



Invitation 6th Powerdome Workshop at Carl Zeiss in Jena, October 7-9, 2012

Dear powerdome user,

The Carl Zeiss Planetarium Division is pleased to invite you to the 6th powerdome Workshop, in which you can get thoroughly familiarized with powerdome software, share your own experience with other powerdome users, and learn interesting facts about the full-dome development in general. Meet workshop participants who have gained experience in using powerdome as well as fulldome equipment. We invite you to tell us your wishes and ideas and contribute your own expert knowledge; this will help us upgrade powerdome into a system platform that meets your requirements down to the last detail.

As with the past workshops we would like to make the workshop informal. There will be interesting lectures and demonstrations under domes of varied sizes. We will introduce new features of powerdome® II like the control of 3D models, usage of plug-ins and the rendering option. You will practice powerdome on workstations in hands-on fashion, and create your own powerdome clips and show files. In addition to the powerdome image generator we will also present the newterface to UNIVIEW software and let you play around with powerdome software.

If you are not a user, but interested in our powerdome solution, you should use your chance now. The maximum number of participants in the workshop is 20. The sooner you register, the greater will be the chance for you to take part in the workshop and to voice your own preferences as to its contents.

Time: October 07 – 09, 2012

Place: Carl Zeiss AG, Carl-Zeiss-Promenade 10, 07745 Jena, Germany

Language: English

Tentative schedule:

Sunday, Oct 7: arrival, start around 2 p.m., new fulldome systems from Carl Zeiss, introductory talks, evening social

Monday, Oct 8: mix of lectures, demonstrations and workshops in the Carl Zeiss powerdome center, evening social

Tuesday, Oct 9: deepening of powerdome, powerdome look-out, end: around 2 p.m.

Meals during the workshop will be provided by Carl Zeiss free of charge. Travel and accommodation are at your own cost. We can arrange for a Zeiss customer discount on hotel accommodation. Further information will be sent together with your registration acknowledgment or on request.

Please register informally, but definitely, and as soon as possible – the earlier, the better. The absolute deadline for registration is September 27, 2012. An e-mail or telefax message stating your name, first name, facility, and contact data (E-Mail, phone/fax, mailing address) will do.

For any further questions please contact the undersigned (e-mail: schorcht@zeiss.de).

We look forward to meeting you.

Yours sincerely,
Volkmar Schorcht
Carl Zeiss Jena GmbH
Planetarium Division

Projections

Autumnal Equinox 2012

In this issue:

- 21st International Planetarium Conference
- Vignettes from IPS
- Loch Ness Productions
- Powerdome Workshop
- Upcoming Events

Seiler and Zeiss attend the 21st International Planetarium conference in Baton Rouge LA July 22 - 27, 2012:

Every two years, the International Planetarium Society (IPS) convenes somewhere in the world to hold their conference. This year, our host was The Irene W. Pennington Planetarium at the Louisiana Art and Science Museum (LASM) in Baton Rouge. It was the largest IPS ever, with over 600 attendees from 43 countries. The Carl Zeiss Planetarium Division, a top sponsor, along with Seiler installed a digital full-



dome VELVET projection system in the host dome where Seiler's own, Brian Wirthlin, gave an amazing demonstration of the VELVET capabilities to a full house with rave reviews on three separate occasions. During the demo, Brian showed a section of the optical sky from the Zeiss Universarium star projector to show the comparison between the best digital sky and the best optical sky, proving that digital stars cannot compare to the sharpness and brightness of the optical stars. In the vendor hall, the beautiful and large Carl Zeiss display was quite the attraction, with a real ZKP4 and control console on loan from our customer at the Modesto Community College in California. The conference included many professional

papers, workshops and vendor demonstrations, and it was a wonderful opportunity for us to meet face to face with many of you.

We were treated to world class speakers on various astronomical subjects. During the Seiler sponsored luncheon, we heard a presentation by Dr. Natalie Batalha, a

continued on page 3



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News & Notes

From Laura Misajet
Sales Manager
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Planetarium Division

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A Note from Laura Misajet

Every time a group of planetarians gather together, inspiration tends to follow. The gathering at IPS this past July was no different. The quality of workshops, meetings, speakers, vendors and casual conversations are sure to spawn new ideas and collaborations, as well as rejuvenate and bond us as a community. Whether at IPS or at one of our smaller regional gatherings, we always learn from each other and advance the planetarium field as a whole.

I would like to send out a heartfelt thanks to Jon Elvert as well as all of our hosts at the Louisiana Art & Science Museum in Baton Rouge, LA. I would also like to express my sincere gratitude to Dave Weinrich and the entire IPS committee for such an inspirational and rejuvenating conference. The IPS conference theme was Bridge to New Beginnings, and I couldn't agree more!

UPCOMING EVENTS:

The 6th Powerdome Workshop will take place at the Carl Zeiss Company in Jena, Germany from October 7 - 9, 2012. Please see our invitation printed in this newsletter for details.

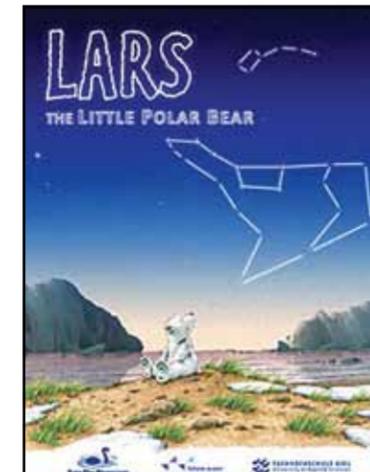
The Association of Science - Technology Centers Conference (ASTC) will take place in Columbus, Ohio from October 13 - 16, 2012. Seiler and Zeiss are a Silver Sponsor for ASTC this year, and we will demonstrate the exceptional quality of the Zeiss VELVET digital projectors as well as the latest features of Uniview 1.5 during the Planetarium Showcase on Monday October 15 at the award-winning COSI. For more information about ASTC, visit www.astc.org or the ASTC Annual Conference website, conference.astc.org.

Great Lakes Planetarium Association (GLPA) will take place in Pittsburgh, Pennsylvania from October 24 - 27, 2012. The conference will be hosted by the North Hills High School and will include a day at the Buhl Digital Planetarium at the Carnegie Science Center. The conference hotel will be the Pittsburgh Airport Marriott. Be sure to visit the conference web site for details:
<http://www.glpaweb.org/conference>

Loch Ness Productions: Two New Shows To Broaden Fulldome Content Offerings

"By Mark C. Petersen, Loch Ness Productions"

Loch Ness Productions is pleased to announce a partnership with Mediendom Kiel to distribute English-language versions of their two popular shows: *Lars the Little Polar Bear* and *Magic of the Otherworld*.



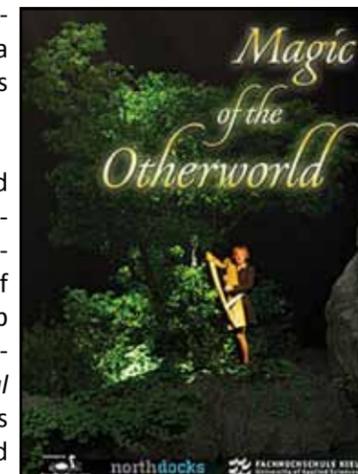
Lars is the beloved star of the children's book "Little Polar Bear and the Whales" authored by Hans de Beer. This storybook tale follows the adventures of a curious little bear who finds his arctic home warmer than usual in spring, which creates a problem for his friends, the Belugas.

Following the Lars story, the show takes a documentary-style turn, and we explore the habitats of the real-life animals in the Arctic. As you might expect with a polar bear as the star, the show offers young viewers a gentle introduction to the topic of climate change. And since this is a show for planetarium theaters, we also included a short stargazing section about the polar bears who circle the North Star in the Arctic night skies.

Loch Ness Productions created this special English-language edition, and it features our own Mark C. Petersen telling Lars's lively story. Planetarians and audiences everywhere loved *Larry Cat In Space*; now open your hearts to little Lars.

We're also pleased to be the exclusive distributors outside Germany for an amazing fulldome experience: a soothing, relaxing 50-minute treat for the eyes and ears called *Magic of the Otherworld*.

Visit snowy glaciers, underground caves, enchanted forests, mystical coastlines, and fantasy wooden sailing ships soaring into the starry night sky – virtual landscapes accompanied by the beautiful harp music of Christine Hoegl. This is the first time a concert of harp music and animation has been made for fulldome theaters. At IPS, one viewer called it "the most beautiful thing I have ever seen on the dome." We hope theaters looking for just this type of alternative offering will add it to their repertory.



These two shows are both stylistic and affordable. We've priced them according to our simple "T-shirt size" model: what you pay is based solely on the size of the movie files you need. No need to worry about annual attendance figures or seating or dome diameter.

As always, you can find previews, prices and more information about these outstanding productions and all the other fulldome shows we distribute at the Loch Ness Productions Web site.



The Best of Both Worlds!
The Zeiss ZKP4 star projector delivers fiber optic stars, the same technology in the larger Starmaster and Universarium, now with brilliant LED high intensity lamps for domes 20 - 50 feet.

Introducing: Velvet Duo Fulldome
for domes from 6 to 14 meters with either center or peripheral projection!

The two projection types work together as one, providing a complete planetarium solution.

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I am a director, but only of fulldome shows. I just try to recreate reality in as much detail as possible, and to convey emotion in graphics."

Sip plans to create future Mirage3D shows to maximize the cross-platform distribution potential. "We're going to 24/48 frames per second instead of 30/60 fps in order to be DCI compliant. It was time consuming to make a good [flatscreen] conversion of Natural Selection. We ran into artifacts and had to make a new, shot-by-shot edit. At the lower frame rate, we can skip that step next time." Because of its size and amount of information, the fulldome frame is an ideal master for extraction to other formats, he points out. "Everyone should start there." <http://www.mirage3d.nl/>

**Turning on the kitchen light at night:
The creatives behind Jeepers Creepers**

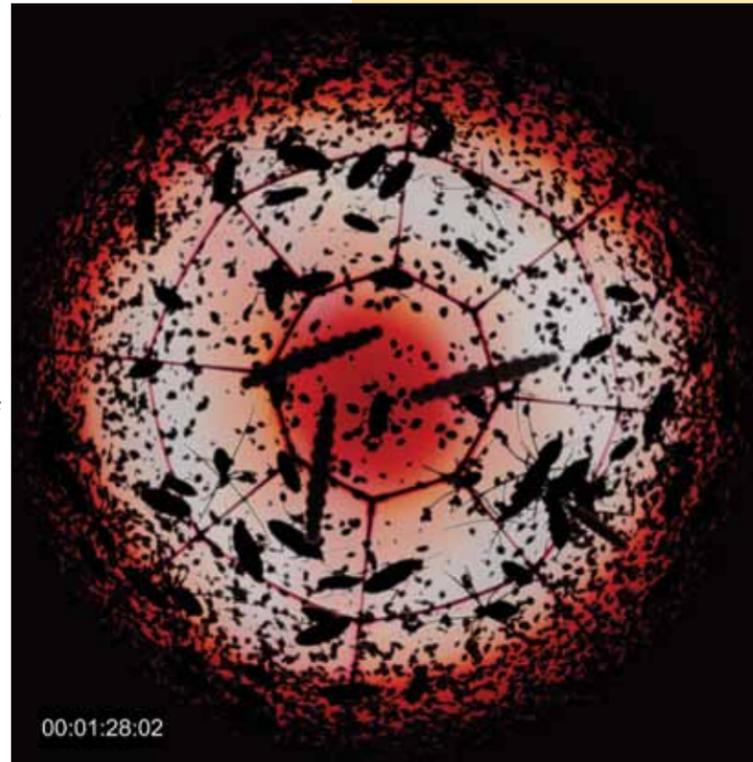
DomeFest2012, held immediately following IPS 2012, bestowed the Domie Award for Design on Jay Heinz, Peter Althoff, and Jim Kachelries for the UNC Morehead Planetarium's 2011 short subject, Jeepers Creepers. It is distributed by Sky-Skan.

JeepersCreepers also had an enthusiastic reception when screened at the 2012 IMERSA Summit in Denver. The animated, 2.5-minute show lightheartedly depicts what we all hope not to see when in the kitchen in the middle of the night - an ever-more-numerous assortment of insects and spiders, silhouetted on a light globe.

Jim Kachelries (digital artist, Morehead), who has a degree in media arts and animation and has been with Morehead about 4 years, confirmed that the lumpy critter is a caterpillar. "There's a single fly, cockroaches, spiders, caterpillars and pillbugs. They were all rendered in 3D except the fly, which is 2D." He animated the cage and its texture along with the lights, the fly and the spiders (all the same spider) and their movement cycles.

Research included consulting an entomologist about leg movements. There was also close observation. "We videotaped bugs on a translucent surface," says Heinz. Kachelries described how Peter Althoff (digital artist for Morehead) animated the pillbugs using crowd simulation. "They start at the ground, migrate toward the center, and climb on top of one another." At one point they were progressing too quickly. "We sent them along an invisible 3D plane to give them something to do."

You can read more from Judith Rubin on her blog: judithrubin.blogspot.com



Kachelries, Heinz and Althoff



21st National Planetarium Conference continued

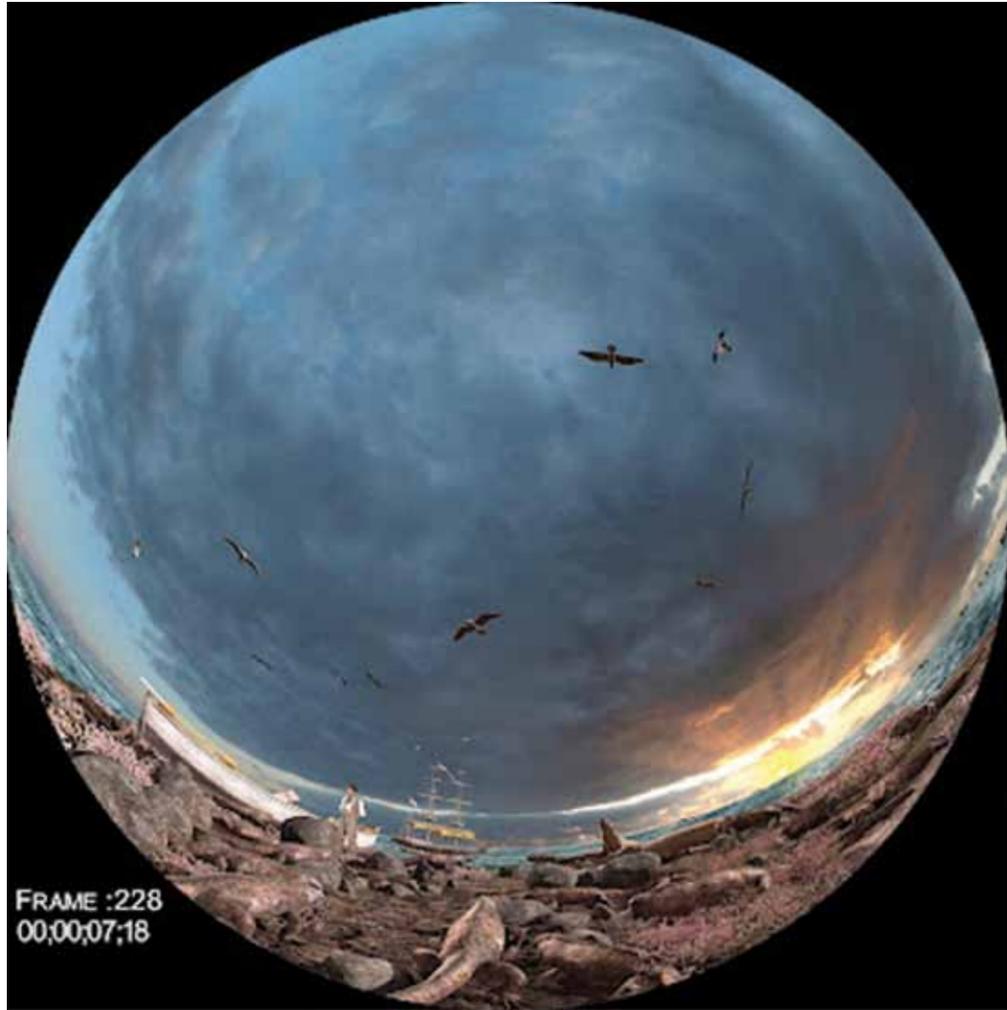
research astronomer in the Space Sciences Division of NASA Ames Research Center and the Science Lead of NASA's Kepler Mission. She holds a bachelors degree in physics from the University of California, Berkeley and a doctorate in astrophysics from University of California, Santa Cruz. She presented the latest on Kepler's search for potentially habitable planets in our Milky Way Galaxy.

The conference concluded with an amazing banquet held at the Houmas House Plantation and Gardens, culminating in a surprise fireworks display. The next IPS conference will be held in Beijing China in 2014.



From left to right: Lutz Müller, Brian Wirthlin, Olaf Kolloosche, Christian Schlager, Stefanie Neuhäuser, Ann Wagner, Sven Ziebart, Wilfried Lang, Volkmar Schorcht

Vignettes from IPS



Full-dome frame from "Natural Selection"

by Judith Rubin (rubin.judith@gmail.com)

Judith Rubin is Communications Director for IMERSA.org, a nonprofit trade group dedicated to the promotion and creative development of full-dome immersive media in multiple market sectors. This article is based on interviews she conducted at the International Planetarium Society meeting, IPS 2012, which took place in Baton Rouge July 22-26. This trade gathering takes place every 2 years and is a rich combination of sessions, exhibits, screenings and of course networking. IPS 2014 (June 23-27) will be held in Beijing.

Lean, Mean and Greenscreen

Robin Sip's Mirage3D is a successful business model for the industry

Founded by Robin Sip in 1999, Mirage3D, based in the Hague, Netherlands, stands today as an example of how a small, independent business can achieve success in the field of digital dome media production (aka "fulldome." The company now has 8 employees, a custom-built fulldome production studio that includes the 100-square-meter Chromakey greenscreen studio and 15-ft-diameter testing dome. At IPS 2012 Mark "State of the Dome" Petersen of Loch Ness Productions ranked Mirage3D as the second most popular fulldome distributor.

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Sip entered the field in 1988, gaining experience in the Omniversum Space Theatre in the Hague, at Evans & Sutherland and the London planetarium. He's made 13 fulldome shows over the past decade, three of them self-financed Mirage3D titles and the others for third parties, including a number of popular favorites and financial successes, including Two Small Pieces of Glass, Dawn of the Space Age, Origins of Life, Natural Selection, Power of the Telescope and Supervolcanoes. The recent title Cleopatra's Universe, produced for the Daniel M. Soref Planetarium at the Milwaukee Public Museum, to accompany the eponymous traveling exhibit, earned back its investment in 3 months, according to Sip.

Sip is a creative as well as a business leader - a pioneer in the application of 3D production processes for the dome as well as a risk-taker when it comes to subject matter. He reports that Natural Selection is now in 50 theaters worldwide, since its release 2 years ago. And that contrary to expectation, it is doing very well in the southern US, with distribution in Texas, Tennessee, Kentucky, Arkansas and Florida. "It's almost doing better in the South than in the North!" says Sip. "So it's not true what people said to me - that a show about evolution won't sell in the US."

He's recently embarked on a new venture to expand the distribution of Mirage3D content by reformatting it for the giant screen cinema exhibition platform: Natural Selection will show in flatscreen 2D and 3D, at DCI-compliant 24 frames per second, at the next Giant ScreenCinema Association conference.

Mirage3D is following up Natural Selection with Dinosaurs at Dusk, which is receiving some funding from Goto and will be released in about 6 months. His signature approach, both economical and effective, composites live-action filmed characters into computer-generated environments. Everything except the sound is done in-house. While Sip can and often does turn out a show in 3-6 mos, for in-house productions he often takes 18 months to 3 years because "I like to give them time to evolve."



Robin Sip

He starts with storyboards rather than a script. "I choose subjects that fascinate me and that I feel confident about from my background with planetariums. I don't shoehorn in astronomy if it isn't a real fit with the story." He gathers imagery and then creates a simple 3D storyboard, which becomes the basis of an animatic that helps determine speed and camera movement. "At this stage it's visual eye candy, emotion, and feeling. Music starts to come in there, too." The story grows while the backgrounds are being created. "Right now I have animators making trees full-time for Dinosaurs at Dusk. I didn't know anything about trees before." The incubation period is part of the creative process. "I start to see a thread. There's a lot of intuition in it. I love to take 3 years; to keep researching, being exposed to music & reference material. I'm really happy when it clicks."

Sip originally trained as an electrical engineer, then became an animator. He has no formal art background. "When I started working in a planetarium, I knew my future was there. I like to push the limits of technology. I don't feel like an engineer;

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