped with an RBT X3 20mm and David's brand new dual Canon HDR-HC3 HDV video rig! It consisted of two 1080i videocams, one mounted upside down to get the tightest interaxial separation (80 mm). Most of the time we used supplemental wide angle lenses, which opened it up to 110 mm. The models were stereographed entirely with film, Klutho using his 28mm and 50mm RBT X3s and two RBT S1 As. Unfortunately it turned out that both S1s were often reluctant to rewind all the way! It was now also my job to unload the unrewound S1s in a changing bag to finish winding manually—something I'd never done before (luckily I did have lots of experience bulk loading film canisters).

The first thing I spotted on the morning of day one was "the tube"—a cylindrical portable hide-away where the model discretely
The bug and Veronika, but it's all about the sign.

Changes her swimsuits. I thought it would make a great behind the scenes image—but denied! This was apparently a restricted area—guidelines were now beginning to surface. While the model was posing, I worked my way around to get a shot of the model with Klutho and crew. This, too, was verboten! Seems Ms. Varekova is a bit petulant about her posterior! I was chastised several more times when I wasn’t even really behind her, but she thought I was. Suddenly I was a troublemaker!

As part of the deal with Sports Illustrated, the hosting hotels are featured in the articles, so we needed to get a good shot that showcased the facility. Klutho and I thought we might be able to shoot the model in the huge fountain in one of the lobbies and amazingly, they went for it! This was a bit tricky to orchestrate, with the model needing a ladder to get into the fountain pool, and us trying to avoid blocking the high paying guests from coming through! We managed to get the shot, and it ran!

One of the key shots which involved a fair amount of prep would be the VW beetle surf car shot. We’d hit upon a nice spot that had a path right down to the ocean with good trees for layering. On the morning of the shoot we arrived about 6:30 AM and found that there was a guy camped out in his truck on that path, sound asleep. Apparently all beaches in Hawaii are public! We had Veronika’s big man, Nacho Jim (he looks like a pro wrestler), go down and get tough with the guy—offered him $20 to go get breakfast! Thankfully, he moved right away—and didn’t even take the cash. I taped a saw on the end of a 15 foot extension pole (from another Home Depot run) to remove the dead branches from any trees that might end up in the shot. The CLOTHING OPTIONAL sign was erected, and the car was eased into place. When Mr. Hoffman showed up, he nearly canned the shot: GMC might be upset that it’s not a GMC vehicle (why didn’t he catch that on the Friday night meeting?)! We went ahead and shot anyway, trying various ways to obscure what’s likely the most recognizable car in the world!

After lunch at Willie Nelson’s restaurant in Paia, we convened at Maui-bud’s in the Garden of Eden for the parrot shot we were so excited about. Naturally some of the crew wanted photos with the birds (I’d had mine done on our scout trip!). Steve Hoffman then wanted Klutho to shoot a wedding invitation 3-D photo with his fiancée and the birds. Finally we were ready to shoot the model! The ten macaws were all really well trained, but our model only wanted to handle one specific bird. It turned out to be the oldest bird that had patches of missing feathers and Bud claimed wasn’t “camera-ready”! Klutho did his best to get only side views of Molly the cockatoo, which meant we couldn’t get the key shot of Veronika popping the parrot out of the page. She also didn’t want birds behind her as we’d envisioned, as it made her nervous—you can’t really push some supermodels, it turns out!

Our subsequent supermodel would be brunette Argentinean Yamila Diaz. On our first morning’s shoot I brought out a Combi viewer and showed her a few of
Klutho's amazing pairs from the previous swimsuit shoot. She was impressed, of course, and seemed to understand the concept! Our first shot was her at the front of a magnificent wooden outrigger, which ten big guys carried down to the hotel beach. The boat was a showpiece, and had to be kept off the sand. This meant that it had to be in fairly deep water, which meant that Klutho had to shoot from a ladder in the waves! Five guys were rowing behind Yamila, while two guys (one out of frame) tried to keep the boat stabilized. Nacho Jim was trying to keep a 6x6 foot reflector stable in the waves and Klutho had to make sure the camera stayed dry. My job was relatively easy—to stay on the beach and catch the action on video! Yamila was a trooper, and she looked great too.

On our list was the provocative "starfish" shot: we imagined the topless model would hold the "starfish" out in front, through the window, just covering her key points. Readers would be tempted in vain to peek around them! We'd been told by the producers that no time for setup, it turned out that she wasn't (the telltale straps would later be retouched out). Of course, this proved to be one of the most popular shots!

It was Steve Hoffman who came up with the idea of a fire-eating Hawaiian native, which Kelli, our scout, came up with in no time at all. We thought we'd add some torches for a layering effect and picked some up at the Home Depot. The location was McKenna State Park beach, where we'd also planned to stereograph Yamila on a beautiful hill of flowers. The sunlight, when we arrived, was not very good. (We did try to take light into consideration on all locations, but we often had to "play it by ear"). The fact that there were some big black bees didn't help, so we decided to setup the fire scene. As Kelli and I were carrying the torches from the van, some of the park rangers (who apparently are hardly ever there) stopped us to let us know that open fires were not permitted on the beach! Kelli showed our photo permit, but it didn't specify fire. We would need to have a fire extinguisher. I thought that was odd, since we were on a beach full of sand and water! In any case, we all left the park and went back to the hotel beach for the shot. After they were set up, Steve ended up rejecting the torches, but the native fire-eater looked awesome against the sunset for our very last shot.

Incredibly, we'd be checking out that same night! After a marathon pack-up, we'd have to catch a red-eye to LA, and Klutho would be carrying 200 unprocessed rolls of film! He informed me that TSA rules allow for film to be hand-checked, and indeed they did hand check every last roll. Each plastic film container was opened, but luckily they only "swabbed" randomly. We made it to the gate in plenty of time.

Since all the 3-D had been shot on film, we had no way of knowing, until processing in NY, if any of it was any good! Klutho, ever the professional, had shot a test roll at most locations and they were marked accordingly. He would be running those rolls first, to see if exposures were accurate, before running the rest of the film. Digital would have been nice!

I was home in Maynard (near Boston, MA) for one day before having to drive to New York City to meet Klutho in the basement of the Time-Life building where he was busily editing film. Before I left, he called with some scary news: several of the S1 test rolls were completely out of focus! No way to know if the bad camera was mine or his (and we thought the rewind problem was a pain!). By the time I arrived, most of the film had been processed and half of the S1 shots were unusable. Since all of the film was processed uncut, we also had to hand mount and page the pairs in groups by location.

After, we went through the pages to pick what we thought were the best few of each. We had to bear in mind that the shots would be likely be cropped to portrait/vertical (all were shot horizontal, of course). Klutho was busy cleaning and scanning while I was selecting (best part of the entire process, for sure!). I would only be there for one day, which left a day for Klutho to scan about 100 slide pairs at 50mb each slide. The last thing we did before I left for Miami (with his 3 RBT X3 cameras) was to run a test with the S1s to determine which the bad camera was. The S1 has a locking auto focus, so we photographed each other using color neg film, and
But we can’t see Yamila’s bikini!
(Stereo by David Klutho)

Klutho has Labbe grab a shot of him with Yamila.
(Stereo by Ron Labbe)

Then had dinner while it was being processed at a nearby one-hour drug store lab. I breathed a small sigh of relief when we discovered that it was my camera that was focusing properly! It came along on my trip to Miami.

David had shipped his Canon DS digital camera gear to Miami ahead of time, along with the “FlashWizard” rigs that he’d built to sync them together and with strobe lights. I knew zero about this setup, and few know the Flashwizards well—so an assistant was booked to help with them. We also had Klutho’s X3s to use as backup.

That evening I went directly from NYC to Miami, and checked into an out of the way bungalow. The next day I met the famed Mr. Walter Iooss Jr., a spry energetic older guy who was definitely from New York! We went out to the Key Biscayne beach and ran some test shots. A beach, you know, is not always the most stereo-friendly environment—usually pretty flat! We searched out some areas where there were enough decent looking palm trees to get a nice 3-D effect with the truck and model. There would be four shots to be done—three far enough to use the digital cameras, one would require the RBT S1 film camera. Walter was initially less than enthusiastic about having to go back to film, but then decided the challenge to be exciting. Film—3-D—something quite different!

The truck was brought to the spot for the test and the truck guys jacked up every tire to clean and polish the rubber and chrome, and removed any tracks and footprints. Andrew had the digital camera/Flashwizard rig wired up and ready to go—we shot the truck in various positions. For the real shoot we’d have a mobile trailer home in which to view the digital images, but that was not yet available. We had to load the digital images on to Walter’s laptop and bring it to the only place we could find out of the sun: the men’s room! So here we are, looking at a laptop monitor, at pairs I’d setup side by side, with a Pokescope viewer, with the young women producers of this very expensive GMC truck ad shoot next to some very well-used urinals! Luckily, one of the producers was able to see the 3-D effect fairly quickly (she’d looked at a lot of Magic Eye images years ago!). It was harder for her co-producer, who finally managed to get it, thankfully. I’d fulfilled my part of the mission so far! We then had to shoot a few rolls with the S1 of the truck interior (filled with strobe), and a runner drove them to the lab in Miami. These also looked fine.

The actual shoots went smoothly, until the last shot on the last day. The afternoon turned quite dark and the famous Florida winds were gusting! While we waited for
Walter to figure out how to make this work one of the crazy windsailers managed to get to shore with his sail ripped to shreds! I couldn’t imagine how we were going to pull this off, and it was sure going to get darker before it got lighter! Six huge strobe lights were brought in, and the entire area—including the palm trees—was lit! Lots of sandbags and grips were utilized to keep the huge stands from toppling. It’s quite a thing to see a seasoned professional like Walter Iooss handle the pressure and pull off a shoot in such adverse conditions. We went into the trailer to make sure we had a good pair of images on the huge 30 inch monitor. The digital guy had a hard time linking pairs (he insisted on putting all the files into one folder!) but we did finally come up with some winners. The producers were happy and the only thing left was to see the film from the S1 shoot, which wouldn’t be ready until 9 PM or so. When it was finally couriered to the bungalow I had to go through quite a few rolls worth, pairing them up in the slide pages and scanning them with my head loupe for the best shots. The lab guys were good enough to hand mount the non-standard RBT film. All the digital shots had also been shot with the X3s for insurance. My only regret is that I didn’t bring more out-takes home! I’d only grabbed a few pairs.

February! Finally, the day arrived that the 3-D issue hit the stands! Got one home and checked it out: aside from some bad gutter (split between pages) placements, I was quite pleased! Overall, I think we outdid the first issue, though there were fewer pages. We had no control over the final picks, but I think these looked pretty good! I asked Klutho what he thought, but he’d not yet seen it. A few days later, he did a quick 2-D viewing at the airport (he travels a LOT), but didn’t buy one. A week later he had a carton of them, but he’d not looked at them in 3-D yet! To this day, I don’t think he’s viewed his published images in 3-D! He’s just too busy with his future 3-D projects! Stay tuned: more great 3-D to come!
Stereo Mission Images Available

NASA has released the first three dimensional photos of the sun taken by a pair of spacecraft named STEREO. (See SW Vol. 32 No. 1, page 16.) Magnetic loops, prominences and plumes will practically leap out of your computer screen. These images will be displayed on big screens at many museums and science centers around the USA or at www.nasa.gov/mision_pages/stereo/main/index.html.

One of the first STEREO Mission stereos released (174608 main Image 1A), combines four different wavelengths into one image allowing scientists to compare different features and wavelengths. (NASA anaglyph)

Miniature Stereoscopic Surgical Camera

Visionsense Corp. has announced a new “chip-on-a-stick” 3.4 mm stereoscopic camera for minimal invasive surgery. The unique camera technology is claimed to provide image quality equivalent to High Definition (HD) and to provide the surgeon with real-time “natural” stereo vision, 3-D measurements and image fusion (“see-through-tissue”) that combines stereo vision with MRI, CT or ultrasound and displays both merged.

Visionsense’s 3D stereoscopic camera enables new surgical specialties and procedures that are under served by traditional flat visualization products, in markets such as: Spine, Neurosurgery, Gynecology, Urology, General Surgery, Micro, Plastic and Orthopedics. More can be found at www.visionsense.com.

New Site to Preserve Work and Memories of 3-D Personalities

Departed 3-D Photographers, Authors, Inventors and others will live on digitally for all to appreciate at www.unforgettablestereoscopic3d.com.

Created by Susan Pinsky, with assistance from David Starkman, credit for this site also has to be given to Jan Burandt, the Editor of Stereoscopy, and Alexander Klein, webmaster for Stereoscopy.com, and host of the site. This is an ongoing project. Visit the site and bookmark the Home Page, as new additions will be added as photos, information and time are available.

Stereo culture, heritage, tradition and foundation have been established by many inspired, creative and inventive people whose names we remember, but whom we may know little about. Together we will share a bit of the 3-D contributions they left us. Unforgettable Stereoscopic3D.com is an ongoing undertaking to try to gather images, information and stereoscopic history of people we choose not to forget.

Just a few of the initial names to be included are: Pat Whitehouse, Tony Alderson, Karl Struss, Herbert C. McKay, David Hutchison, John Meredith, Paul Wing, Peter Palmquist, Seton Rochwite, Conrad Hodnik, Tommy Thomas and Stergis M. Stergis. This is a joint effort. Feel free to email, write or call us with additional ideas, suggestions and information. Write to us at susan@UnforgettableStereoStereoscopic3D.com.

This column depends on readers for information. (We don’t know everything!) Please send information or questions to David Starkman, NewViews Editor, P.O. Box 2368, Culver City, CA 90231.
A Harry Potter 3-D Snippet

Imax Corporation and Warner Bros. Pictures have announced that about 20 minutes at the end of the IMAX DMR edition of Harry Potter and the Order of the Phoenix will be converted to 3-D when the film opens July 13. To which one IMAX projectionist replied: “Yeah, this is bloody brilliant... Two and a half hours of black scrap film and a lamp on for no reason, all for 20 minutes of 3-D at the end, by which point most people will have broken their glasses.”

Meet the Robinsons

(Continued from page 18)

The 3-D effects in Meet the Robinsons represent a considerable advance for McNally beyond his initial efforts with stereoscopic conversion of Chicken Little in 2005 at Industrial Light and Magic. Serious 3-D contributions were also made by Brian “vtxdoctor” Gardner and Bernard Mendiburu working on stereoscopic layouts. Stereoscopic software for the project was developed by Paul Allen Newell.

Meet the Robinsons opened in 3-D on over 600 screens with stereoscopic digital projection devised by the Real D technology company. In November 2005, Disney’s Chicken Little opened on 84 digital 3-D screens with the same process. Real D is putting an increasing number of 3-D screens in theaters on a daily basis.

We are reaching the end of a cycle of 3-D feature films repurposed to stereo from preexisting projects. New stereoscopic features will be built from the “ground up” specifically for 3-D narratives in the language of the “z-axis.” On March 12, for example, Dreamworks announced that by 2009 all of its releases will be in 3-D and that it had hired McNally to supervise stereoscopic production, commencing this Spring, of its first 3-D release, Monsters vs. Aliens. The new 3-D stories will be built for deep vistas behind the screen and wide open air in the audience space. Stereoscopic cinema is entering a new era.

ZAYA-RUZO

stereo equipment

From the most affordable... ...To the most advanced!

 Holmes Scope 2-in-1 for stereo cards, books, etc. $39.50

 Beam Splitter ZR-100 for digital and filmcameras $355.00

Also: stereoscope kits, parts, lenses and repairs on www.ThreeDview.com

WONDERVISION

3-DIMENSION PRODUCTS

PRESENTS

THE TRIUMPHANT RETURN OF ANOTHER STEREO CLASSIC

IF YOU MISS THE EASE, PRECISION AND SUPERIORITY OF ALUMINUM!

LOOK FOR THE WONDERVISION THEATER AT THE BOISE TRADE SHOW JULY 2007

WWW.WONDERVISION3D.COM

WONDERVISION3D@CHARTERINTERNET.COM
Think “Outside the Window”

by Michael Beech

Most, if not all, good stereo photographers rigorously follow the rule of avoiding window violations by never bringing any object ahead of the stereo window if the object is either split by the stereo window edge or appears in one chip but not the other. Some stereo photographers go so far as to never allow any part of their photo to project forward of the stereo window at all. Few ever consider violating this most sacred tenet of stereo photography. But there are ways to do so, or at least give the appearance of doing so. All we have to do is “think outside the window.”

This is possible if the part of the object being split (cut-off) by the window is restored to a degree of completeness acceptable to the eye and mind. If this is done correctly, the object appears to be forward of and overlapping the stereo window edge, much like the leg of a man stepping through an actual window. In this way some unusual but workable and high impact image pairs can be created.

The Concept

Visualize a common stereo card with each chip totally white or blank (the same exact color as the card itself). The entire card appears to be blank. Place a mental dotted line around the two areas which would be the borders of the images if you could see them. That is the “real” stereo window. If you work entirely within those imaginary dotted lines you can do some amazing things.

Window Violations Rule Bent, But Not Broken

The image manipulations described here were done with Photoshop 7, but any full-featured image editor, such as Paintshop Pro, should be adequate. The first image, Figure 1, “Attack”, is the metal plated skull of a peccary or javelina (a pig-like animal found in the desert southwest, mainly in Arizona). The skull had originally been photographed with the thought that it would be interesting to allow its upper jaw to project partially, maybe mostly, forward of the stereo plane (through-the-window effect) to give the viewer an impression of being threatened or attacked. Indeed, the completed stereo was quite effective that way. But, noticing the down thrusting lower jaw, I had a notion that the stereo might be enhanced if the lower jaw appeared to be actually overlapping the lower edge of the window. The only way to do this was to create a “false” lower window edge. This was done with Photoshop by simply erasing everything but the actual jaw below the line.
where the lower window edge would “appear” to be. Looking at Figure 1, it is important to understand that the actual bottom stereo window edge is still there, somewhat below the bottom of the jaw—except it is invisible because it’s white like the paper the image is printed on.

Then, partly as a whimsical touch, but mainly because it is just as important to fool the mind as well as the eye, the image was completed with a caption similar to a stereo card but allowing the subject to overlap and partially hide the caption. This was intended to give the impression that the object in the stereogram had just come to life. This has drawn criticism from some (“I can’t read the caption.”) while others have greatly enjoyed the effect. Regardless, the appearance of this monster (especially on a monitor screen) is quite shocking.

**Right and Left Edges Penetrated**

Having succeeded in creating the appearance of violating the bottom edge of the window frame (in effect if not in actuality), how about the sides of the window? To do this you need an object which starts within the window at one side and finishes projecting beyond the other side of the window. In Figure 2, “Engine 191”, to avoid having the left engine project into the right window, the shape of the false window was changed to an oval. The explanation of the actual construction of the “Engine 191” stereogram, since it is lengthy, is provided separately at the end of this chapter for those who are interested.

Next, let’s attempt to get an object completely outside the window while apparently violating both the edge and the bottom. Figure 3, “Warthogs”, is provided as an example of this effect.

To create Figure 3, all the necessary corrections were done, the left and right images were carefully aligned, and the stereo window set so that one warthog appeared to be forward of the window (the plane of the paper) and everything else appeared to be behind it. With both chips in separate layers in the same file in Photoshop, the images were placed directly over one another in prefect register so that the zero offset point (stereo window plane) would appear to be near the tail of the lead warthog. A rectangular marquee selection was
placed around the portion of the image that would appear to be behind the window. The left and bottom edges of the selection would be where the apparent or "virtual" stereo window would appear to be. To the left and below the selection box everything was erased in both image layers, except for the warthog. As you see in Figure 3, the left warthog appears to be outside and ahead of a "virtual" or false window frame and everything else is within and behind. Again, the warthog and the scene are both within the actual stereo window—the imaginary dotted line—so no violations are perceived by the eye or mind.

In every picture, the important thing to grasp is that one or more of the stereo window edges have been hidden by making the color inside and outside the real window edge the same. The color of the stereogram card is continued inside the real stereo window edge, hiding the real stereo window edge(s) from view.

**Extracting an Object from its Background**

To create images like these, you should possess some degree of skill in extracting objects from their backgrounds. Some tips may be in order.

Extracting a 3-D image from its background is not quite the same as just erasing the background. One big difference is that you have to do it twice. Furthermore, each image must match the other perfectly. The first step is to do a careful extraction to transparency of the parts of both images that will appear to be outside the false window frame. Use whatever image editor tools you prefer. Using the Pen tool and Paths is good and the Lasso tool and Delete key works for most things, but a simple Eraser tool and patience will get it done, as well.

The extractions for the images shown here were done after alignment was completed. Both images as layers, named Left and Right, were still in the same file in Photoshop. While doing the extraction (so you can see edges better) it is helpful to install a temporary layer of a color that is in counterpoint (dark on light or the opposite) beneath the layer containing the object you are extracting. Pure white or black usually works best, but I often use both when working on an image (for different areas of the extraction).

The two images should be aligned perfectly for rotation, up-and-down registration, and the stereo window set where you want it to be. Then you can do a careful extraction. Once the backgrounds have been removed (around just the parts of the image outside the virtual window frame) then the extractions should be compared, one to the other, to confirm that they are an exact match.

Sometimes (not often) it is necessary to confirm that the extracted edges of the two images are precisely the same. To do this, change the opacity of the top layer to about 50%. This will allow you to see through the top layer and make comparisons of the edges. You should work at high magnification—perhaps 4x pixel size. That is to say, 1 image pixel covering 4 pixels on the screen. It is important while making the edges match that you use only the left and right arrow keys to move the top layer about. Otherwise, you won't be comparing equivalent sections of the edges and you could lose your perfect vertical alignment.

Find a spot near the extraction edge in the top layer that you can line up over itself in the bottom layer and use only the left and right arrow keys to do so. You will then be able to see whether, in one layer or the other, the edge extends out into the extracted area incorrectly. If it does, then that part must be trimmed away. To do this, select the correct layer and erase the superfluous piece of edge. Continue along the edge doing this, but don't work too far away from the aligned point (because of divergence).

For example, suppose you are extracting along the edge of a wall that recedes into the picture. The offset at the front of the wall is far less than the offset at the back, so you must constantly realign the images as you work to avoid trimming into a part of the image that you really need to retain. You can use the Window > Documents > New Window command to open a second view of your file and resize it so you can see both windows, i.e., your magnified working space and the complete image. This way you can track what is occurring as you work along the edge.

It helps to go back when you are finished with the extraction and use the Blur tool to slightly soften the extraction edges. It seems odd, but the blurring of the edges makes the two images fuse better when viewed in stereo.

**How the “Engine 191” Stereogram was Made**

To make "Engine 191", both the left and right images of the steam engine were completely extracted from their photos. The background was made transparent around the engine in both chips. This was done with both the left and right chips in the same file. Layer 1 contained the right image and layer 2 contained the left image. The Background layer was white to aid visibility of the edges as the extraction was performed.

Once the extraction was completed, an oval selection shape was made and inverted in Layer 1. Then a small part of the rear of the train that was outside the selection boundary was erased on both
Layer 1 and Layer 2. In order not to lose a selection boundary, it is convenient to store it as a selection in an alpha channel whence it can be recalled if needed (Selection > Save Selection).

A color was chosen to fill the area outside the selection boundary and applied with the command "Create new Fill or Adjustment Layer". The resulting mat looked flat, so I selected Add a layer style / Bevel and Emboss, set the Style to Inner Bevel, set Technique to Hard Chisel, set Direction to Up, set Angle to 70, and adjusted the opacities to about 50%.

After I was satisfied with the look, the modified fill layer was duplicated. The layers were then rearranged to this order (from background to top); the white Background layer, an oval fill layer, Layer 1 (the right view), Background copy (a copy of the white layer), an oval fill layer, and Layer 2 (the left view).

The white area inside the oval mat now looked too stark, so the Create new Fill or Adjustment Layer option was again selected and a gradient was created in a slightly lighter color than the mat color. The gradient layer was duplicated and the layers were arranged so that there was one gradient layer beneath each oval mat layer.

Eventually a problem was discovered ... the bevel also repeated around the outside of the mat, and this was not wanted. Using the Rectangular Selection tool, I selected an area that would be inside the final crop lines (just .02 inches to the left of the oval and touching the nose of the engine). Choosing the Create new Fill or Adjustment Layer option, two new mats were made the same color as the oval mat. One of these was placed above each oval mat, successfully hiding the unwanted outside edge bevel.

The Layers > Merge Visible option was used to merge the top 5 layers (not counting adjustment layers) into a finished left image. The bottom 5 layers were then merged to create the finished right image. Figure 4 shows the Layers palette just before the top 5 layers were merged. The canvas was expanded to the left using the mat’s color as the background. The left image was moved into place at the left. The image was then flattened and saved.

**Dream Machine**

Another example of the out-of-frame effect is the Dream Machine stereogram, Figure 5. For this image the entire automobile was extracted from a very cluttered background and a flat photo of a cloud was substituted in its place.

**Scream**

Finally, a favorite of mine, Scream, Figure 6. This is another full extraction pasted down over a black rectangle which was created to represent the virtual window.

With good image editing software, such as Photoshop or Paintshop Pro, a little practice and patience is all that is required to accomplish the necessary image extractions. Once you gain a little skill, you'll find that this is often a

(Continued on page 37)

---

**The Digital Stereo Tutorial**

The Digital Stereo Tutorial is provided as a book on a CD. It is comprised of 120 pages of instruction in MS Word format 65 illustrations, figures and stereo images.

The reader is first carried from novice to effortless competency in the production of stereo views. Subsequent chapters provide a new level of understanding of the art. Unlike other stereo tomes, where deep math and complex trigonometry obscures the meaning, making concepts difficult to understand, everything is presented in plain, easy to understand terms. In the first chapters all the little mysteries about stereo are cleared up.

In the middle chapters, many easy techniques are presented that can be used to navigate the many pitfalls that trip up the unwary stereographer. These concepts should greatly increase your number of perfect stereos and eliminate the disappointing stereos which failed for seemingly no reason. Topics include avoiding and digitally correcting distortions, rivalries, monocular objects, rotation errors, window positioning, etc.

The last chapters go completely wild and explain how to make the jaw-dropping through-the-window effects, out-of-frame techniques, 2-D to 3-D conversions, warped frame illusions, sphere conversions, and many other exciting effects you have often seen. The chapters on 2-D to 3-D conversion are possibly the most complete and thorough information on the subject available anywhere. Further, the information in the chapters that teach frame manipulations and effects is unique.

The price of the tutorial, on CD, is US $24.95 plus shipping. (USA shipping $4.00. International shipping $6.00). E-mail to PhotosN3D@aol.com for ordering information.
Stereographic conversion of "flat" two-dimensional images is one of the "holy grails" of stereoscopy. Though the fundamental principles of such a procedure have been long established, the method and means of repurposing 2-D images to 3-D are still in the process of becoming a "mature" technology. It is an artistic and perceptual strategy that continues to elude automation. So sensitive is the human sensorium to retinal disparity and spatial perception of the visual world, an automatic means of stereo conversion has yet to be successfully implemented. In addition, with moving images the amount of visual information that must be manipulated is so large, any effective process of stereo conversion in "real time" has proved quite elusive.

Fortunately, the complexities of the task have not daunted or stopped various utopians of stereography from making inroads with this most challenging of repurposing technologies.

States of the Spatial Art
Stereoscopic displays were highly visible at the 2007 Consumer Electronics Show (CES) in Las Vegas. Autostereoscopic video displays were much in evidence, with a 42-inch LCD 3-D monitor from LG, the "intelligent" display from "The 3D Company" (Dubai) and Phillips' WOWvx professional displays. Autostereoscopic displays are rapidly becoming a mature technology. Almost every one of them have evolved from the classic 1903 U.S. Patent (No. 725,567) by Frederic E. describing a "Parallax Stereogram and Process of Making Same." This was a lenticular autostereoscopic process and represents the first really practical method of producing a stereo photograph which did not require glasses for viewing. One of the virtues of the proliferation of autostereoscopic displays, of course, is the creation of a need for stereoscopic content. The growth of digital 3-D cinema also creates such a need. And those needs can be partially answered by stereo conversion of "flat" content to three dimensions.

In addition to the WOWvx display Phillips was demonstrating a suite of 3-D content enabling software to convert existing material to stereo with what they call a "2D plus depth" format using plug-ins for animation software and "semi-automated" conversion tools for 3-D conversion of two-dimensional video. The important term there, of course, is "semi-automatic," because for any stereo conversion procedure to be effective, the intervention of the human hand and eye still remains artistically necessary.

The Syntax-Brillian Company demonstrated their 3D Olevia display, a 32-inch LCD HDTV display running content from the Digital Dynamic Depth (DDD) company's "TriDef Vision" software that converts existing 2-D broadcast or DVD content to 3-D in real time. DDD stereo conversion technology uses gray-scale depth mapping of 2-D imagery that generates left and right eye images, as well as the intermediate views necessary for autostereoscopic displays. DDD, like Phillips, continues to work on a real time solution to automatic stereo conversion of 2-D moving images.
Z-Axis Repurposing in the 1950s

By using two sets of registration punch marks on acetate cells in cartoons of the early 1950s, stereoscopic animation was achieved from primarily “flat” source material. These animated 3-D cartoons featured well-known characters such as Bugs Bunny, Popeye and Casper, the Friendly Ghost and now they have achieved classic status. Most of these twin-strip 35mm cartoons were seen recently in 2006 in Hollywood at the World 3D Film Expo II with dual projection on a silver screen and polarizing filters.

Among the cartoons screened in Hollywood recently was Hypnotic Hick, a seven-minute twin-strip film from 1953 featuring Walter Lantz’s “Woody the Woodpecker.” With a 1953 U.S. Patent filing granted on January 8, 1957 for a “Method Of and Means For Producing Stereoscopic Animated Cartoons,” William F. Garity illustrated and described a method of “preparing cells, bearing representations of objects at different distances from an observer, for the production of animated cartoon films for stereoscopic projection.” This patent was assigned by Garity to Walter Lantz Productions.

Observing Hypnotic Hick closely in stereo, as well as Popeye, Ace of Space, and Boo Moon, featuring Chrysler film for the 1939-40 World’s Fair in New York and applications for Vectography along with Edwin H. Land during World War II.

Another foundational patent (U.S. No. 2,057,051) for stereoscopic conversion was granted in October, 1936 to Freeman H. Owens and titled “Method of Drawing and Photographing Stereoscopic Pictures in Relief.” The fundamental principle of Owens’ patent for stereo conversion is illustrated by breaking down a newspaper drawing into “various picture units” consisting of background, middle rear ground, middle ground and foreground picture units. Each of these units is reproduced as “transparent picture units or cells” that carry two sets of registration marks. The register marks allow for assembly of the separate cells into two different composite pictures, one for the left eye and one for the right. Owens notes that “the dissecting of the picture...requires some artistic sense of values, but does not require great skill, and may be done rapidly and largely mechanically.”

Stereo Foundations

With a series of three articles published in the Journal of the Optical Society of America (JOSA) from 1938 to 1941, John T. Rule, a Professor of Engineering Graphics at the Massachusetts Institute of Technology, formulated practical techniques for drawing, photographing and projecting both still and moving stereographic images. In his February, 1941 JOSA paper, “The Shape of Stereoscopic Images,” Rule wrote that the purpose of the paper was “to supply an exact tool for the analysis of stereoscopic effects so that it may become possible to determine the reasons for observable distortions and to predict the results of any proposed optical system.” In the absence of a unified literature on the subject of stereoscopy, Rule’s work was foundational and important.

In 1939, Rule was granted U.S. Patent No. 2,171,894 which described an “Apparatus for Producing Stereoscopic Drawings.” The apparatus, which Rule described as a “space pencil,” could “automatically and accurately” produce “two perspective views of the object drawn, which perspective views are accurately related to each other in a manner corresponding to the relationships of binocular vision.” Rule subsequently worked with John Norling on stereoscopic production of In Tune With Tomorrow, the short 3-D Chrysler film for the 1939-40 World’s Fair in New York and applications for Vectography along with Edwin H. Land during World War II.

Another foundational patent (U.S. No. 2,057,051) for stereoscopic conversion was granted in October, 1936 to Freeman H. Owens and titled “Method of Drawing and Photographing Stereoscopic Pictures in Relief.” The fundamental principle of Owens’ patent for stereo conversion is illustrated by breaking down a newspaper drawing into “various picture units” consisting of background, middle rear ground, middle ground and foreground picture units. Each of these units is reproduced as “transparent picture units or cells” that carry two sets of registration marks. The register marks allow for assembly of the separate cells into two different composite pictures, one for the left eye and one for the right. Owens notes that “the dissecting of the picture...requires some artistic sense of values, but does not require great skill, and may be done rapidly and largely mechanically.”
Casper the Ghost, instances of true stereoscopic drawing were occasionally present with actual elements drawn as right and left eye stereo pairs. Most of the 1950s 3-D cartoons, however, exhibited a world of limited visual space consisting of four or five planar levels going back into the screen.

But, in 1951, two years prior to the Hollywood 3-D boom, Norman McLaren had achieved the summit of artistic expression for stereoscopic conversion with two short films made for the Festival of Britain titled Now is the Time and Around Is Around.

With a paper written for the SMPTE Journal, “Stereographic Animation: The Synthesis of Stereoscopic Depth from Flat Drawings and Art Work,” McLaren detailed his production technologies. To make both these films, McLaren had “to synthesize three-dimensional space, from two-dimensional subject matter.”

A conventional camera, optical set-up and animation stand was used for Now is the Time. Parallax for left and right eye views was created with movable cutouts in the artwork. The cutouts were moved left or right according to calculations based upon screen size which, at the Festival of Britain, was fifteen feet. For research, McLaren consulted John T. Rule’s classic papers on stereoscopic projection. Parallax by lens shift was also created with optical prints made from the hand-drawn negative to produce left and right eye optical negatives. Optical prints made from the hand-drawn negatives were used to produce left and right-eye optical negatives. Color separation negatives (yellow, cyan and magenta) were made from the combined elements for release color printing by Technicolor in England.

Around Is Around used both standard cell animation double-punch techniques and frame-stagger photography of oscillograph patterns in motion. The oscillograph patterns were controlled manually with a knob and the Bell & Howell camera ran at eight to twelve frames per second for greater control of pattern modulation. The black and white stereo pairs were optically printed as yellow, cyan and magenta color separation negatives for release printing in twin-strip Technicolor.

Both Now is the Time and Around is Around were also screened with dual stereoscopic projection in September 2006 at the World 3D Film Expo II in Hollywood.

**IMAX, In-Three and Digital 3-D Cinema**

Stereoscopic conversion of live action motion pictures found its first application in the Large Format (LF) world of 15/70mm filmmaking with IMAX 3D. The IMAX Corporation experimented with stereo conversion of motion picture footage and subcontracted both DDD and Sassoon Film Design (SFD) to convert several segments of Siegfried and Roy: The Magic Box to stereo in 1999. In 2000 IMAX released Cyberworld 3D featuring computer generated (CG) animation which was repurposed from the original volumetric data files to stereo under the supervision of IMAX’s stereoscopic supervisor Hugh Murray. In 1998, Murray had applied for a CG stereoscopic conversion patent (U.S. No. 6,208,348) that was granted in 2002 under the title “System and Method for Generating Stereoscopic Image Data.”

At the same time, Michael Kaye, CEO of the In-Three Company of Agoura Hills, California had applied for and was granted U.S. Patent No. 6,208,348, titled “System and Method for Converting Two-Dimensional Images into Three-Dimensional Images.” Kaye has subsequently been granted a number of additional patents that build upon this original and the In-Three Company is currently converting the original Star Wars films to stereo for the emerging Digital 3-D Cinema platform.

November 4, 2005 marked the inauguration of Digital 3-D Cinema with the release of Chicken Little 3-D. On 84 digital cinema screens implementing the RealD technology for projection at 72 fps on a silver screen and viewed with passive circular polarizing 3-D glasses. Chicken Little was a CG film so the stereo conversion that was produced by ILM for Walt Disney was made from volumetric data files. A blend of digital capture and processing techniques are currently being used to repurpose CG 2-D movies to stereo. Another technique utilized recently in the digital realm is to build a new volumetric data model for different props and characters and to “texture wrap” existing art around the new model.

2006 saw the release of Superman Returns in IMAX with 20 minutes of live-action footage converted to 3-D by a team of 70 stereo artists working at IMAX under the supervision of Lorne Orleans. Monster House, a CG film created using performance capture of actors, was
repurposed to stereo by Rob Engle and his stereoscopic team at Sony Imageworks. Previously, Sony Imageworks had created the digital stereo repurposing for the IMAX 3-D version of *The Polar Express*, a performance capture CG feature film released in 2004. Tim Burton's *Nightmare Before Christmas* was also converted from scratch to stereo by ILM in 2006 and released to over 200 Digital 3-D Cinemas.

**The Human Sensorium**

Digital stereo conversion of 2-D motion pictures today still must observe the fundamental procedure of Freeman Owens. First, selection of picture units is made for placement on the Z-axis. Later, shifting of the individual units takes place, each slightly different. The result is two separate composites, left eye and right, which hopefully correspond to each other, in Rule's words, with respect to their "relationships of binocular vision." Freeman Owens minimized the importance of the "dissecting of the picture" but digital technologists today still struggle with this highly important component of stereoscopic conversion. Many different algorithms for digital imaging have been applied to this essential function, from edge detection and grayscale depth-mapping to depth-of-field calculations based on focus and sharpness.

The fundamental challenge to an automated form of picture dissection is found in the "wetware" of the human sensorium and the fact that our spatial perception of the world is based upon a highly complex visual repertoire, encyclopedic in its subtlety, and built up through experience from infancy. Monocular cues for depth such as occlusion, scale, diminution of tone and atmosphere are currently exploited digitally for the depth information they will yield in dissection of the picture for stereo conversion. And with grayscale depth-mapping, the individual sections themselves can be given roundness and a volumetric character. The orchestration of these spatial elements and their organization in visual space, however, still require what Owens originally characterized as "some artistic sense of values."
LISTED FOR SALE:

**STEREVIEW BOOK OF PRICES**, only $18.00, includes postage, 198 pages, soft cover, 5300 stereoviews listed. Great for auction bidding, collectors, and insurance companies. Doc Boehme, PO Box 326, Osakis, MN 56360.

**TIM MCINTYRE'S** new antique photo web site is up and running at www.timoni.net.

**VHS ONLY** - shot with NuView, Toshiba - "Surfing, All the Pros 3D" 2 hrs, winter/summer $25 incl. s/h. Brad Bishop, 7728 Boeing Ave., Los Angeles CA 90045.

**FOR VISTA-REALIST** stereo viewer I will trade Rolleidoscope for 120 roll film with orig. leather case. Camera in perfect order. Other items for trade: Mint Wolensak with mint viewere in orig. cartons, never used. VersaScope 40 for 35mm film with leather case. View-Master II with film cutter for 35mm film. D. Smekal, email: dpal1@shaw.ca

**ALASKA & KLONDIKE** stereo needed, especially Muylbridge; Maynard; Brodeck; Hunt; Winter & Brown; Continent Stereoscopic. Also buying old photographs, books, postcards, ephemera, etc. Wood, PO Box 22165, Juneau, AK 99802. (907) 789-8450 email: dck@AlaskaWanted.com

**COLLECT, TRADE, BUY & SELL**: 19th Century images (cased, stereo, CdV, cabinet & large paper) Bill Lee, 8658 Gildatoir Way, Sandy, UT 84094. billlette@juno.com Specialties: Western, locomotives, photographers, Indians, Mining, J. Carbutt, Expeditions, Ships, Utah and occupational.

**CORTE-COPE VIEWS or sets; any subject or condition. No viewers unless with views.** John Waldsmith, 323 Granger Rd., Medina, OH 44256.

**DAKOTA TERRITORY** (also states) stereoviews or any format photo, or information on area photographers to add to only book listing Dakota photographers. "They Captured the Moment" listing 1750+ photographers to 1920. Hard cover only left. $42.50 plus post. Dakota Photo, 636 West 21st, Sioux Falls, SD 57105. Brad Bishop, 7728 Boeing Ave., Los Angeles CA 90045.

**FLORIDA ANTHONY** stereoviews, $100 each for views I still need. Other Florida stereoviews also wanted (e.g., Fields, Wood & Bickell, Mangold, small towns) High prices paid. Hendriksen, Box 21135, KSC, FL 32915, (321) 452-0833.

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

I'D LIKE TO KNOW if Sensio's *Jaws 3D* is analog? If so, don't want. If alt. field, where can I get Sensio's (or anyone's) alt. field *Jaws 3D*?

**MUYBRIDGE VIEWS** - Top prices paid. Also Michigan and Mining - the 3Ms. Many views available for trade. Leonard Walle, 47530 Edinborough Lane, Novi, MI 48374.

**PARK CITY, UTAH** wanted - mining scenes, skiing, snow scenes attributed to Park City. Utah Thanks so much! Linda Roberts, 1069 Rubio St., Altadena, CA 91001.


**SINGLE VIEWS**, or complete sets of "Longfellows Wayside Inn" done by D. C. Osborn, Artist, Assabet, Mass.. Lawrence M. Rochette, 169 Woodland Drive, Marlborough, MA 01752.

**THE DETROIT Stereographic Society** invites you to attend our monthly meetings at the Livonia Senior Center, on the second Wednesdays, September through June. Visit our website http://home.comcast.net/~dswsweb/ or call Dennis Green at (313) 755-1399.

**WEST VIRGINIA** stereoviews, photo postcards, other photography, books and old paper. I buy from xerox or e-mail scan. Tom Prall, PO Box 155, Weston, WV 26452. WVABOOKS@AOL.COM (304) 924-6553.

**WHITE MOUNTAINS**: Early photographic views and stereoviews of new Hampshire White Mountain and northern NH regions, 1850s-1890s wanted for my collection. Town views, main streets, bridges, homes, occupational, coaches, railroads, etc. E-mail images to dsusman @LittletonCoin.com, or send photocopies to David Sundman, President, Littleton Coin Company, 1309 Mt. Eustis Rd., Littleton, NH 03561-3735.

YOU COULD HAVE told the world of your stereo needs in this ad space! Your membership entitles you to 100 words per year, divided into three ads with a maximum of 35 words per ad. Additional words or additional ads may be inserted at the rate of 20¢ per word. Please include payments with ads. We cannot provide billings. Ads will be placed in the issue being assembled at the time of their arrival unless a specific later issue is requested.

Send all ads, with payment, to:

**STEREOWORLD CLASSIFIEDS**, 5610 SE 71st, Portland, OR 97260.

(A rate sheet for display ads is available from the same address. Please send SASE.)
19th and Early 20th Century Stereoviews For Sale

Over 10,000 all illustrated, graded & priced (including glass views), work by Bedford, England, Sedgfield etc. Especially strong on UK and European views.

Only online at: www.worldofstereoviews.com

National Bank Views Wanted

Desire stereo views of national banks (not savings banks or other banks), any state or territory, USA; any and all 19th century and early 20th century. I am just beginning this endeavor and need just about everything!

Dave Bowers
PO Box 539
Wolfeboro Falls, NH 03896

E-mail: qdbarchive@metrocast.net

ARCHIVAL SLEEVES: clear 2.5-mil Polypropylene

<table>
<thead>
<tr>
<th>Size</th>
<th>100 per</th>
<th>Case of 1000</th>
<th>Case of 10000</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDV / Snapshot (3 3/8&quot; x 4 3/8&quot;)</td>
<td>$9</td>
<td></td>
<td>$85</td>
</tr>
<tr>
<td>CDV Polyester (3-mil)</td>
<td>$15</td>
<td></td>
<td>$140</td>
</tr>
<tr>
<td>Postcard (3 3/4&quot; x 5 3/4&quot;)</td>
<td>$10</td>
<td>$90</td>
<td>$900</td>
</tr>
<tr>
<td>4&quot; x 5&quot;</td>
<td>$11</td>
<td>$90</td>
<td>$900</td>
</tr>
<tr>
<td>Stereo / #6 3/4 Cover (3 3/4&quot; x 7&quot;)</td>
<td>$11</td>
<td>$80</td>
<td>$800</td>
</tr>
<tr>
<td>Stereo Polyester (3-mil)</td>
<td>$24</td>
<td>$200</td>
<td>$2000</td>
</tr>
<tr>
<td>Cabinet / Continental (4 3/8&quot; x 7&quot;)</td>
<td>$12</td>
<td>$110</td>
<td>$1100</td>
</tr>
<tr>
<td>#10 Cover / Brochure (4 3/8&quot; x 9 5/8&quot;)</td>
<td>$12</td>
<td>$110</td>
<td>$1100</td>
</tr>
<tr>
<td>5&quot; x 7&quot;</td>
<td>$10</td>
<td>$85</td>
<td>$850</td>
</tr>
<tr>
<td>BOUDOIR (5 1/2&quot; x 8 1/2&quot;)</td>
<td>$9</td>
<td>$55</td>
<td>$550</td>
</tr>
<tr>
<td>8&quot; x 10&quot;</td>
<td>$10</td>
<td>$55</td>
<td>$550</td>
</tr>
<tr>
<td>10&quot; x 14&quot; MUSEUM BOX SIZE</td>
<td>$11</td>
<td>$85</td>
<td>$850</td>
</tr>
<tr>
<td>11&quot; x 14&quot;</td>
<td>$10</td>
<td>$80</td>
<td>$800</td>
</tr>
<tr>
<td>16&quot; x 20&quot;</td>
<td>$24</td>
<td>$160</td>
<td>$1600</td>
</tr>
</tbody>
</table>

Russell Norton, PO Box 1070, New Haven, CT 06504-1070

Carl’s Clean & Clear Archival Sleeves

Polypropylene Acid Free

<table>
<thead>
<tr>
<th>Size</th>
<th>100 per</th>
<th>Case of 1000</th>
<th>Case of 10000</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDV (2-3/4 x 4 3/8)</td>
<td>$9</td>
<td></td>
<td>$80</td>
</tr>
<tr>
<td>Snapshot (3-1/4 x 4-3/8)</td>
<td>$9</td>
<td></td>
<td>$85</td>
</tr>
<tr>
<td>Postcard (3-3/4 x 5-3/4)</td>
<td>$10</td>
<td></td>
<td>$90</td>
</tr>
<tr>
<td>4 x 5</td>
<td>$10</td>
<td>$90</td>
<td>$900</td>
</tr>
<tr>
<td>Stereo (3-3/4 x 7)</td>
<td>$11</td>
<td>$100</td>
<td>$1000</td>
</tr>
<tr>
<td>Cabinet (4-3/8 x 7)</td>
<td>$11</td>
<td>$100</td>
<td>$1000</td>
</tr>
<tr>
<td>5 x 7</td>
<td>$10</td>
<td>$200</td>
<td>$2000</td>
</tr>
<tr>
<td>#10 Cover (4-38 x 9-5/8)</td>
<td>$11</td>
<td>$200</td>
<td>$2000</td>
</tr>
<tr>
<td>BOUDOIR (5-1/2 x 8-1/2)</td>
<td>$9</td>
<td>$60</td>
<td>$600</td>
</tr>
<tr>
<td>8 x 10</td>
<td>$10</td>
<td>$70</td>
<td>$700</td>
</tr>
<tr>
<td>8-1/2 x 11</td>
<td>$10</td>
<td>$85</td>
<td>$850</td>
</tr>
<tr>
<td>11 x 14</td>
<td>$10</td>
<td>$75</td>
<td>$750</td>
</tr>
<tr>
<td>16 x 20</td>
<td>$25</td>
<td>$200</td>
<td>$2000</td>
</tr>
</tbody>
</table>

Total

U.S. Shipping—$4 per order
California Residents add 7.38% sales tax

Grand Total

Carl Mautz
329 Bridge Way
Nevada City, California 95959
530-478-1610 Fax 530-478-0466
cmautz@ncn.net

* Order Sleeves or Books online at www.carlmautz.com
P200 Digital with adjustable hyper stereobase

3D Concepts

Keep visiting our website for updates, give us a call or email if you have any questions

www.make3Dimages.com

NEW RBT S3A! (details to be announced)

P200 EBF (extended base frame) Digital
Jefferson Stereoptics

John Saddy
50 Foxborough Grove
London, Ontario N6K 4A8
CANADA

Phone: (519) 641-4431
Fax: (519) 641-0695
E-mail: john.saddy.3d@sympatico.ca
Website: http://www3.sympatico.ca/john.saddy.3d

FINE OFF-EBAY STEREOWVIEW AUCTIONS WITH DIRECT BIDDING ON-LINE,
AS WELL AS BY PHONE, FAX, E-MAIL TO ME, AND POSTAL MAIL.
(Paper Catalogues available.)

You are welcome to register for my stereoview auctions. There is no charge.
I also have a separate registration for my View-Master (Etc.) Auctions, which have
more-modern stereo and 3-D formats. I am presently selling off the Willie Aarts Collection
with some of the Rarest of the Rare in View-Master reels and viewers.

I SPECIALIZE IN CONSIGNMENTS.
Consignments welcome,
from a single view to giant collections.

←Left: Helene Leutner
(German Actress)
→ Right: The Young Velocipedist

←Left: Edward Stokes, who shot
Jim Fisk over
a woman.
→ Right: View from the wood car,
behind the locomotive
in full motion.

←Left: Tissue Genre View.
→ Right: General U.S. Grant