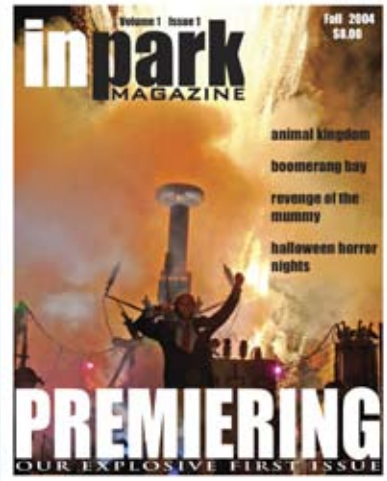
InPark: Celebrating 10 years!!

Ten years ago, armed with thousands of copies of InPark's PREMIERING issue, Martin Palicki and supporters set up their first IAAPA booth. The following year, Judith Rubin, accomplished publicist and writer, published her first article in InPark.

Things have changed a bit over the years, so enjoy this trip down memory lane: highlights from our ten years of publications.



HAPPY 10th!!!

far-out!
CREATIVE DIRECTION

Rick Rothschild CCO
818-294-0487 rickrothschild@me.com

Thank you to all of our friends

SALLY
CORPORATION
DARK RIDES & ANIMATRONICS
745 West Forsyth St.
Jacksonville, FL 32204
+1-904-355-7100
www.sallycorp.com
sally@sallycorp.com

ENTERTAINMENT DESIGN CORPORATION
Designing attractions, entertainment venues, and shows around the world
wwww.entdesign.com

BRC
IAAPA
JRA
Jack Rouse Associates
KEN SABA
writer
creative director
picsolve
UTOPIA
JUST IMAGINE
TEA
THEMED ENTERTAINMENT ASSOCIATION

MANUFACTURING FUN

2004

InPark Magazine talks to Lynn Singer from KoalaPlay Group and Jan Sherman of Sally Corporation about how parks and their guests can best benefit from their company's years of experience.

inpark When you work with a client, how involved are you in setting direction for the project?

Koala: Depends on the objective of the client. We need to be in tune with the client's objectives, since we feel our success depends on our client's success. Age groups they would like to attract, revenue goals, community involvement, theming, water or dry play attraction. It also depends on the client's experience. Some clients have a set direction where as other clients need consultation from the manufacturer.

Sally: Sometimes the client has the concept, and sometimes they come to us and we do the whole thing. For example, Challenge of Tutankhamon was our concept. We did the original development work behind it, Six Flags found it, really liked it and adopted it. With Scooby Doo, the Paramount Parks started off with that concept as they had the rights to it and they knew they wanted to do an attraction ride with Scooby Doo. They had heard about some of our interactive dark rides, so several of their staff went to Lake Compounce to see Ghost Ride. They just loved it and felt it would work perfectly as a Scooby Doo dark ride.

inpark Do you coordinate press releases with the parks on premieres?

Koala: We definately will write the press release. We also offer to assist them with an article for the trades or other media outlets.

Sally: We provide the parks with numerous press releases. They utilize whatever they can. We try to make their job easier.

inpark How involved are you in the premiere of your products?

Koala: We are as involved as the client would like us to be. Some clients already have a system in place for promoting their installations, as they do it on a regular basis. They may only want to utiltize our library of images or video for the pre-promotion of the installation. Some of our clients who are not as familiar with the process may want our assistance planning the entire grand opening, from images and video for pre-promotion, to planning the grand opening day, to designing media invitations and follow-up with the media, to writing articles and press releases.

Sally: Our role is to be there for the client, to make sure that everything is working. We are happy to talk to the media, and make sure everything is running smoothly. Most of the parks do a wonderful job of opening their attractions and we are really just a resource for them. For Challenge of Tutankhamon, we were able to shoot some video at the IAAPA trade show the year before the ride opened that the park was able to use for their publicity while the ride was being completed.

inpark What suggestions do you have for park operators to help make the launch of your products more successful?

Koala: If you are new to the industry, work with the manufacturer to find out what resources are available to assist in a successful launch. If you already have a system in place for the launch, I would suggest still working with the manufacturer because they may have some additional thoughts and resources that the customer could utilize. Here are 4 stages for a successful launch:

1)Pre-promotion - press releases, advertising in local media, stunts

2)Media preview - allow the press to get a first look and take photos

3)Grand opening for the public - advertising, stunts

4)Follow up to the grand opening

Photo Courtesy Sally Corp.

Sally artist Randy Rhodes works on an interactive exhibit at Adventure Science Museum

Sally: We can give them the benefit of our past experience with how other people have dealt with the process of premiering new attractions. We are currently talking about producing a presentation to give [potential clients] ideas for how they can handle these concepts and help promote it, as well as various avenues they can pursue because of the ride.

inpark When does your involvement with the client end?

Koala: We will work with the client as much as they would like us to. We assist in articles for them to gain attention throughout the year, we offer to work with them to submit industry awards, if they look to expand the park, we do the entire grand opening process over again.

Sally: Never. We tend to keep in touch with people all over the world. We call them up periodically and ask them how they are doing and to see if they need anything from us. Also, our customer service department is on call 24 hours a day to get help immediately should the need arise.

Mongo Wonder

The ferris wheel cabins are able to rotate.

Photography by Andrew Campbell

It's apparently too cold to even disassemble the rides during the off-season.

December is probably not the ideal month in which to explore the roller coasters of Ulaan Baatar, Mongolia. If the eye-watering, frostbite-inducing wind doesn't get you, the snarling, rabid street dogs might.

Despite the Lonely Planet traveler guide's warning, "Ulaan Baatar is the coldest capital city in the world," my husband and I were not deterred, and set off to 'honeymoon' in Central Asia. With my younger sister serving in Mongolia as a Peace Corps volunteer, we had all the impetus we needed: a free place to stay and a Mongolian speaker to show us around. Neither the prospect of freezing nor the possibility of rabies could put a stop to our plans. What follows is part travelogue, part theme park guide and insight, and part encouragement to explore both the roller coasters and cultures beyond the United States.

Surrounded by mountains, Ulaan Baatar (UB, to the

olian
tland

by Megan Riordan

One hopes the fence is fixed on this Mongolian roller coaster before summer starts.

expatriate) cradles coal smoke in the valley of the city. Since many local Mongolians continue to live in traditional gers (circular felt yurts) fueled by coal, the scent hangs heavy in the air, clinging to clothes long after going indoors. Although smoke from coal burning may obscure some long range views in UB, Mongolia is nonetheless known as "Land of the Blue Sky," with over 260 sunny days a year (Lonely Planet, 2001). The day we visited UB's National Recreational Park, called Nairamdal Park (also known as Friendship Park or Children's Park) the sun beamed in the sky even as we inhaled -16 degree coal-infused air.

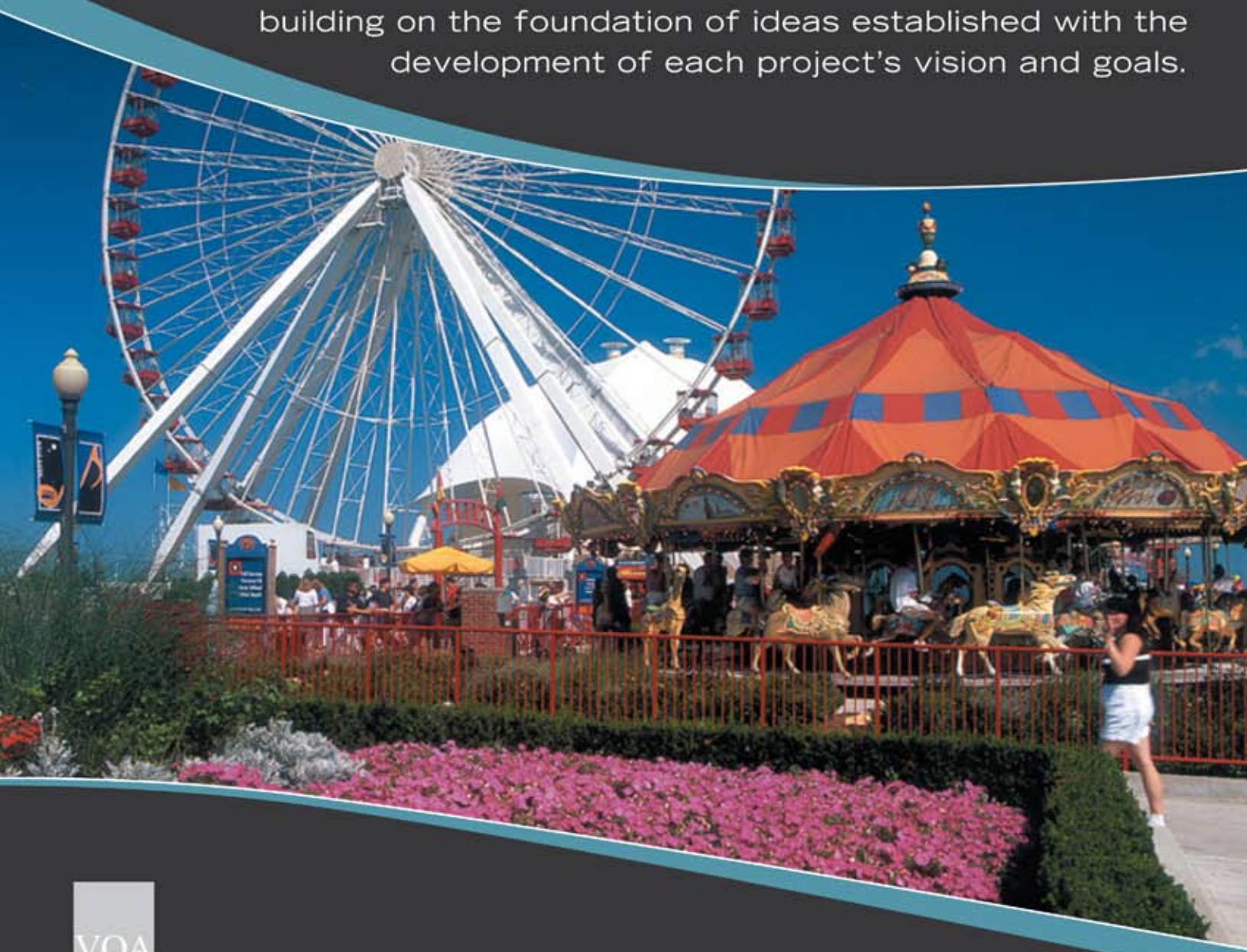
Entering through a wrought iron gate from a rather obscure side street, the park was - for good and obvious reasons – empty. A thin layer of snow frosted the ground and wild street dogs ducked in and out of sewer pipes seeking warmth. Unlike the large, commercial parks in the U.S., this one has no special signs, no football field-sized parking lots, no banners or flags, and no admission charge - even in the summer. It's a "pay-as-you-ride" kind of park wholly under the thumb of Mongolian government control. That last bit might explain why, after countless attempts via email correspondence with locals in UB, we came up empty handed in our quest to find out the price of each ride. However, when one US dollar buys 1050 Togrog (the Mongolian currency), and admission to a nearly 200 year old Buddhist monastery is 2000 Togrog, I don't image a roller coaster ride would break the bank.

My husband and I counted five rides clustered together in one area: a Ferris wheel, a small roller coaster in the rough style of a wild mouse, a twirling tea cup-like ride, an "aerobicycle" sort of ride that resembles a bike on a monorail track, and a decrepit round-up type ride.

In addition to rides, we also spotted a small, graffiti-splashed movie theater and snack bar combination. Since popcorn, licorice, funnel cakes, and cotton candy haven't made it to UB just yet, and the favorite local dish consists of fatty mutton tucked inside dough and boiled, I can't quite imagine what this snack shack serves up. Not surprisingly, in mid-December, it too was closed.

Although our off-peak season travels meant we weren't able to sample any of the park's offerings, for the adventurous soul, Nairamdal Park should land a spot on the radar. While perhaps not as sexy or glamorous as parks in the U.S., Mongolia's scene provides something much more rare: an unfiltered experience. No fantasy castles with pastel spirals greet the customer. No promotions plaster brochures. No vendors hawk T-shirts or stuffed animals. In Mongolia, one simply walks into a real park, with real (though admittedly 1970's Soviet era) rides. That is the atmosphere of a park in Ulaan Baatar; just as the street dogs, icy winter winds, and lingering scent of coal are part of life in Mongolia as well.

Our team is committed to creating truly unique destinations, building on the foundation of ideas established with the development of each project's vision and goals.



VOA

VOA ASSOCIATES INCORPORATED, founded in 1969, is an international architectural, planning, interiors, and landscape architectural practice with a focus on themed entertainment, performance venues, theme parks and attractions, resorts, spas, mixed use, retail, and restaurants.

Our diverse range of services include:

- Architecture
- Planning
- Interior Design
- Master Planning
- Landscape Architecture
- Programming
- FF&E Procurement
- Branding
- Graphic Design
- Placemaking
- Repositioning
- Sustainable Design / LEED

CONTACT INFORMATION

Jonathan F. Douglas, AIA
VOA Associates Incorporated
4798 New Broad St, Suite 100, Orlando, FL 32814

V 407 425 2500 • E jdouglas@voa.com

CONNECT

@VOADesign
www.facebook.com/voaassociatesinc
www.voa.com

Orlando | Chicago | Los Angeles | Highland | New York City | Washington, D.C. | São Paulo | Bogotá | Shanghai | Beijing

PHOTO COURTESY ANDY & DEBI SIMPSON

Summer brings warmer temperatures and more riders.

PHOTO COURTESY ANDY & DEBI SIMPSON

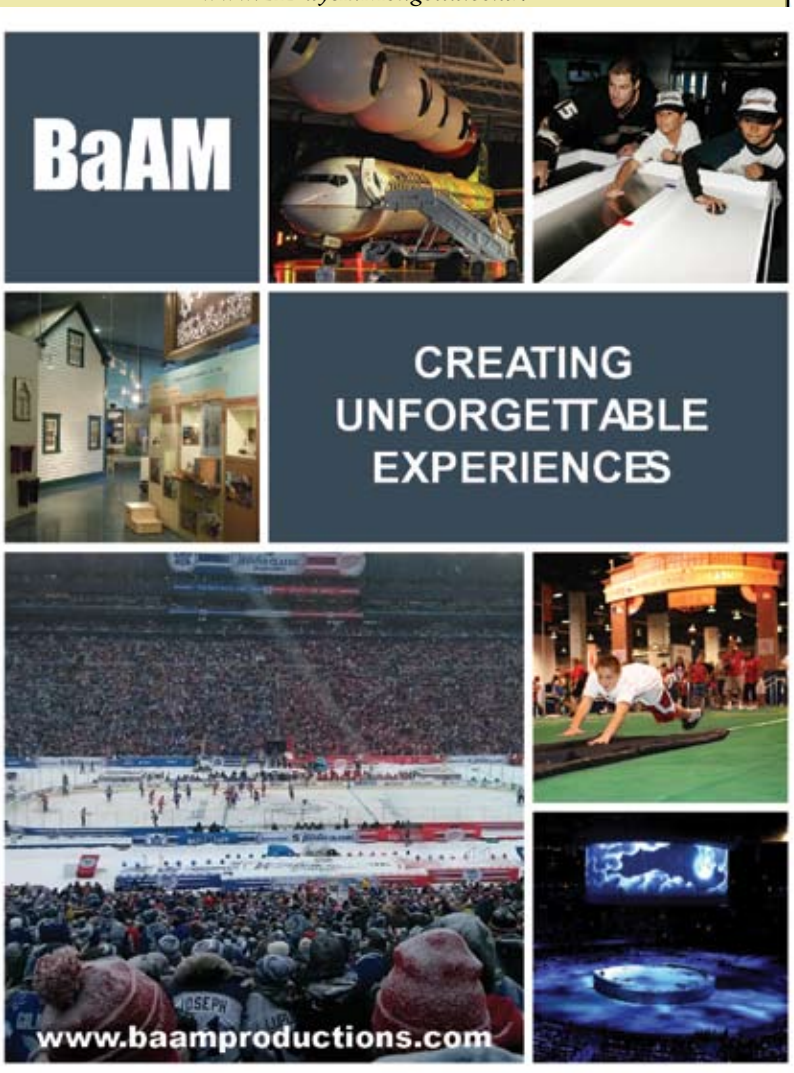
Nairamdal Park in Ulaan Baatar, Mongolia.

Since the park only offers a small handful of rides, even the most gung-ho park enthusiast might start looking for something else to do. No worries, for Mongolia offers a wealth of other adventures for travelers. In UB, as mentioned above, there are several impressive Buddhist monasteries worth a visit. The most significant is Gandantegchinlen Khild (called "Gandan," for short), which houses a gold statue that stands over 80 feet tall and was consecrated by the Dalai Lama. Gandan is the largest active monastery in Mongolia, and on the day we visited our senses were treated to a feast: bald-headed monks cloaked in orange robes chanting, frost-bitten red cheeked children tossing crumbs to hundreds of pigeons, gray wings flapping, and local Mongolians dressed in traditional clothing spinning silver prayer wheels.

Having made our journey specifically to visit my sister, we were also treated to Mongolian hospitality in the countryside near Choibalsan, the small eastern city in which she lives. As writer Jonathan Maslow said, "the line between 'guest' and 'hostage' becomes vague" in Central Asia, and our experience held this to be true. Picked up in a narrow van by my sister's friends, we bumped off of the main road onto what can only be described as dirt: endless, far-as-the-eye-can-see craggy dirt steppe meeting a vast horizon. We were welcomed into a traditional ger where the following scene took place: our host offered (read: demanded) we drink vodka shots. Being a non-drinker, my husband and sister bravely stepped up, consuming 8 large shots in the space of two hours. Food was piled on a low table before us: gazelle meat stuffed into boiled dough, hard chunks of fermented mare's milk, white cheese, candies, a thick side of mutton (or was it yak?), and steaming cups of buttery, salty tea. My slightly inebriated husband and I were dressed up in traditional clothes and colorful hats, and led outside into the bitter winter air to ride horses and camels while our hosts looked on, smiling (and no doubt laughing).

Clearly, the magic of Mongolia includes far more than a stop in Ulaan Baatar's Nairamdal Park. If roller coasters are your driving passion, you will likely be better served by a Paramount Parks or a Disney trip (unless, of course, you are deeply passionate about 'old-school' rather sketchy rides). However, if the appeal of exploring a vast, wild country outside of theme park rides inspires you, Mongolia awaits. But, unless you happen to like dressing like the Michelin Man, I'd recommend waiting until springtime.

For more information on Mongolia, visit www.21DaysInMongolia.co.uk



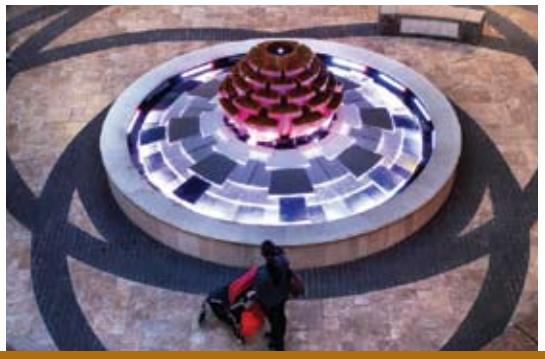
COST OF WISCONSIN INCORPORATED

THEME AND SPECIALTY CONSTRUCTION

YOU DREAM

Since 1957, COST has been actively involved in award winning theme and specialty construction work. Our scope includes shop drawings, modeling and construction of simulated rock work, trees, theme façades, water features, decorative coral, and sculptures. Whatever theme environment you dream, COST will deliver.

1-800-221-7625
262-677-6060
info@costofwisconsin.com
www.costofwisconsin.com



10th anniversary inpark magazine

2006

13th Annual Thea Awards

Some of TEA's best and brightest stars turned out for the annual Thea Awards, held at the Disneyland Hotel March 3rd.

Thea's Best Dressed

LEED-CERTIFIED STUNNING
April Johnson looks ravishing in red.

SCARF COUTURE
Is that Meryl Streep or **Louise Upson**?

CINDERELLA STORY
Tisa Poe is ready for the ball in this blue beauty.

THREE'S COMPANY
Shawn McCoy, **Raina Ross** and **Andy Gregory** prove everyone looks great in black.

THINK & DRESS WELL
Kelly Ryner & **Craig Hanna**

IT'S ALL SMILES AFTER THE AWARDS
Roberta Perry, **Dawn Lunde**, **Brian Edwards** & **Susan Cowan** seemed to enjoy the night.

MELISSA IN THE MIDDLE
Kirk Kennedy, **Melissa Townsend** & **Ron Griffith**

A NIGHT AT THE DIVE IN
Sea World's **Robbin Sheets** & **Rick Shuiteman** make a splash with Super 78's **Dina Benadon**

CAN YOU HEAR ME NOW?
AV Experts **Lisa** & **Steve Thorburn**

POWER TRIO
Michelle Berg, **Monty Lunde** & **Pat Scanlon**

I'M PROUD OF YOU, DAD!
John & **Bob Rogers**

DOUBLE TROUBLE
Eddie Newquist & **Judith Rubin**

THE FUTURE OF FUN IS HERE
Juleigh DeCarlo, Beth Semler, Rich Marmura & **Lenny Larson** from the ETC at Carnegie Mellon

IT'S LADIES NIGHT
Bonnie Sinclair, Tanya Loh, Jennifer Miller, Kim Clark, Merrill Puckett-Miller & **Dina Benadon**

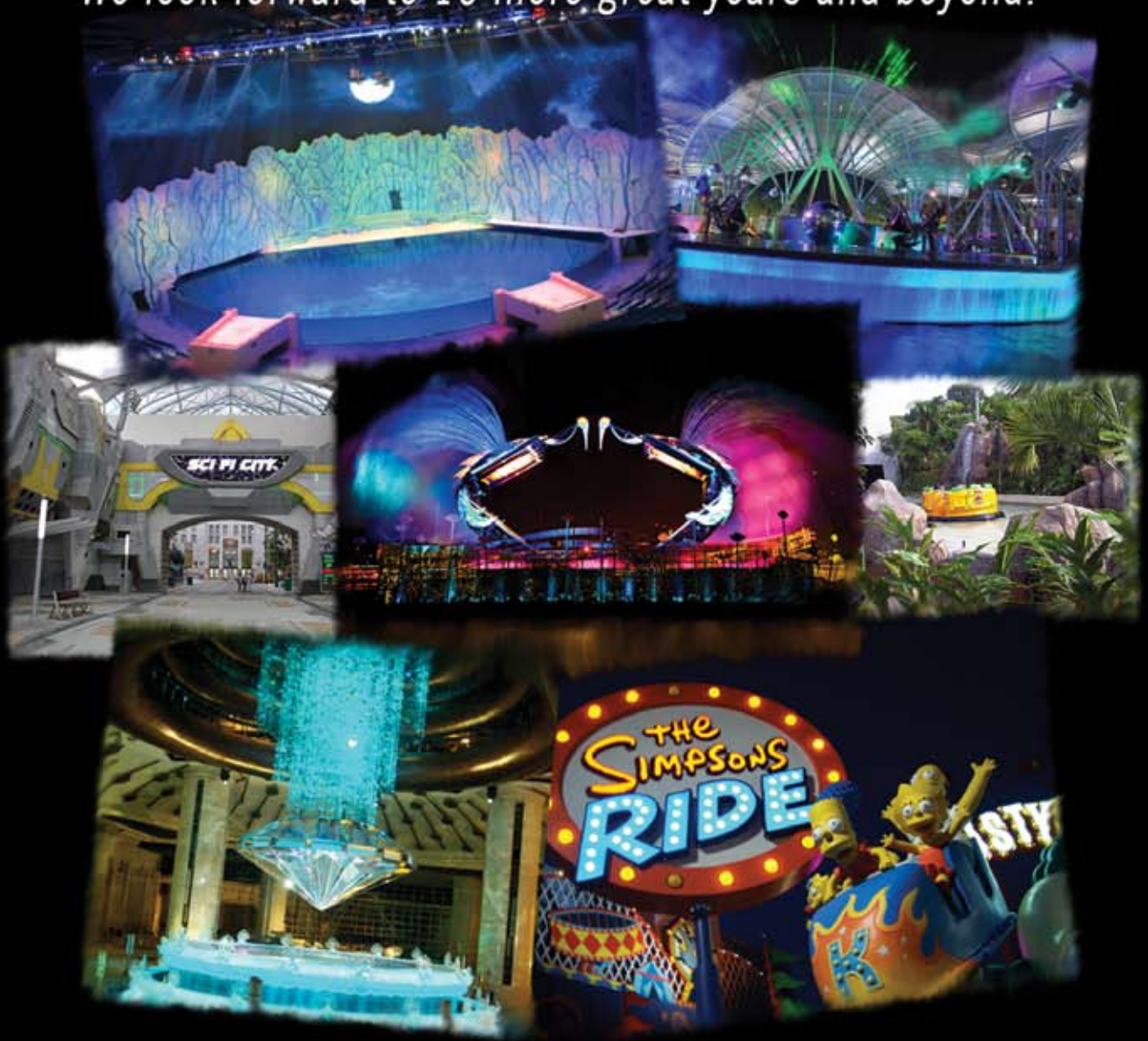
SOMEONE TO LOOK UP TO
Gary Goddard & **Taylor Jeffs** ham it up for the camera

the PRODUCERS GROUP

A full service theme park production company

The Producers Group congratulates InPark Magazine on their 10th Birthday!

We look forward to 10 more great years and beyond.



• Project Management • Technical Design and Documentation • Show Production Management • Specialty Design-Engineer-Build

• 项目管理 • 技术设计和文件制作 • 技术设计和文件制作 • 特型设备的设计－工程研发－制造

www.producers-group.com

+1 (818) 334-2829 • info@producers-group.com

Proud Gold Sponsors of IAAPA Attractions Expo and IAAPA Asian Attractions Expo

The Fortune Diamond, Crane Dance, and Lake of Dreams created by Jeremy Railton and Entertainment Design Corporation.
Members of The Producers Group provided services to Entertainment Design Corporation.

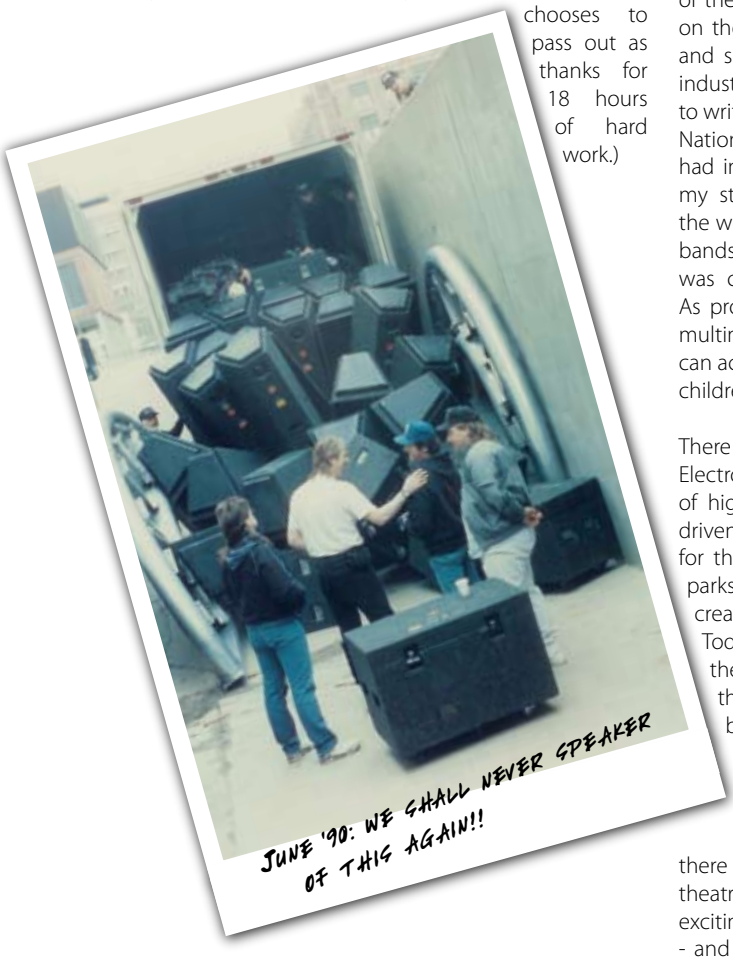
CONFESSIONS OF A FORMER ROADIE:

How Yesterday's Theatre People Make Today's Museum Exhibits Rock

by Thursby Pierce, Electrosonic Systems Inc.

Ah the good old days...

Roll out of the tour bus at 7:00 am after three hours of sleep in a swaying tin can. Race into the arena ready to unload 12 trucks of lighting, audio, video and staging gear. Install the whole show in eight hours. Sound check at 5:00 pm. Mix the audio (either for the monitors or the main house system; usually my job was the monitors – this was in the days before in-the-ear monitors) throughout the course of the two-and-a-half hour show, tear it all down and load it all back into the trucks to take to the next town for another show tomorrow. All of this is accomplished working with a local tech crew whose only real motivation is what swag they get at the end of the night. (For you non-roadie types, that's T-shirts and any other trinkets the band chooses to pass out as thanks for 18 hours of hard work.)



On one particular day in June of 1990, as I approach the loading dock to begin my day in some arena in the heartland of America, I hear shouting and see people scrambling to the dock. It seems the truck driver hadn't checked the load bars on the truck. Since the loading dock was down a 30-degree incline, as he backed down the ramp to the dock the whole audio system unloaded itself on the pavement. We get the equipment loaded in and the show comes off with out a flaw. This in a nutshell is what a roadie deals with on a daily basis – what I dealt with on a daily basis for some 15 years, as a former audio engineer/production manager of many live show productions and heavy metal bands touring the world's arenas and theatres. You run into many challenging technical situations that test your ability to adapt – and usually your only choice is to adapt.

I know many of you reading this are thinking, "This is another article by some former hippy longhair who doesn't have a clue about our industry, even if he can keep his drug-induced flashbacks in check. What's this story doing in a museum-based editorial section?" Well, (with the possible exception of the drug-induced flashbacks) it turns out that those years on the road were not wasted. A background in live theatre and show production translates quite well to the museum industry, and that's what this article is about. I was approached to write this not long after the December 2006 opening of the National World War I Museum in Kansas City, MO. The editor had interviewed me about the project, and she sniffed out my stage production background when I blithely uttered the words "rough swag" (not the same kind of swag that rock bands give out). The $102 million renovation of the museum was conceived by renowned designer Ralph Appelbaum. As project manager for Electrosonic, I was in charge of the multimedia design/build team for the project. (We roadies can actually hold down real jobs now that we have wives and children to support.)

There are many similarities between what I currently do for Electrosonic and my past life on the road. In today's world of high tech systems integration, much of what we do is driven by the same brains that think up the blue-sky ideas for theatrical productions. That's because museums, theme parks and cultural centers draw from the same pool of creative and technical people to bring their ideas to fruition. Today's museum designers are pushing us right up against the bleeding edge of what technology can handle, to tell their stories in the most effective ways. This brings my background into play, because the touring entertainment industry has always been a testing ground for new technology. Entertainers are always willing to take the big risks to entertain their fans, and we technical managers and engineers who live in the real world are there to ground these people with reality. In the same way, theatre producers count on us to help them identify the most exciting solution that is both show-stopping and practical - and then pull it off. The difference is that now, instead of

puzzling over how to hang a gigantic, animatronic skull over a stage full of heavy metal rockers, I am working with our engineers to figure out how we can blend six projectors together to get a seamless image that is 200 feet wide.

Today's museum exhibits feature plenty of interactive, touch-sensitive, sensory, stimulating learning experiences in keeping with the media-rich world in which our public now lives.

Accordingly, more and more we're called upon to install large, immersive theatre systems to thrill visitors (while educating them and spurring them to think about things) and bring them into an exhibit much as a live show draws an audience in and makes them forget their surroundings and exist in a different world for a few hours.

Theatrical Horizon

At the WWI Museum the highlight is the Horizon Theatre. Visitors walk out onto a balcony and gaze out upon a 125-foot wide, full-scale battlefield mock-up/tableau with genuine period artifacts - complete with mud, downtrodden soldiers, craters and blown-up bits of cannons and caissons. Behind that, as a backdrop to the tableau, is a 100-foot-wide by 25-foot-tall projection surface. The designer of the show, Donna Lawrence (Donna Lawrence Productions) elected to use a scrim-like material swagged (there's that word again) with rough pleats and draped to give it an old-world feel. Most of the content imagery is authentic film and still footage from the era, edge-blended with multiple projectors, and most everyone on my team expressed doubts about how it would look on this surface. But when we began image testing on the screen, it became apparent that it was going to work very well and that it would be a very moving, theatrical experience. Donna and her team did some amazing things with the content, telling the story of how the US and the rest of the world were affected by this global conflict that was supposed to be "The War to End All Wars." They developed some content specifically for the moving head, digital lighting/video projectors that were part of a dynamic system specified by the lighting designer, Technical Artistry. The lighting effects were employed to great dramatic effect, using static theatrical lighting, moving light fixtures and the digital projectors to complement the video presentation. Much of the technology in that theatre could be used on the next U2 world tour.

As we worked through the design and installation of the Horizon Theatre we found it both natural and useful to employ standard stage terms such as "upstage" and "downstage," "stage right" and "stage left" in order to identify points on the lighting trusses and where images would be projected. Some of the people on the project had not worked in a stage environment, and didn't know stage left from house left. The lighting designer and I had to translate these coordinates for them. This is often a typical situation because of that common creative talent pool I mentioned earlier, that everyone draws upon. On the teams, in the trenches, and on the conference calls of the production process for the modern museum exhibit are teams peopled with crossover show directors, designers, producers and technical integrators who also work on film, video and theatrical productions, and in entertainment venues such as theme parks. With their various backgrounds, part of the process is finding a common language so they can talk about the project.

If It Were Easy...

While their terminology may vary according to their backgrounds, those crossover team members all know the conceptual process and the production/installation drill. The various phases you go through to design, build and install complex technology systems in a museum are the same as when you plan a tour with a rock n roll band or plan an attraction at a theme park. You have many conference calls discussing the creative intent. Drawings are passed back and forth; considerations are made for the particular venues' regarding facility impact. Specialists such as acousticians, scenic designers and effects consultants are all brought in to help through the process. Planning a museum renovation is no different.

In the theme park and road show environments you learn a great deal about the durability and reliability of the various pieces of equipment used in today's multimedia systems. At

Photos courtesy of Electrosonic Systems, Inc.

the theme parks, operating hours are typically 12 hours per day off season and up to 18 hours per day during the busy seasons. We generally recommend that our systems be left powered up 24/7. You have a considerably lower MTBF rate, (Mean Time Between Failure), if you're not switching everything off every night and then expecting to bring it all up cold in the morning. Places where you have guest or operator interfaces such as touchscreens or switch panels, you have to consider the amount of cycles the particular unit or part can withstand. You would be amazed at how many of the clients we work with require such devices to handle millions of cycles before failing.

On the road, you have to take into consideration all of the abuse the gear takes in the trucks, packing and unpacking every day. Outdoor venues can be very dusty, dirty, hot, or - worse yet - wet. We have to consider the same parameters when specifying equipment for a museum exhibit. Is it spill-proof? Can the 10-year-old child with the sticky hands and a slushy find his way to the Internet through the touchscreen? Is the item safe for any guest to be near or under, to touch, push or generally interact with? Show and theatrical people bring this experience with them to the museum industry. We are all tasked with outdoing what was done before. Push the envelope with the technology; make it bigger, better, more exciting then the guy down the street. My general manager at Electrosonic keeps challenging us with the words, "If it were easy, everybody could do it." So we former roadies and theatre techs will continue to produce for our clients what was thought impossible only yesterday, and make their museum exhibits meet the expectations of the creative folks, and, ultimately, the museum-goers of the world. **ipm**

Thursby Pierce, Carefree Roadie

Thursby Pierce's career in live production commenced in 1979. He was production manager for a friend's band (Full Moon) touring the northeastern US for several years. In the early 1980s he began working as a system engineer on multimedia systems for theatrical and industrial productions throughout the NYC metro area. In 1984 he hit the road again, in demand as an audio engineer/production manager for a number of top touring acts, including Anthrax, Blondie, Deep Purple, Iron Maiden, Kiss, Ozzy Osbourne, The Ramones, and Reba McIntire.

Thursby Pierce, Project Manager & Breadwinner

Thursby Pierce (thursby.pierce@electrosonic.com) project manager for Electrosonics Systems Inc., has more than 25 years of multimedia entertainment technical show and project experience. During his "roadie" years, in addition to being a sound tech he acquired familiarity with laser special effects, lighting and film projection. He was part of the Universal Studios creative technical team that designed and built Islands of Adventure in Orlando, and then spent two years as one of the technical project managers for Universal Studios Japan, building the Spider-Man attraction. Other recent projects include Ringling Bros. Circus Museum, World of Coca-Cola Museum, Smithsonian National Zoological Park, Singapore Discovery Center, Restless Planet Theme Park (Dubai), Hard Rock Café (San Juan) and Adidas America Corporate Center.

ZEBEC WATER SPORTS

COMPLETE LILY PAD WALK SETUP

- Foam Lily Floats
- Overhead Netting
- Entry Pool Side Padding

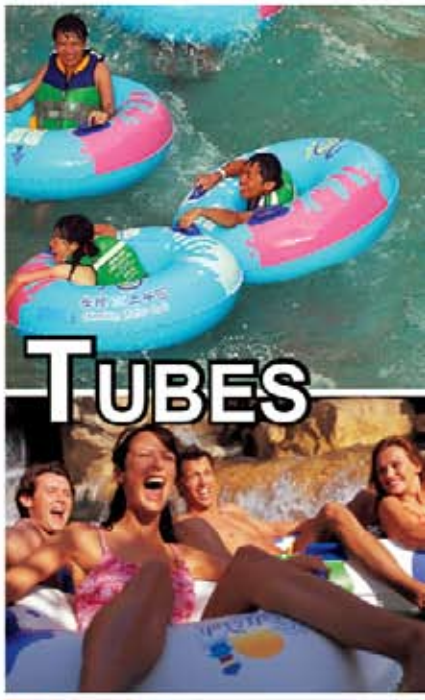
Visit us at IAAPA Booth #3252

Heavy-Duty Single, Double, Tear-Drop, 3 and 4 Person Clover Tubes made in USA with extra heavy material and overlapped, heat-welded seams

HEAVY DUTY TUBES

☎ +1(513) 829-5533
FAX +1(513) 892-7466
ZEBEC@ZEBEC.COM
WWW.ZEBEC.COM

SAFETY PADDING



flight of imagination

analyzing AV market trends in themed entertainment

by martin palicki

Where can you take a ride with the Simpsons, play virtual carnival games, escape a dragon's lair, explore the inside of a dinosaur or rock out with Led Zeppelin? At the nation's variety of theme parks, waterparks and museums, of course. And a scant five years ago, none of these experiences were available. Despite changes in the economy, themed entertainment has continued to evolve and produce new ideas and products.

Naturally, the AV systems required to produce these attractions have advanced and changed as well. We sat down with some of the creative forces behind the themed entertainment market to find out what trends have informed this industry and what direction the technology is headed.

control is everything

For a long time, operators and developers were hesitant to utilize PC's to control AV equipment. The perceived reliability issues of PC's have slowly eroded away to the point that they are quickly becoming the preferred method.

"More and more facilities, museums and corporate centers especially, do not want specific AV control equipment anymore," says Mad Systems President Maris Ensing. "They would rather utilize a PC where they can hire an IT person to maintain the system." Mad Systems is an AV integration firm that specializes in museum and cultural projects. Their recent renovation of the Griffith Observatory in California utilized over 80 PC's that run everything from the power management systems to the AV components. Their installation of the Blue Planet Theater in the Gwinnett County Environmental and Heritage Center in Georgia utilizes a mix of audiovisuals and multimedia including high-def video projected onto a waterscrim, water-based foggers, simulated rain and waterfalls, seat rumblers, specialty lighting, and a 9-foot-diameter reflecting pool from which a topographical map emerges to become a projection surface- all of which is controlled by PC's.

"Backup systems are now quite simple, cost-effective and completely reliable," explains MediaMation's Dan Jamele, whose company also provides AV solutions for the themed entertainment market. That safety net has helped encourage institutions to move that route. Additionally, PC controls are easily networked and allow for remote monitoring. "We can run diagnostics and solve most problems from our offices in California," says Ensing. "That saves the client money and inordinate amounts of time that would normally be eaten up by transportation."

The Simpsons ride's four digital projectors *cover the 90-foot-tall domed screen with crystal clear digital renderings of the characters. Photo courtesy of Universal Studios.*

interaction equals satisfaction

Every step forward in the evolution of the themed entertainment market has led toward more interaction for visitors. As Maris Ensing puts it, "Interaction is not just a requirement, it is the standard." Nowhere is this more evident than in the museum market, where according to ETI President Brian Edwards, museums have really started to compete directly with schools. "Of course, museums are still competing with theme parks for that leisure market, and still borrowing heavily from their design models," says Edwards. "But they will start to focus more on partnering with schools and help provide that which schools cannot, namely focused, interactive experiences for students to learn from." Content is king, and museums are working harder to provide actual learning experiences, rather than just showcasing knowledge for students. That means an increasing amount of AV integration, a change in the technological, and a shift in the methodology of application.

sensing rfid

According to some industry experts, the greatest potential is to be found within RFID (radio frequency identification) technology. John Miceli, president of Orlando based Technomedia, reports that there are currently projects in the works where RFID will adjust seats, lap bars and conditions that will make for a safer product tailored to the likes of the rider. Technomedia is no stranger to AV integration. They have recently worked on a number of high profile on-board audio systems for the new Hard Rock Park in Myrtle Beach, SC and the Hollywood Dream: The Ride at Universal Studios Japan, where guests can choose one of five songs to listen to during their ride. RFID could allow songs to be chosen based on the visitor's previous preferences, or even be integrated with several on-board camera systems, which will store on-ride video or photography for the guest to view and purchase. Systems that capture on-ride video such as CDRide are already available at many major theme parks, so integrating an RFID tracking component seems a logical next step to many.

"To the savvy developer, RFID tracking can be paired with a database, reporting what people do, where they go and how much time they spend there," says Steven J. Thorburn, President of Thorburn Associates, Castro Valley CA and president-elect of the Themed Entertainment Association (TEA). "Not only will the operator be able to provide proactive guest services such as collecting on-ride photos and videos for the guest, but they will be able to more effectively

Used with permission of Testa Communications from the September 2008 issue of **Sound & Communications** magazine. For more information, go to www.soundandcommunications.com

analyze and plan future developments based on precise data from RFID tracking."

However, rolling out full-scale RFID projects still has a few challenges to overcome. According to Ensing, "The systems have to be completely secure in who/what they are sensing, and they must be able to recognize multiple tags with various signal strengths. The cost of sensors also has to come down before they are truly ubiquitous."

The International Association of Amusement Parks and Attractions (IAAPA) utilized RFID sensors at its annual trade show in November, unobtrusively scanning guests as they entered and exited the trade show floor in a clear sign of support for the emerging technology.The trade show market stands to benefit from the technology, which replaces bar code scanners, requiring additional staff and slowing down traffic flow into and out of a show floor.

more than a touch screen

For years most levels of interactivity terminated at the touch screen. Museums especially have utilized touch screens to provide visitors the opportunity to select which direction they want to pursue, but some are sensing a change in that trend, and see museums requiring more than a touch screen can offer.

Mad Systems is banking on clients seeking out more mechanical interaction for their guests, moving to more of what theme parks are able to provide, although perhaps not on such a thrill-based scale. "Pretty soon nearly all home computers will have touch screens, especially as multi-touch becomes available in about five years," explains Ensing. "There will be a renewed interest in actual mechanical interactions, because the touch screen video interaction will be available at home."

The trend is already visible as places such as the Kidspace Museum in Pasadena, CA, where visitors are encouraged to play, dig, climb and explore the many highly themed environments the museum offers. But a return to mechanical components won't mean AV experts are no longer needed.

transparent integration

While AV components may become less apparent, less visible to the guest, in the world of themed entertainment, they are actually becoming more important, and more integral to the whole process. Instead of merely supporting or enhancing content, AV is expected to help contribute to the actual storyline of a project.

Many themed projects are creating storylines that begin even before the guest arrives, via the internet. A web site allows visitors to become familiar with a storyline and follow it through the attraction or exhibit. Interactivity starts online with a game or contest, and continues at the museum or park, and can even extend beyond the visit in the form of video and photos available online.

The full integration of technology throughout a property is evident in a Mid-East project ETI is currently working on. Guests will literally log on with their cell phones as they enter and be able to interact with components of the development throughout their visit.

Walt Disney World experimented with (and appears to currently rolling out) such a system with the Kim Possible World Showcase Playtest. Inside EPCOT park, select guests were given special cell phone transmitters themed after the Disney show Kim Possible (and called Kimmunicators) that guests would use at seemingly benign locations throughout the park. The phone activated audio, video and mechanical effects that helped the guests solve the mystery. The AV was completely integrated into the existing architecture so that guests not participating in the program were not aware of the special promotion, while still providing a magical experience for those involved. The project was so successful it earned a Thea Award for Outstanding Achievement in 2007.

Nowhere has the total integration package been put into better use than at the Discovery Science Center in Santa Ana, CA. Their DinoQuest adventure integrates mechanical effects, lifesize play structures, RFID activated effects, and a virtual challenge from the scientists at Dino Quest Headquarters. The center bills the exhibit as a fully "interactive, electronic exhibit where guests are… characters in a video game that has 'come to life.'" (www.discoverycube.org)

The complete integration of such a highly interactive exhibit required the skills of industry designer and fabricator Lexington, AV experts, and the RFID application provided by MagiQuest, which has rolled out multiple RFID interactive adventures throughout the country and continues to partner with museums, theme parks and attractions on new concepts.

complete and utter immersion

"Being in the middle of a fully immersive environment that you cannot effect or control to make your experience be different each time is how most attractions have historically been," says Technomedia's John Miceli. " It's always fun to go through the Haunted Mansion or ET's Adventure, but they never change. With the new possibilities on the horizon, the experience can change and be much more realistic and interactive- giving you a reason to come back over and over again for that different experience."

But how is that total immersion best created? The answer depends on which market you are considering. Waterparks, for example, have only recently started to break into the realm of themed ride experiences. With a nod to their theme park counterparts, waterslides have recently been infused with AV effects, and a themed storyline to match. Technifex Products recently exhibited waterslides outfitted with waterscreen projections and interior lighting effects at the WWA Trade Show.

Tim Gantz, owner of Noah's Ark Waterpark in Wisconsin Dells, WI agrees that waterpark theme immersion seems to be heading that way. "We just put a giant dinosaur head and sound effects in our Time Warp ride," explains Gantz, "but we have been concerned about the corrosive elements affecting [AV] hardware."

There's no need to worry, claims Thorburn Associates' Steve Thorburn. "Coming from the San Francisco Bay Area, we are well aware of many corrosive-resistant products that can easily be used in a waterpark environment." This summer, Schlitterbahn waterpark in New Braunfels, TX retrofitted an existing slide to create Dragon's Revenge, a highly themed waterslide experience that utilizes waterfall projections, lighting and sound effects, foggers and fire effects to create a slide experience that takes riders through an abandoned castle inhabited by a fierce dragon.

Splashtacular has produced designs for an Alien Invasion slide complex that includes a rotating elevator platform for rafts, fiberoptic, audio and projection effects. The designs were showcased at the World Waterpark Association's 2007 expo, though an installation has yet to be announced.

But waterparks are at a point now where theme parks were twenty years ago. How can theme parks (or museums, for that matter) create fully immersive environments today? The answer is nearly unanimous: projection!

"Imax Corp. started the business of full immersion in the 1970s by creating giant screens that filled guests' field of vision and surround them with a completely new environment," explains Thorburn, who has

provided quality certification for large format theaters and worked on projects for the likes of Lucas, Dolby and Disney. For some time attractions moved away from large screen projection, but with the arrival of increasingly cost-effective digital systems, the trend is to incorporate more projection into the totally immersive experience.

Both of the world's top theme park chains, Disney and Universal, opened up sister attractions at their California and Florida coasts this summer that rely heavily on projection to create the immersive environment. Disney's Toy Story Mania combines a typical dark ride vehicle path where cars stop briefly in front of screens depicting carnival game booths from the Toy Story franchise. Guests interact with the game by firing cannons mounted on their car, while their glasses allow them to see in 3D their real time score and progress. The completely digital projection system allows Disney to upgrade or seasonally theme the attraction relatively quickly, a benefit, according to Thorburn, many parks might not have initially realized. "Changing out an older attraction or show meant a venue would have to be shut down for at least a year," says Thorburn," but with a digital system, changes to the software or content are relatively quick, easy and cheap."

Universal Studios unveiled The Simpsons Ride at both of its US parks. Utilizing the building and concept from the Back To The Future ride, Simpsons makes use of a giant domed screen and four Sony digital projectors to create a cartoon environment that motion base simulators react to. Video experts Electrosonic helped create the projector system that brings the Simpsons characters to life. The use of multiple projectors provides a resolution and luminosity superior to Back To The Future's film version. Also, though no announcement has been made, the ride's creators did see a potential synergy between the Simpsons' Treehouse of Horror franchise and the park's extremely popular Halloween Horror Nights event- a seasonal overlay that would have been cost-prohibitive in a film environment.

What about the smaller players? "3D and 4D continue to be popular in a wide variety of markets," explains MediaMation's Dan Jamele. "It is still a passive experience, but it is incredibly popular, and venues have learned that they can show multiple titles at one time and increase attendance." Museums have been quick to convert to 3D and 4D, such as Chicago's Shedd Aquarium, which recently traded in a small presentation theater for a 4D model and began showing SpongeBob Square Pants: 4D. Interestingly, Noah's Ark Waterpark also shows that same movie in what it calls a Dive-In theater, where the special effects are no less dramatic, only a lot wetter.

"There are certain experiences that just seem to be natural draws for audiences," says Jamele, "and when you get a product [such as SpongeBob] that has a wide appeal, there are plenty of opportunities to utilize AV systems to differentiate and develop that product." Even with the benefits of projection and 3D or 4D, there still seem to be limitations on merging both immersive environments with interactive ones, though that barrier is being eroded.

People are looking for that group interactive experience and to have it be fully immersive. Unfortunately, the average park or museum hasn't had the budget to pull it off, but another group has, and it's a group that is expected to grow in its use of immersive and interactive environments: the US Military.

The Great Lakes Naval Base in Illinois worked with a host of themed entertainment producers, among them ETI, to create the most lifelike and reliable interactive training simulations, known as Battlestations 21. The simulated ship experience puts trainees on a vessel in the middle of the ocean for 12 hours and throws a wide range of simulated disasters at them, all within the safety of the simulator environment.

"Just as in real life, each person is responsible for a certain task or position, and their individual actions affect the entire situation and change the results for themselves and everyone else," explains ETI's Edwards. "The military wanted people to have their natural reactions under stress to be played out in a controlled environment." The result is not an entertainment masterpiece, but rather a sophisticated training simulation masterpiece, complete with just about "every effect and gag we've ever worked with."

Edwards sees more growth in this area for all branches of the military and government, as the process goes full circle. "The theme park sector took simulation technology that the government had devised and we made it cost-effective, enhancing it with effects," says Edwards. "Now the government is going back to those simulators and working with the theme park people to take it to the next level and push the technology forward."

While every client may not be as big as the US Military, the effect of such big projects does work its way down throughout the market, and the technology becomes cheaper and more accessible. Particularly as more and more developers are looking to themed entertainment designers to work on projects, the opportunity to integrate advanced AV systems into what at one time might have been a more straightforward application continues.

"Developers are certainly aware of all that is out there," claims Edwards. "They look at all aspects of a project, and want to make sure that everything not only achieves the project's main mission, but also works to make them money in the process." That means AV designers must be more involved in the project to ensure the AV components all support the main narrative in the project. In addition to being knowledgeable in the technical specifications, AV designers have to, as Brian Edwards likes to say, "use the other side of their brain" to embrace the creative component.

Because if one thing is certain, it's that people will still want to be entertained and told a story, whether it is in a theme park, museum, or even a corporate center or retail development. Steve Thorburn has made it one of his goals as TEA president to ensure developers are well aware of the benefits themed entertainment providers can produce. "We will be working hard to let everyone know that the themed entertainment industry, including architects, writers, designers, fabricators, and AV specialists, are necessary to create the best immersive and interactive experiences of tomorrow."

ipm

More information on any of these projects or companies can be found on the web:

Electrosonic
www.electrosonic.com

ETI
www.edwardstechnologies.com

Mad Systems
www.madsystems.com

MediaMation
www.mediamat.com

Technomedia
www.gotechnomedia.com

Thorburn Associates
www.ta-inc.com

2009

the making of jungala

It has been almost a year since Busch Gardens Africa opened their newest themed adventure zone, Jungala. The large, heavily themed land combines new interactive animal experiences, educational opportunities, wet and dry play areas and amusement park rides. Jungala was created out of the park's old Congo Area, and has been a hit with guests since its spring 2008 opening. The project recently won a Thea award, presented by the Themed Entertainment Association this past March.

Throughout the creation of Jungala, Busch Entertainment worked hard to reflect their company's core values of conservation and preservation. Jumana Brodersen, a lead designer on the Jungala project, provided InPark with little-known green facts about how the area was created.

Demolition of the old Congo Area

- Relocated two large Live Oak trees and many smaller trees
- Sent all pressure treated lumber (330 cubic yards) into the re-use market
- Recycled all rebar (180 tons) and scrap steel from the Python coaster (128 tons), plus 9,000 tons of concrete from sidewalks and structures

Construction of new Jungala Area

- Trex decking – a composite material made from reclaimed wood and plastic – used in play area and orangutan habitat
- All lumber for new-wood construction on-site is from reforested areas
- New steel structures include recycled content
- Use of slate and other natural roofing materials reduce need for manufactured products
- Restoration of Vivi Restaurant reduces new construction waste
- Employing local steel fabricator and subcontractors reduce shipping impact and transportation emissions
- Open-air designs maximize natural light and air flow to reduce power usage ipm

-Photos by Martin Palicki

Canada's Sports Hall of Fame

Photo: The Taylor Group

ipm CONGRATULATIONS inpark MAGAZINE 10 YEARS AND COUNTING

YOUR STORY — OUR — TECHNOLOGY SOLUTIONS

Our technology solutions have captivated and entertained audiences around the world for 50 years. We specialize in interpreting your design ideas and carefully selecting the technologies that complement your story.

Complete Audio Visual Solutions

- *Technical Design Consulting*
- *Systems Integration*
- *Service & Maintenance*
- *Global Reach*

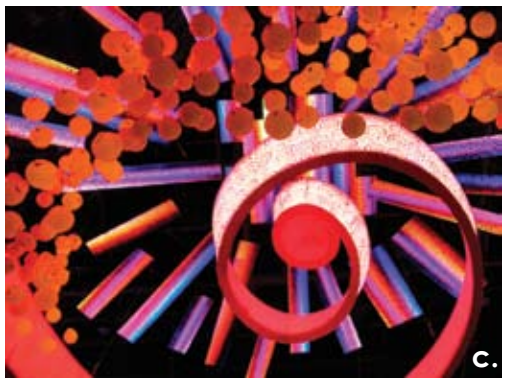
IAAPA Attractions Expo

Booth #1652

ELECTROSONIC

1.888.343.3604 | electrosonic.com

1964 2014 50th ANNIVERSARY



a. A performer interacts with the moving balls at the Chinese Industries Pavilion

b. The bamboo cathedral of Vietnam

c. It's whimsy and smiley faces at the Oil Pavilion

d. Even the highways of Shanghai are adorned with color-changing LED lights

e. Inside the Magic Box at the State Grid Pavilion with projection surrounding guests

Five Things I learned from the Expo
by Martin Palicki

1. The real planetary problem we face isn't pollution or consumption, it's population. If there is one thing the Expo made perfectly clear, it is that there are too many people in the world. Overcrowding and inadequate resources go hand in hand, and with fewer people, many of the world's other problems dissipate as well.

2. The Chinese like Chinese food. Many international pavilions offered great dining experiences with food from their native country, but the restaurants were almost empty. Instead, Chinese fast food outlets like KFC and Uncle Fast Food were constantly packed.

3. Our grandchildren will wonder what an incandescent light bulb is. LED lights were so pervasive throughout the Expo, and used in a variety of creative ways, it seems like the days of the good old light bulb are numbered.

4. Queue management is a skill not everyone understands. The entrances to the Expo are built to handle the 500,00+ visitors each day. They are massive, and they include lots of queue. But every day, even at the times when there was no line, the full queue was in use, forcing everyone to walk back and forth ad nausea just to get to the entrance. Once inside, many pavilions had drastically underestimated how much queue was needed. Additional lines were created, but instead of keeping the entrance in the same spot, the queue often began on the opposite side of the pavilion and sometimes hundreds of feet away from the pavilion, making it difficult to figure out which line went to which attraction.

5. The Chinese love a good story. And they won't put up with anything less than a good story. At pavilions where a storyline was weak, or the emphasis was on visual intrigue rather than a narrative, Chinese visitors would get up and leave en masse, even if it meant disrupting the environment for other guests.

The Art of Queue Jumping

When you think of the Chinese arts several examples may come to mind. The "Art of War" by Sun Tzu, written in the 6th century BC. The "Three Perfections" a combination of harmonious calligraphy, painting and poetry found in beautiful Chinese scroll paintings. The "Peking Opera" a two hundred year old theatrical tradition that combines music, performance, dance and acrobatics.

A lesser known but no less highly evolved art is the "Art of Queue Jumping."

The Chinese norms of what's "right" or "wrong" for queue line etiquette are, of course, uniquely Chinese. Special events in China, like the Expo 2010 Shanghai, can attract enormous crowds in orders of magnitude greater than what you might see elsewhere.

Wait times for some of the pavilions are three to four hours long or even longer! On a good day, without any creativity in the art of queue jumping, you might see only three pavilions after braving ten or so hours in line!

What would you do if a third of your visit was spent waiting in line for one pavilion?

You might get a little creative with your "queue minimization" as well. Here are some of the best and most humorous "queue jumping" techniques we witnessed at the Expo. Many surprised us for their unique combination of audacity and creativity. And more seriously, this offers a look at how, in order to serve international clients, designers need to understand and design for their audiences to ensure the best guest experience possible.

NOTE – We know you would never indulge in these antics. However, for the purpose of this article, we are going to assume you are the visitor. Hence the employment of "you" in the examples.

Jumping the Kid – The technique uses your kid as an "advance man". How it works: Your small child "accidentally" wanders away, snaking his/her way through the queue advancing just far enough so that you can see him/her. You begin yelling at your child, "you're a very bad boy or girl." As you yell, your entire family pushes its way through the queue line to retrieve the child, inserting yourselves as far forward as possible. Once you reach the child, repeat.

Constant Walking – Using this technique, you move forward, as if oblivious to the other people around you in line. How it works: Walk through the queue line at a steady and quick pace, even if the line has stopped. This constant movement is similar to the way Chinese street traffic moves in a constant flow of energy, vehicles and people. In the same way, the people in the queue line naturally want to flow and not stop. If someone confronts you, act oblivious and continue walking at pace, making little to no eye contact, and advance your way through the queue.

Screaming Old Man – The technique is used by elderly men and women to advance to the front of the line, so if you're older than 75 listen up! How it works: Go to the front of the pavilion queue or the pavilion exit and begin yelling. As the staff and supervisors gather, crank up the volume and begin waving your arms like you're trying to flag down a passing jetliner. This instantly creates a commotion in the queue line. In order to maintain order and as a sign of respect, the younger staff members or supervisors will usually reward you by letting you enter the pavilion with no further wait.

Bump and Jump – This technique uses your rolling luggage to create a distracting decoy. (Note: You can also use your umbrella, handbag or body to create the same effect.) How it works: Go to the expo with a small rolling luggage bag. As you enter the queue line, shift your luggage bag in front of you, not behind. As the queue begins to move, use the luggage bag to constantly push into the heels of the person in front of you. Be patient and use constant pressure. Continue this action until the person in front of you gets annoyed and allows you to advance in the queue. If the person in front of you gets angry, shift immediately to the Constant Walking technique and advance in the queue anyway.

I Didn't Know This Was a Line – To use this technique, go to the very front of the line, wait and just insert yourself into the flow of people. How it works: Find your way to the very front of the queue, right near the entrance to the pavilion. As people start to flow into the pavilion, you merge with the flow of people gaining immediate access with very little to no wait time. If someone confronts you say, "Oh, I didn't know this was a line." An obvious lie but, naturally, no one wants to create confrontation so they let it go. (This technique can also be used at taxi queue lines in Shanghai.)

Passport Exit Jumper – First, you need to understand what an Expo Passport is. The Expo Passport looks and feels like a real passport and comes in several colors. The goal is for you to collect "passport stamps" for every pavilion at the World Expo. The Expo Passport is incredibly popular! The Expo is now selling insert pages and additional Expo Passport goals are being developed. It is the number one selling item at the Expo and everyone is doing it. So get ready to collect as many "passport stamps" as possible in a day! How it works: Here you use your "passport stamp" as an excuse to gain entry to the pavilion through the pavilion's exit. Many of the pavilions will just let enter through the exit to get the "passport stamp." Once in the pavilion, you can experience the pavilion in reverse order. Another variation of the Exit Jumper technique is to use the restaurant or shop as an excuse to enter via the exit.

Lift and Insert – Another very popular technique is to lift or crawl through the queue line barrier to gain an advanced position in line. How it works: Find an area of the queue where there is no guide. Lift or crawl through the queue line barrier inserting yourself directly into the queue. You can even do this with your entire family and group! Your chances for success are quite high, as many people in line will say very little or nothing and let it go to avoid a confrontation. If a guide catches then they you may have to leave the line, but this is quite rare.

Design Tips

The best queue lines at the Expo 2010 Shanghai are designed with an enclosed (solid) queue line structure. The pavilion entrance should be protected. They should not be immediately accessible from a main plaza. The queue itself should be a narrow single file line for control. A single person width discourages many of the queue jumping techniques above.

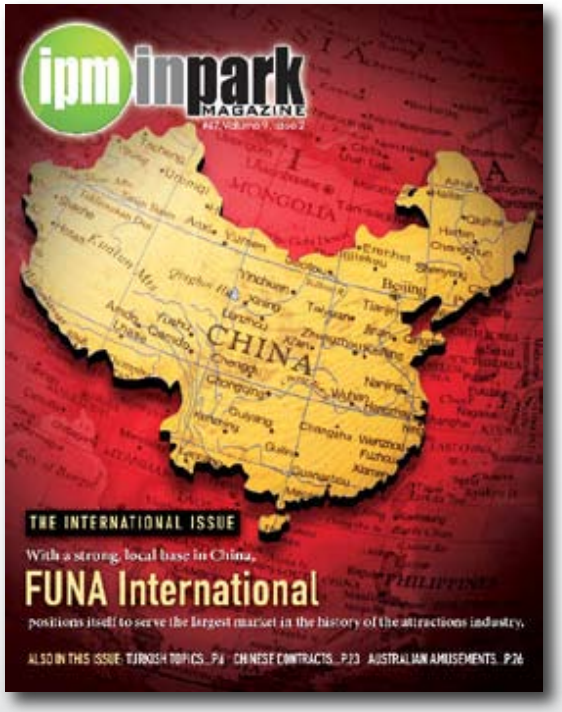
Other design techniques that help include providing a well-shaded and comfortable queue area, designing in separate entrance lanes and seating areas for visitors with special needs, elderly and parents with small children and providing entertainment (music, media, interactive games, performances, etc…) for those waiting in line. With the enormous crowds, there is a higher rate of wear and tear on all surfaces. Make sure that all queue areas are built with very robust and durable materials. Also, provide large recycling cans throughout the queue line, if you don't the trash will pile up!

A combination of these techniques will help your attraction in China maintain order and provide a quality show experience for everyone. So be creative!!

FUNA

global technology solutions provider

congratulates InPark's
Martin Palicki & Judith Rubin
on ten years of reporting on
the best of the industry



Visit with FUNA's Brian Paiva and
Scott Arnold during the IAAPA 2014 Expo

92 seconds on skull island

king kong 360 3d at universal draws applause

by Judith Rubin

Fire on the Universal Studios Hollywood back lot in spring 2008 wiped out several movie sets, damaged the famous "Back to the Future" clock tower and destroyed the popular King Kong tram-tour attraction from the 1980s. It was decided to update the popular attraction by replacing it with "King Kong 360 3D" - an immersive, multimedia experience that opened July 1, 2010 and features a gigantic 3D projection system, with two screens 187 feet wide by 40 feet high within a football-field sized soundstage.

Passengers have their breath taken away in stereo when the tram pulls into Skull Island and they are engulfed by the Peter Jackson-directed battle of Kong and the dinosaurs. It rages for 92 seconds of consummate wraparound 3D imagery produced and animated by Weta Digital, Jackson's New Zealand based company recognized with five Academy Awards for digital effects, most recently for Avatar. On Feb 1, King Kong 360 3D was honored with a VES Award from the Visual Effects Society, for Outstanding Visual Effects in a Special Venue Project.

Capacity is 160 seats per tram, with the show repeating over the course of the 10-16 hour Universal Studios day. The vehicle pitches, heaves and rolls as the beasts roar, punch, leap and lunge their way through battle in the jungle landscape. The show doors open and the tram emerges, its applauding passengers only a little worse for wear – slightly sprayed with Kongspittle. Tram ridership is up. Kong is back.

The facts according to Universal:

- King Kong 360 3-D features the world's largest 3-D projection installation ever produced.
- Two seamless, compound curved screens, each measuring a massive 187 feet wide by 40 feet high - the equivalent of 16 movie theatre screens - surround the Studio Tour tram.
- If the digital 3-D King Kong could leap off the screen, he would be astoundingly large: 30 feet tall, 20 feet wide, 15 feet deep and 6,000 pounds heavy.
- Whereas the average film projects at 24 frames per second, King Kong 360 3-D's 16 ultra-high definition projectors display 60 frames per second, creating an incredibly fluid sense of reality.
- Guests will see and experience the equivalent amount of media - one terabyte of information - that is usually rendered for one hour of a feature film.

Technical A-Team

Design, installation and control of sound and video systems were in the charge of Paul Cuoco, Technical Manager - AV & Lighting for Universal. His team within Universal included Senior Technical Manager Brian McQuillian and Technical Coordinator Drew MacDonald. Universal's Technical Director Bill Whitcomb oversaw design, integration and control of the show action equipment. Among those Whitcomb worked closely with were Universal's Greg Bryant (ride system specialist) and David Lundberg (Technical Manager – Controls).

Other members of the in-house team at Universal steering the project included Thierry Coup (SVP, Creative Studio), Jen Sauer (Creative Director), Mark Rhodes (Director of Media Production), Valerie Johnson-Redrow (Show Producer), Brian McQuillian (Sr. AV Engineer), Daryl Parker (Technical Manager - Special Effects), John Dunne (Technical Manager - Set/Scenic), Greg Burnett (Facility Design Manager), Rae-Mi LeRoy (Project Coordinator), Drew MacDonald (Technical Coordinator).

Noted Universal Creative VP Chip Largman, "The Weta Digital team including Peter Jackson and Matt Aitken, along with Sassoon Film Design and Park Road Post, not only created a great new King Kong 3D movie, they also played a significant role in the technical process and brought considerable expertise to the job." The technical specialists interacted with Universal's facility design team and the Weta content production team. 3D special venue cinema specialist Peter Anderson ASC provided input on system design as well as content design in the role of Stereoscopic Specialist/Projection Design Consultant. Additional outside providers included Creative Technology Consulting (Ben Sheldon, working closely with Whitcomb), engineering consultant Jason Taylor, Leff Brain Consulting (project manager Steve Leff), Electrosonic Systems Inc. (projection systems) Pro Sound (audio system design & installation) LA ProPoint (screen fabrication & install) Visual Terrain (lighting design & programming), AET (special effects) and Visible Sound (Peter Lehman, on-site mixer).

Paul Cuoco and the AV team

3D presentation is always challenging in terms of illumination, and this was a unique situation not only in terms of off-axis sightlines but also screen size and cross-reflection. Several CAD constructions in 3D were produced. "We came up with what we called the French Curve screen to deliver an acceptable amount of light to guests' eyes and keep falloff to a minimum, ensuring that the projected world appears uniformly lit no matter where you are sitting on the tram," Cuoco said.

Electrosonic's project manager Linda Danet said, "Originally, the attraction wasn't planned as 3D – and I first thought the suggestion of 3D was a joke. Honestly, this hadn't been done before."

"The creatives didn't want to ever see the edges of the screen," said Cuoco, "so we had to make them as tall as possible given the throw constraints." In order to achieve enough height with the 16 Christie projectors, edge blended across the screen, they used anamorphic adapters, deployed vertically along the lens to stretch the image taller.

Cuoco described the content as "uncompressed RGB frames running at 60 frames per second," which some readers will recognize as the signature frame rate of a promising but ultimately unsuccessful special venue cinema format, Showscan, with which Douglas Trumbull was closely concerned – and Cuoco reported having recently given Trumbull a backstage tour of the show.

We asked Cuoco to parse Universal's statement that "guests see and experience an amount of media equivalent to one hour of a feature film." He pulled out his calculator and responded, "The show is roughly 90 seconds. Take each of the servers – 16 servers each running a 90 second show at 60 fps and compare to an equivalent 24 fps show. That's 86,400 frames, which comes to about 60 minutes' worth of 24P content in 90 seconds. So yes, they had to produce an hour's worth of CG in order to develop this show: 30 minutes per eye."

The entire projection system was mocked up to scale and tested extensively in the former Spruce Goose hangar at Playa Vista Studios. A Medialon control system monitors all the AV equipment.

"The fullsize mockup at Playa Vista Studios was up almost a year," recounted Mark Riddlesperger, founder and president of LA ProPoint, "and they played around with that mockup to finalize the geometry of the screen, do projection studies and sightline studies from the tram, and basically look at all aspects of what the show was going to be."

"It's a complex toroidal shape, which curves in 2 directions and makes you wish you paid more attention in geometry class," says LA ProPoint project manager Andy Hanlen. "There was a lot of handwork, and a lot of trial and error and headscratching. "Universal built something that has never been built before." The screen was plaster-finished and finished off with Screen Goo.

Sound, show action & lighting

A system of line arrays was deployed to create the sound field. There are additional speakers embedded into the tram bridge walls to allow for near-field effects like gravel. Two subwoofers per side supply substantial bass. "Since we couldn't have a perforated screen," noted Cuoco, "we couldn't hide speakers behind it at guests' ear height." Sound design was provided by Park Road Post.

The pneumatic Kong motion base and automatic show doors were built to Universal's specs by The Attraction Services Company (TASC). 10,000 gallons' worth of air is pumped in and out for each show cycle. For sound isolation, the pressurized pump and exhaust lines are buried underground and there is a system of solid steel plates on top of the entire motion base, combined with a thick rubber skirt.

The lighting uses mostly ETC fixtures, provides a variety of environmental enhancements to make the experience more convincing and immersive, such as when the tram seems to be swinging from vines. "In an attraction of this kind, the projector is the brightest light source in room. We work to complement that but not compete with it," said Lisa Passamonte Green of Visual Terrain.

Ordinary equipment in an extraordinary configuration

"One of the things that really amazed me," observed Electrosonic's Pete Tinari, "is what Universal created from very simple elements by thinking differently about those elements. Nothing like Kong has ever been done before, and even though the project is cutting edge, the technology it is based on is not - and it has brought us to a new place."

"There were a lot of interesting logistics," remarked Dale Mason, Universal's Vice President of Creative Design. "We were very concerned at the beginning whether there was going to be enough time in 92 seconds to tell the story. We got so much more than we thought we were going to get. It feels immersive and complete."

Reprinted with permission from Sound & Communications Magazine, published by Testa Communications www.testa.com.

11

got revenue?

Check out our Best Practices & Galaxy™ Enhancements Sessions at IAAPA Orlando!

REGISTER TODAY

COME SEE US AT BOOTH #5110

Gateway TICKETING SYSTEMS®

SMARTER SOLUTIONS. SMARTER TICKETING.

445 County Line Road, Gilbertsville, Pennsylvania 19525 | +1 610-987-4000 | gatewayticketing.com

east-west voices

revelations from Asian-American themed entertainment creatives

by Judith Rubin

How is the attractions industry being re-invented as the Asian market continues to flourish? What are the important cultural signposts? IPM co-editor Judith Rubin spoke to Sywa Sung, a designer and Harriet Cheng, a project manager. Their observations are as enriching as their cross-cultural backgrounds and experience.

SYWA SUNG

"Westerners need to try as hard as they can to not think like Westerners, and inhabit the minds of the people in the countries they are thinking of establishing projects in, or working with."

Sywa Sung (www.sywa.net) is a freelance art director, conceptual designer & illustrator recently contracted to Walt Disney Imagineering. He has provided design services to numerous leading design companies in the attractions and film industries, including Pixar Animation Studios, Jack Rouse Associates, The Hettema Group, Thinkwell Group and BRC Imagination Arts. He has guest lectured on design and culture to the USC Annenberg Getty Award Fellowship.

You're an Asian-Canadian, the child of immigrant parents. You're based in Los Angeles but you grew up in Canada. What languages do you speak?

English, French, and a little Italian. I spoke Cantonese fluently as a child, but lost most of it when I started school. I am left with basic oral comprehension and enough spoken Cantonese to order food at a restaurant. My father is from Hong Kong and my mother is from the Canton region around Hong Kong. As a born and bred native of Montreal, I do not consider myself the ultimate expert on the intricacies of Asian perceptions, but I do have some insight given my upbringing. Foreigners like myself probably have a unique insight into American culture as outsiders looking in. We are probably more objective -- like the Bob Hope phenomenon.

The Bob Hope phenomenon?

Bob Hope - in that he was foreign born (UK) yet became an American cultural icon. As more contemporary examples, Shania Twain and Celine Dion have also become American music icons - yet are Canadians whose work becomes the culture. There was a kind of parallel vibe for me when I was working as the attraction art director relating to Batman for the Warner Bros. Abu Dhabi project. For me - a Canadian – getting to work with and interpret a globally synonymous American icon for a foreign audience was a thrill.

Growing up, were you encouraged to assimilate - to leave off speaking Cantonese?

Not at all. Integration and high functioning were the goals. To let go of one's original roots was not the intention. Canada is sometimes described as a "salad" as opposed to America's "melting pot." I have found that nothing really melts together in reality. I will never be able to walk into a room and not have people think of my ethnicity. Sometimes I am reminded of that fact in rather jarring ways.

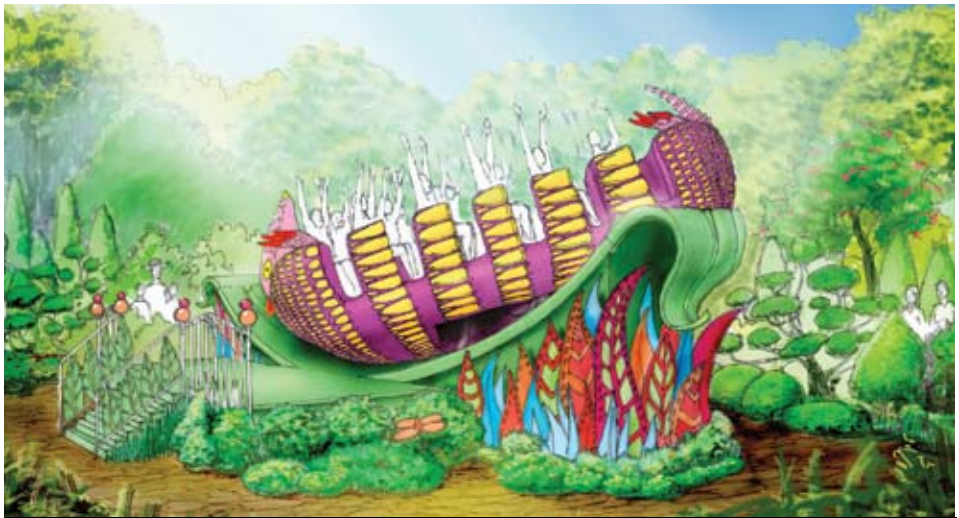
Do people expect you to be an instant expert on all things Oriental?

Yes! But I am of both worlds, so I can interpret for each side. That's the unique space I think I occupy. And being Canadian plays a big part of it too. Canada is multi-cultural, and that is celebrated.

What are some things your "outsider" viewpoint helps alert you to in your work?

I am always aware of how American culture may or may not be perceived by non-Americans. Americans frequently take it for granted that everyone loves everything from America, and for the same reasons. That's not always the case in either respect.

There is sometimes the assumption that people abroad will automatically love an American intellectual property (IP). But not every IP is going to have American qualities that appeal internationally. Here's an example from when I worked at Sony Development [in the 1990s]. One of the attractions created and brought to Japan was "Where The Wild Things Are" based on Maurice Sendak's beloved American children's book. It was beautifully done and true to the book [the attraction first appeared at the original Sony Metreon in San Francisco]. "Wild Things"



Sitting on the belly of a Oaxacan inspired Armadillo, guest thrill to the twists and turns of this playful creature, set in a lush garden setting. Parque Festival, Guadalajara, Mexico. © *MSI Design*

A dramatic and humorous Pirates live stage show concept incorporating an exciting blend of acrobatics, death defying high dives, and sword fighting, developed for Hong Kong's Ocean Park's Summer Splash. *© IvanXTeam S.r.l. 2011*

being American and popular in America led to some assumptions that the Japanese would also love it. It ended up not working there.

In my personal opinion and observation, what was not realized is that Mickey Mouse and other such characters fit within the "cute" and rounded aesthetic that Japanese love, which is already in their culture. The Wild Things, on the other hand, are visually rough-hewn characters with a lot of grit and sharp teeth. That is not to the Japanese taste, so they appeared ugly and scary to them. The mother's behavior is also different from Asian parenting - a traditional Asian parent would never allow Max to leave the dinner table without eating first. Max's behavior as a child is very disobedient, which would be considered shameful and embarrassing of the mother, and Max's behavior unacceptable.

To export concepts or stories to other countries and cultures without doing detailed homework can be a costly mistake.

What do Westerners need to pay attention to as the industry grows in Asia?

Westerners need to try as hard as they can to not think like Westerners, and to inhabit the minds of the people in the countries they are thinking of establishing projects in, or working with. Being a good houseguest, as it were. It is their country, and we are only invited guests. We shouldn't go in and start rearranging their furniture or telling them how things would be better if they did things our way. You wouldn't be welcome very long doing that. Eat their food, seek it out, and learn to like it.

When it comes to conceiving attractions, how does one follow the practice of being a good houseguest, so to speak?

We need to listen to their wants and desires, and not to impose our own tastes on them. If they love Bollywood, but don't care that much about superheroes, give them Bollywood attractions and don't force superheroes on them. Being a good designer is being able to inhabit your client's mind, and bring out what they want. All too often, their tastes are not taken seriously enough. They are paying us to provide them what they want, not what we want.

What should Westerners be paying attention to culturally, in that regard?

In the Middle East, and India, we need to pay much closer attention to what Bollywood has going on, and to gain an appreciation for it. Anime in animation and comics must also be taken much more seriously. It is a huge cultural influence in Asia - yet it is considered an exotic side dish here, when in fact it should be influencing attraction design. There is more love and brand awareness of many Anime titles in Asia than for many beloved American IP's there. We also need to appreciate that Anime storytelling is distinctive. They mix genres much more than we do. You can have a drama-comedy-vampire-love story all in one.

I have seen American Caucasian Anime fans singing Anime karaoke word-for-word in Japanese. Do they know how to speak Japanese? Probably not.

Of course American films are popular and have great reach globally. Disney is obviously a huge influence on the industry. As a generator of IP, it is the gold standard. But one walk around Anime Expo or the show floor at Comic-Con - or a browse through the Bollywood video section of an Indian video store - reveals the huge potential of many other sources - many of which, I must reiterate, are more popular abroad than American IP's. The industry needs to be more aware of this. If not, other design firms in other countries will outmaneuver us here.

If we want to be relevant, and continue to push the edge, we need to dare to learn more, and more importantly, understand other people and cultures. We live in a global economy, and soon a global culture, whether people are prepared or not. We need to think 10-25 years ahead.

HARRIET CHENG

"In America, we believe that 'Story is King.' But when you partner with a different culture, the willingness to execute that vision is not always there."

Harriet Cheng is currently project manager for IWitness at the USC Shoah Foundation Institute and producer/project Manager at Playground Digital Technologies. She previously worked as project coordinator, Shanghai Disneyland at Walt Disney Imagineering Creative Entertainment. She is first-generation Chinese-American, grew up in the US and is fluent in Cantonese and English.

Tell us about your current projects.

With Playground Digital Technologies, I am creating exhibits for the National Museum for the United States Army, a new museum opening in 2015 in Fort Belvoir, Virginia. For the USC Shoah Foundation, I'm creating content for and managing the development of an educational website using materials from the collection. The online education field is exploding right now. That is why I am there - I try to stay ahead of the curve.

How does project management or coordination in the East differ from what the industry's used to in the West?

I think the biggest difference is the balance between project management (money) and the creative. The Chinese don't inherently believe that better creative leads to better experiences, and thus, one should not spend money on it - unlike the Japanese, where the experience is paramount and they spend for it!

That's a huge difference from the storytelling emphasis of the industry in the US and Europe. Here in America, we do believe that "Story is King." Certainly, that is the case with Disney.

But when you partner with a different culture, the willingness to execute that vision is not always there. With the Japanese, they believed it - Universal Studios Japan and Tokyo Disney Sea are both winner parks. Whereas the Chinese close down parks every day because most of them are thrill ride parks that contain no magic or wonder for kids to love.

Then a stronger story core is needed to earn repeat business?

Well, that's what we in the West believe. Look at Harry Potter. It blew the doors off Universal's numbers because the story is so loved. I believe that the Chinese are really a very practical culture. They don't have a lot of cultural belief in the magic of childhood, the gifts of imagination, and having fun. It is a culture built upon hard work and survival, not daydreaming.

Do you think the growth of the middle class will promote more 'daydreaming'?

The middle class do not feel very secure in China, or America, either, for that matter. So, in China, where the culture dictates that you save money and don't spend on idle things, I'm not sure that the parks will get repeat business. For example, Hong Kong Disney depends mostly on tourists, not the local population. Contrast that to Disneyland, where the majority of their business is local customers.

In America, you can become anything. You can start as an "Okie from Muskogee" and turn into Brad Pitt or Carrie Underwood. That is unheard of and undo-able in China. There are far fewer dreamers. When was the last time we had a Chinese performer, or character, or property have that kind of success here? Jackie Chan? No one is making theme parks out of him.

Can you give an example of a Chinese theme park that is achieving a higher standard?

One such park is Happy Valley in Shenzhen. It is an OCT park. The OCT chain spends money on items with no inherent ROI, like landscaping and theming. In America, we talk about "experience" which to us, includes all those intangibles. But the Chinese say, "the grass is not a ride, no one pays to see grass."

You don't go to a theme park to bootstrap, though. A theme park visit is an escape from daily life.

And there is the crux of the culture clash. Escape? The practical, Chinese attitude is, "Your life is what it is. We can go to this park for a fun time today, but don't ever believe this is real life."

The Chinese don't promote creativity, and in theme park development, there's much cost cutting. It can be frustrating. As in any business, if you just tell the production teams what the real budget is at first, then they can design to that; not design to something that was never there. Then you get death by a thousand paper cuts.

Then, if allowed to, Western optimism and the concept of the guest experience may greatly benefit theme park development in China?

When society encourages you to be anything you want to be, the creativity is huge. • • •

Thrilling gladiatorial sword play, pageantry, horse tricks, fire effects, humor, and drama are interwoven into an epic live stunt show in an epic Roman Coliseum set. Project in Vietnam. © *Steelman Partners*

YOU DREAM BIG

We take care of the rest.

color reflections
DYNAMIC DIGITAL IMAGING
LAS VEGAS
crvegas.com

crvegas.com 702.262.9300

Childrens Medical Center, Dallas TX

Boise State University

MAC Cosmetics

scenic backdrops
custom graphic fabrication
museum graphics
trade show displays
dimentional letters

OPEN 7 DAYS A WEEK

iconpath curated experiences

Creative IDEAS BEAUTIFULLY DESIGNED

Bold new concepts for world expos,
theme parks and museums.

LIVE EVENTS | EXHIBITS | ATTRACTIONS

iconpath.com

Cedar Point's new roller coaster, GateKeeper, soars over the park's new spacious and barrier-free entrance. P*hoto by Martin Palicki*

tickets to ride

the technology supporting the ticketing and admissions process is having a dramatic impact on park architecture and planning

by Martin Palicki

Approaching the entrance to Cedar Point, guests' eyes are drawn to the new $25 million dollar coaster flying over the front gate every few minutes. They might not even notice the brand new entry plaza, or the sleek ticketing building tucked off to the side. Interestingly named The GateKeeper, the ride actually gave the park the opportunity to open up the front gate area, allowing guests more freedom and mobility. The very architecture of the park's entrance has changed, thanks in large part to advancing ticketing technology and evolving guest trends.

"Every year the amount of people buying tickets at home jumps a large amount," says Matt Ouimet, President and CEO of Cedar Fair. "We want to make it easy for our guests to come here, and let them have fun."

Purchasing a ticket is usually the first interaction a guest has with a park, and it's something that leaders like Ouimet don't take for granted:

"The first thing guests see at most regional parks around the world are ticket booths that are well beyond their years and certainly a design feature and utility that are no longer necessary.

"If you bought a hotel room in Hawaii on the internet, and you got to the lobby you either said, 'I made a great purchase' or 'What did I do?' – The front gate is our hotel lobby."

It's not just Cedar Point. Other players like Six Flags and Disney are re-designing their entrances, and often with the help of leaders in the ticketing industry.

Matt Ouimet

"Ultimately, what's happening is customers are still presenting a ticket; that concept hasn't changed a whole lot," says David Goldman, President at Ideal Software Systems. "But it's a much more efficient process now."

The First Tickets

Depending on whom you talk to, the field of modern ticketing had its origins in any number of industries like concerts, skiing or sporting. But Dave Hutton, Vice President of Marketing for Diamond Ticketing, has what seems the most credible theory:

"Ticketing probably was developed in the early days of rail and boat passage, where there were large groups of people that were traveling at the same time. Those that were running the services needed a way to have access control. That's where we started keeping track of people and wanting to know numbers. It advanced significantly in performance theater, with Broadway developing new ways to track and identify ticketholders. That's what informs our ticketing procedures today."

Up until the 2000's nearly every guest to an amusement park or theme park purchased their ticket at the park's entrance. Then, print-at-home tickets arrived on the scene and guests gained the option to show up with their printed ticket and have it either exchanged for a new ticket at the gate, or scanned for entry. Even that process is starting to become a bit passé, with the increasing use of mobile devices to allow entry.

The core function is that of presenting a scannable code, and that hasn't changed in a while, although it has become more complex.

"Scanning systems have evolved from regular barcodes to 2D barcodes (for use on mobile devices) to QR codes, which have the capacity to store more information than just a serial number," explains Melinda Arvin, Director of Sales and Marketing for OmniTicket Network.

Making phones smarter

Clearly the trend is to use the mobile technology already in guests' hands to enhance the ticketing and entry process. But relying on smartphones has a few drawbacks.

"For starters, not everyone has a smartphone," says Siriusware's President and CEO Mark Danemann. Additionally, the variety of operating systems ensures there is no one-size-fits-all solution. "Nonetheless, this is a bridge moment. As phones start to be used as a form of payment, then they will start to transform the ticketing procedure."

Steve Brown, Accesso's Chief Operating Officer, North America, agrees. "Right now what mobile devices provide is a readable image, but as devices continue to develop we expect them to include near field communication."

Near field communication technology is based on RFID (Radio Frequency IDentification) chips that emit an identifiable frequency that readers are able to read and track. Although not necessarily new technology, it is being utilized in new ways and currently being rolled out at all of the Walt Disney World Resort's parks as part of their new MyMagic+ program.

Only a few devices have that technology now, but that is expected to expand. How quickly it rolls out will largely depend on phone service providers as well as banks and merchants partnering together to provide all the pieces. Perhaps not surprisingly, Asia is first, Europe second and the US is third for mobile technology adoption. In Asia and in London people are already paying for taxis using near field communication on their mobile devices.

Near field is still in testing at Walt Disney World; the goal is to replace paper tickets with RFID wristbands that function as hotel room key, park ticket, ride reservation system, and more. Disney also touts the system's ability to create customized experiences for guests, with ride control systems able to read data from the wristbands and display a Happy Birthday message to a birthday child during a ride, for example. Initial results from Disney indicate that the wristbands have increased per cap spending.

OmniTicket Network developed the system in Florida, and while Melinda Arvin is quick to point out all the benefits the system provides, she also cautions parks from jumping too quickly onto the RFID trend.

"The concept of making experiences more interactive – and creating more guest engagement throughout the experience – is certainly a big selling point of the technology, but RFID is not an option for most smaller venues," says Arvin. "The cost for RFID is still high, and most of what is being done with RFID can be replicated using less expensive technology. As expected, Disney is at the leading edge, and now others will start to adapt and follow their lead."

Actually, waterparks have been a prime playground for developing ticketing technology. With wallets and waterslides not mixing well, waterparks have sought out ways to pre-load money onto wristbands that guests can use as cash throughout the park. While that can be accomplished with barcoded wristbands and networked scanners, some parks like Waterworld in Colorado have started selling RFID wristbands for that purpose, with the price of the wristband helping offset the cost of the technology. At Dorney Park, Cedar Fair is running its own experiment of offering the RFID wristbands not only at the waterpark but for the adjoining theme park as well.

The New Architecture

As an effect of the changes in technology, a number of park operators have taken the opportunity to re-think and re-design the front gate experience, as Cedar Point has. Budgeting for these projects can be challenging, however.

"We tried for years to come up with a rationale for investing in the front gate," says Matt Ouimet. "Every time we wanted to, we decided to spend those dollars on a ride instead."

Rob Decker, VP of Planning and Design for Cedar Fair, said he was looking at ways to redo the front gate since he started at the company in 1999.

"When the wing coaster came along I realized that was the opportunity," says Decker. "I met with Walter Bolliger [of Bolliger & Mabillard] and said, 'I've always wanted to fly over the front gate,' and within five minutes the idea was born."

From a design and architectural standpoint, the redevelopment of the front gate had as much to do with the park's identity as it did with the coaster.

"For us, not having theme-heavy IP, we have to create our own identity. If we are going to be known as the roller coaster capital of the world, then we put a roller coaster at the front gate," says Decker. "Furthermore, it should be about giving the space back to guests. We tend to shoehorn things into limited space, but now we are thinking more about the placemaking - the sense of place - and making the day better for the guest with less hassle. So we think about those things from an architectural and planning

standpoint to make sure we deliver not just the thrills but have it be a pleasant place to enjoy the day."

It's the advances in technology that are allowing those conversations and design shifts to take place. Guests at Cedar Point find an open plaza at the front gate. Tickets are still sold in a low profile building to the side of the entrance, and directly below GateKeeper, the row of old fashioned turnstiles has been replaced with barrier-free access points. Employees scan tickets, while newly installed cameras count guests as they come in and out of the park.

Although Cedar Point has hard wired scanners, mobile ticket readers could also be used, allowing virtually anywhere to become an access point quickly and easily.

Matt Ouimet calls it "the beginning of the death of the turnstile."

Diamond Ticketing's Dave Hutton thinks "most major parks will be turnstile-free in about 15 years as technology becomes more affordable."

But Steve Bell, Business Solutions Architect for Gateway Ticketing Systems, does not see turnstiles approaching their end of life. "The attraction space can experience significant loss without the utility of rigid control," says Bell. "With key customer locations handling 40,000 ticketed guests per hour, even a 10% loss for our customers can translate to unimaginable and unacceptable revenue sacrifice."

OmniTicket Network's Melinda Arvin says it's the start of "transforming access control." Where feasible, she indicates, facilities are moving towards barrier free access. But at the same time, Omniticket has sold more turnstiles this year than in years past.

The Future

How can one tell where this technology is headed for parks? One way to find out is to look at corollary industries.

Siriusware's Mark Danemann looks to his company's work in the ski industry and a practice they call "direct to lift." Skiers receive a card, either RFID or barcoded, that they can load a lift ticket onto online or at the resort at a discount and go straight to the lift. It's sort of a middle ground between a single admission and a season pass. It increases the park's yield, but also depends on the price point. It starts to make more sense when ticket prices approach the $100 mark.

Cedar Point's main entrance, shown here just prior to opening, features a barrier-free entry and attendant-monitored ticket scanners.

"Getting that card into the customer's hands is key," says Danemann. "Then you can start tracking and analyzing their spending habits, while building loyalty."

Danemann also sees dynamic pricing as a hot topic that has yet to solidly establish itself in the attractions industry. With the majority of tickets being purchased electronically, the actual price of admission could change based on how busy an attraction is. "Does it play out in the real world?" wonders Danemann. " I'm not sure whether a $1-5 change in ticket price will drive people from one attraction to another."

Dave Hutton sees an all-in-one ticket coming soon. "Patrons can purchase their whole experience from home. It will be similar to how vacations are bundled together, or a cruise ship, with everything on one card."

John Collins, Strategic Sales Executive with Active Network also sees further integration of biometrics with other technology on the market. "Using devices like Microsoft Kinect could allow us to establish identification metrics based on height or other identifiable features of guests," says Collins. "Right now, the ROI doesn't make sense, but the future is there."

In the meantime, parks will continue to watch how the front gate experience is changing at parks like Walt Disney World and Cedar Point and adapt their own architecture to meet the changing technology.

"The technology and GateKeeper allowed us to do great placemaking with our entry gate," says Ouimet. "The [open] entry plaza allows for the drama of the ride to take center stage." • • •

THORBURN ASSOCIATES
ACOUSTICAL, TECHNOLOGY, AND LIGHTING DESIGN

Helping Guests SEE and HEAR Your Vision!

www.TA-Inc.com

SAN FRANCISCO LOS ANGELES ORLANDO CHARLOTTE RALEIGH-DURHAM

MORROWSOUND®

salutes ipm inpark MAGAZINE

Charles Morrow Productions LLC
New York Los Angeles Helsinki London Berlin
San Francisco Portland OR Barton VT
+1.212.989.2400
info@cmorrow.com www.cmorrow.com

NOLAN HEIMANN

NOLAN HEIMANN LLP

Congratulations,
Martin and InPark!

Here's to 10 more years of informing, promoting, and connecting our unique community.

www.nolanheimann.com

Visual Terrain

Celebrating 20 years of lighting design for Architecture, Attractions and the Arts.

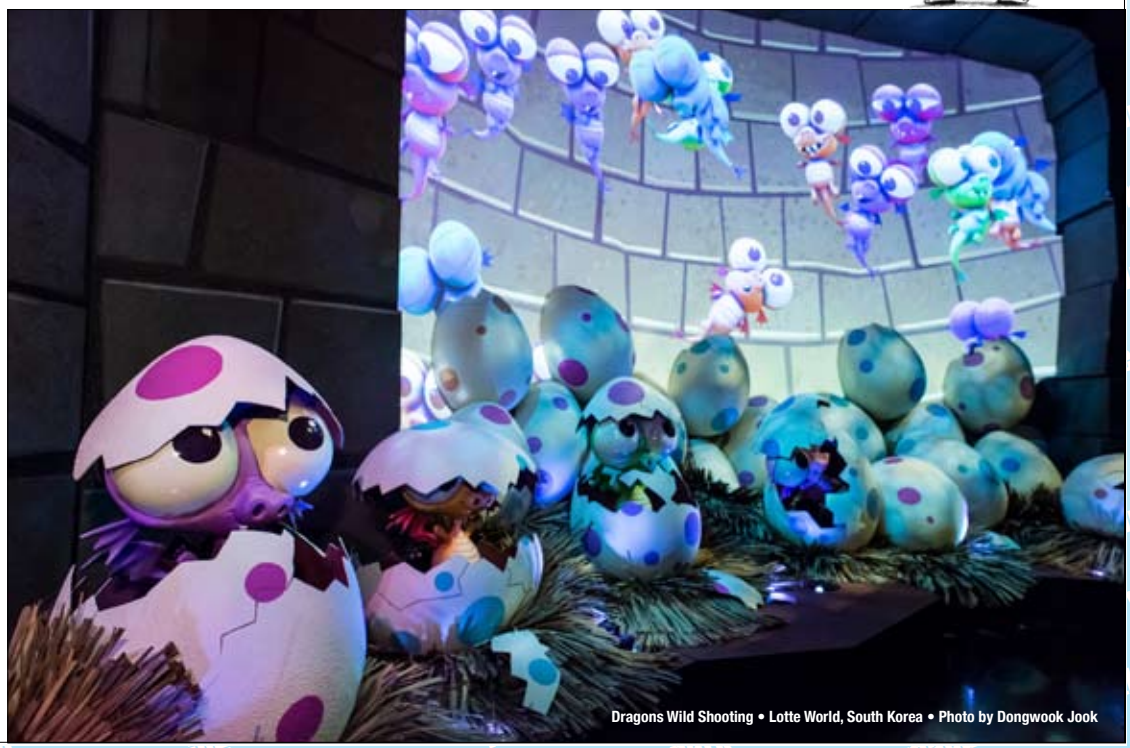
HAPPY BIRTHDAY!
We congratulate InPark Magazine on 10 years of covering themed entertainment and the amazing people and projects that make our industy such an exciting place to work.

Here's to your next 10 years… It only gets more fun moving forward!

Best wishes,

Lisa Passamonte Green
David Green
and your friends at Visual Terrain

www.visualterrain.net



Dragons Wild Shooting • Lotte World, South Korea • Photo by Dongwook Jook

Sailing the Wings of Time

by Martin Palicki

There's a scene in *Wings of Time* where the show's starring bird appears on a giant water screen and appears to fly off into the distance. It is convincingly real. The ability to convey depth on an oftentimes-challenging water screen surface is one of many treats showcased in ECA2's latest outdoor production on Sentosa Island.

Called in by Sentosa to redevelop their Thea Award honored show *Songs of the Sea*, ECA2 built on the basic structure of the original show to create an entirely new production, taking advantage of the latest in show technology.

"*Songs of the Sea* ran for seven years and had over eight million visitors," explained ECA2 CEO Jean-Christophe Canizares. "Sentosa didn't want the show to become dated. It was time to refresh the offering."

To create bigger and better effects, *Wings of Time* combines existing technologies in brand new ways. All the effects used already existed (many in ECA2 productions), but for this new show they needed to become bigger, more surprising, more spectacular. And while projection has long been a part of the company's signature multimedia spectaculars, combined with a host of other effects such as pyrotechnics, water features, lasers, lighting, sound and flames, *Wings* would be the first time that video mapping came into the mix.

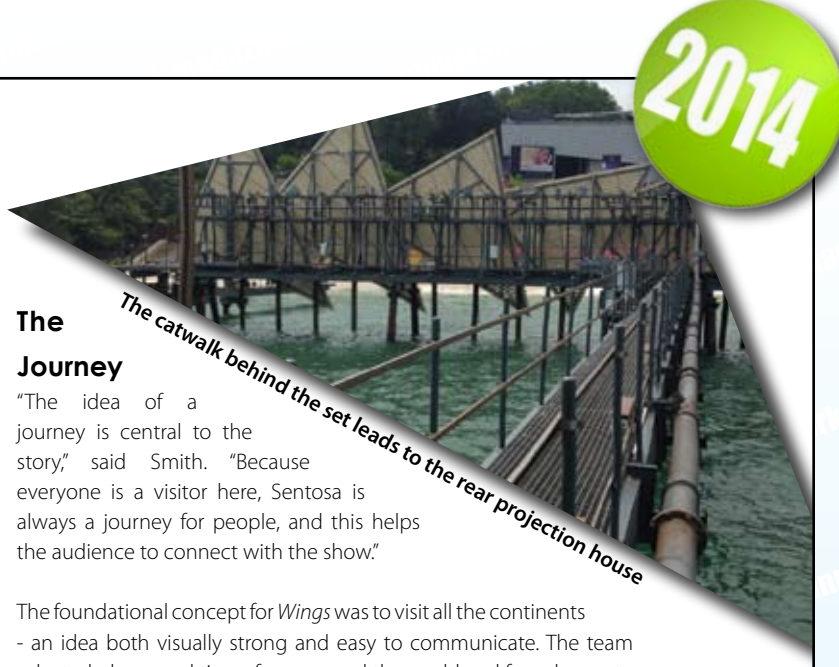
The Venue and Staging

Wings of Time plays two shows nightly on Sentosa Island, Singapore's playground, which is also home to a casino, multiple resorts, a Universal Studios park and a wide array of attractions and entertainment.

The 3,000-seat theater was built for *Songs* eight years ago. Sentosa wanted the venue to be inactive for as little time as possible between the two productions. And so, *Wings of Time* was installed in a record six weeks. The process involved completely dismantling the previous show, construction of the new stage, technical installation, programming, technical tests, operator training and rehearsals for local live performers.

The set was built on the original pier footings from the *Songs* stage, but everything from the catwalk flooring and up was replaced. The focal piece of the set is a series of slatted triangles overlapping one another. They provide the main projection surface.

The pre-show begins with actors on the beach meeting to rehearse a song. The pre-show helps the audience learn the theme music and introduces the show's two primary teenage characters. Two of the actors appear in projected form at the start of the main production. Show designer Moira Smith talked about the decision to use live actors only in the pre-show. "People were an important part of the story, but we didn't want there to be a different scale between the live actors and the screen," said Smith. "This also allowed us to create a show with limited dialog, minimizing language barriers."



The catwalk behind the set leads to the rear projection house

The Journey

"The idea of a journey is central to the story," said Smith. "Because everyone is a visitor here, Sentosa is always a journey for people, and this helps the audience to connect with the show."

The foundational concept for *Wings* was to visit all the continents - an idea both visually strong and easy to communicate. The team selected places and times from around the world and found ways to support the story with technology.

As the story goes, the teenagers meet Shahbaz, a bird who, intrigued by their curiosity about the world, helps transport them through time and space. He takes them to visit his garden of origins, and to various times and locations in history, some more specifically referenced than others. The European industrial revolution is one of the more dramatic scenes in the show. Projection mapping on the triangular surfaces shows machines and gears developing, while rear-projected lasers slice through the surrounding mist in the shape of giant mechanical presses, moving up and down with the beat of the music.

"This show forced all of us to think outside of the box…literally," said Smith. With the multiple projection surfaces and image sources, the show allowed Smith to escape from the traditional frame and move ideas and imagery among different formats and screens.

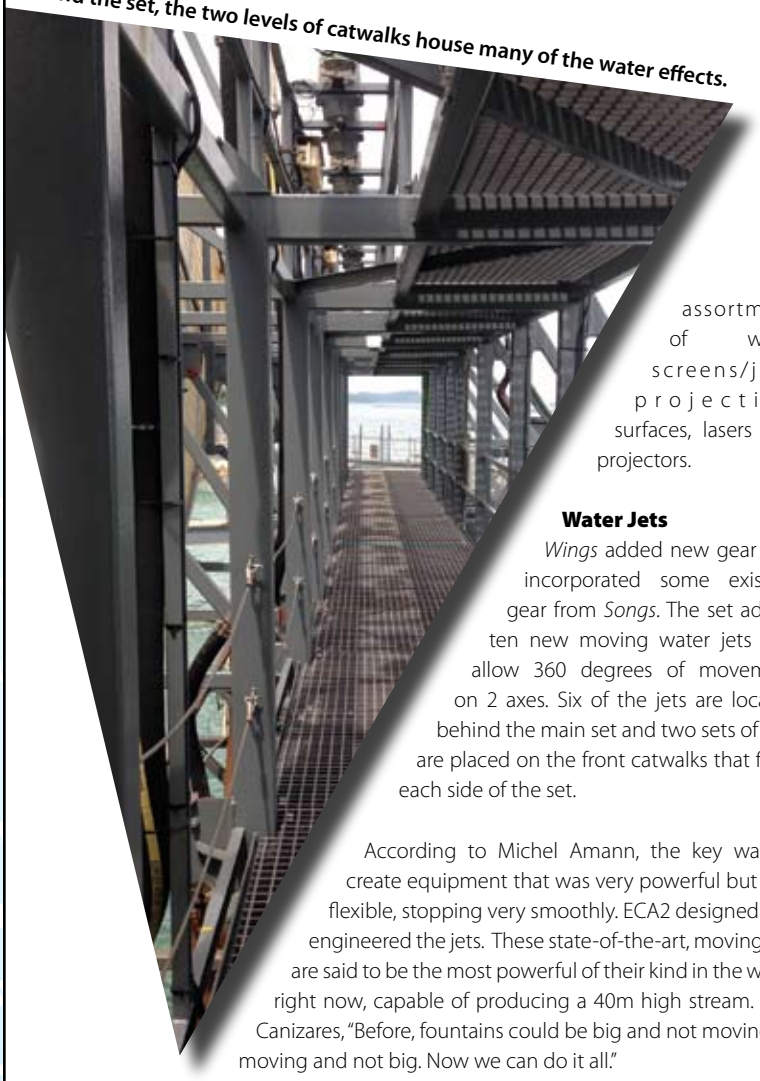
During an Asian-themed scene, flowing ribbons move off the triangle screens and travel (in laser form) up a nearly 40-meter fountain. The effect is seamless, and challenges what the viewer considers the "edges of the screen."

Occasionally, the show journeys into the audience arena as well. Water cannons explode on the beach, sprinkling nearby guests. Fireworks shoot off the structure into the sky, and lasers dance in patterns on the sand.

The show is driven by the effects and technology, but the strong beat of the music also pushes the production forward. ECA2 worked with Philippe Villar and Pascal Lengagne to create the show's musical soundtrack. The duo worked with composers and instruments from around the world to match the feeling and sounds of each of the regions visited.

The Technology

The imagery and the surrounding technology and effects are what drive the story forward. The 20-minute show's plot was designed to be enjoyed on different levels. Guests may just be amazed by the visuals without following the story. What makes that possible is an impressive



Behind the set, the two levels of catwalks house many of the water effects.

assortment of water screens/jets, projection surfaces, lasers and projectors.

Water Jets

Wings added new gear and incorporated some existing gear from *Songs*. The set added ten new moving water jets that allow 360 degrees of movement on 2 axes. Six of the jets are located behind the main set and two sets of two are placed on the front catwalks that flank each side of the set.

According to Michel Amann, the key was to create equipment that was very powerful but also flexible, stopping very smoothly. ECA2 designed and engineered the jets. These state-of-the-art, moving jets are said to be the most powerful of their kind in the world right now, capable of producing a 40m high stream. Said Canizares, "Before, fountains could be big and not moving, or moving and not big. Now we can do it all."

40 existing, stationary water jets from *Songs* were moved from the lower level catwalk behind the set to a new second story, increasing the height of the jets. Additionally, all the moving and stationary jets were outfitted with LED colored lighting, reducing lighting power consumption for the show by 25%.

Water screen

An existing, key feature of the *Songs* production was its main water screen, and this was retained for *Wings* but given a complete overhaul. Perched above the center of the set, the screen extends the projection space far out and above the set's main triangles. ECA2 rebuilt a new head for the water screen, creating a more focused and powerful water stream and thereby a better projection surface, with optimized clarity and crispness and more ability to retain those qualities even in windy conditions. Two new Christie Roadster S+20k rear projectors provide the power for the graphics, which are duplicated for image quality and redundancy.

Lasers

Equally dramatic is the usage of lasers in *Wings*. Four green lasers from the previous show were repurposed and four new color laser projectors were added bringing a total of 88 watts of power (10 times more than previously).

Claude Lifante laser designed the show, and was given complete creative license. The lasers dramatically emulate sparks during the industrial revolution, and create geometric patterns that move from the triangle sets, to water jet sprays and to the beach in captivating, fluid movements. At times, it wasn't clear what was projected image and what was laser. The blending is seamless and the effects dramatic.

Show Control and Maintenance

Wings of Time uses a Medialon show control system to control the entire production. ECA2 created its own interface for local techs to operate. For the new production, all the controls were switched out to digital systems, and a redundant show control system was installed to enhance reliability.

As might be expected, one of the biggest challenges for a show of this type is dealing with the corrosive effects of seawater. According to Technical Director Jason Fischer, while misters on the set use fresh tap water, every other fountain and device uses filtered seawater, and the set is constantly bombarded by waves and mist from the sea. Luckily, ECA2 is skilled in this area, and has built up expertise from their work not only on *Songs* but from *The Big O Show* in South Korea. Their three-pronged approach to combat corrosion includes:

- **Routine maintenance** – Technicians regularly clean and inspect the submerged and exposed elements of the show equipment.
- **Equipment and materials selected and fabricated for tough conditions (such as stainless steel made for sea environments)** – The metal catwalk flooring, for example, was replaced with a resin grating that is more durable and less susceptible to corrosion. Similarly, the triangle set, although made to look like wood, is fabricated out of a resin resistant to sun and moisture decay.
- **Lighting and equipment positioned and mounted in protected environments where possible** – During the three weeks of programming the show, the programming equipment, set up front and center under tents on the beach, was ruined by the corrosion. It was expected and part of the cost of production, but it highlights why new buildings were constructed to house additional projection and lighting equipment in an effort to protect the sensitive electronics from the elements.

> **"Our model is to have as many in-house people work on a project as possible."**

Nature ultimately wins, and the show, which is expected to have a run of around five years, will likely be the last for the set and the underwater structures that support it. Sentosa expects to eventually redevelop the area into a new attraction and create a new nighttime show elsewhere on the island when that time comes.

The Team

It's impossible to not want to compare *Wings of Time* with *Songs of the Sea*. And even after a very cursory comparison, one can tell that *Wings* is an evolution of *Songs*. Canizares admits that their shows evolve just as their company does, building on the past and reaching towards the future.

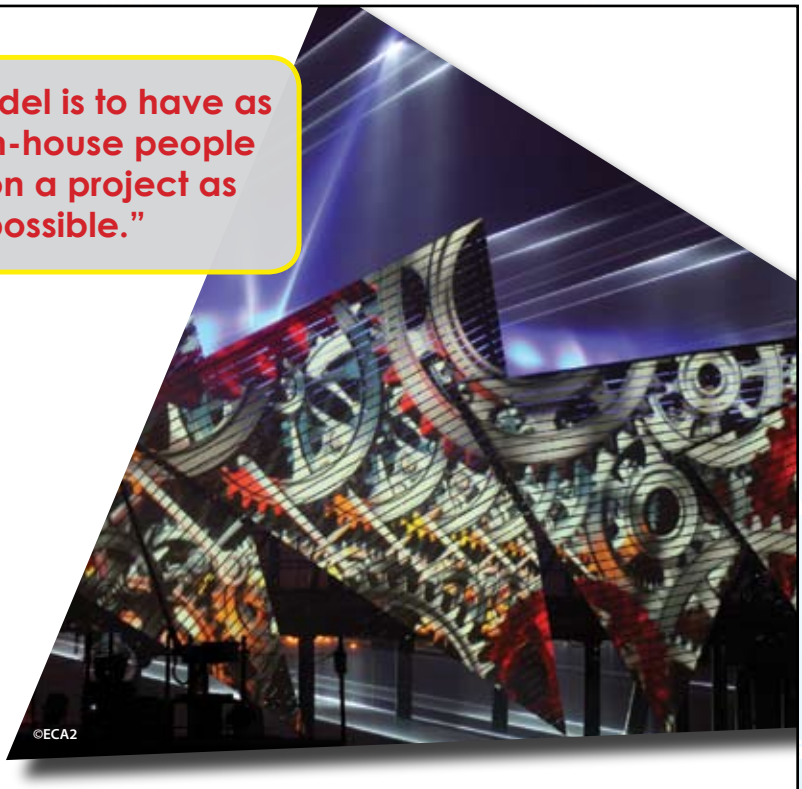
"Between producing these two shows, ECA2 worked on a dozen other performances that provided us more experience," explained Canizares. "Our model is to have as many in-house people work on a project as possible. We want the R&D value to remain with our company, so we choose to contract out positions as little as possible."

Contracting with other people can be a fast path, indicates Canizares, but can reduce long-term benefits. By having an in-house development team, ECA2 can show the client that the solutions required have been studied and developed by an established core of creative and technical professionals. "Our brains, ideas and flexibility are our biggest assets," he said. • • •

MEET THE MASTER: Jean-Christophe Canizares, CEO of ECA2

With 20+ years of experience in the company, Jean-Christophe Canizares leads a team that includes talents in the fields of creation, engineering, logistics, project management and production.

He was educated as an engineer and in his early career worked as technical manager for concerts and festivals, first collaborating with ECA2 in 1992 on the opening of Euro Disney. He joined the company full-time in 1994 and since that time has played a part in producing all ECA2's shows, first as technical director, then as chief of operations and finally as CEO.



Key Technical Figures

Main show structure
- A façade of 8 triangles and a diamond covered by timber lattice: 55m long, 12m high
- Boardwalk: 50m long, 6m high from mean high sea level

Mist installation
- 4 series of mist of 48m (one on the beach, 3 on the catwalk)

Water installation
- 10 robotic moving jets (6 x 20M high, 2 x 30M high, 2 x 40M high)
- 37 cannons (24 x 14M high, 12 x 18M high, 1 x 40M high)
- 1 water screen (60m X 20m)
- 2 cascade effects 40m long

Geyser installation
- 5 airshoots, 20m high

Laser installation
- 2 15W ROGB
- 2 14W OGB
- 2 5W green
- 2 10W green

Video projection
- 6 Christie L2K1500 projectors for the triangles
- 2 Christie Roadster S+20K projectors for the water screen

Flame generators
- 6 units FG 25 with a flame height 7M
- 12 units FG 50 with a flame height 10M
- 1 unit FG 100 with a flame height 16M

Lighting installation
- 10 donut 96 LED for moving jets
- 114 RGBW 48 LED PAR for water effects
- 4 moving LED wash in Tempest domes
- 136 1000W submersible PAR
- 10 moving heads Mac 2000
- 6 moving heads Mac Viper Air FX
- 8 Source Four
- 32 PAR
- 18 halogens

Pyrotechnics installation
- 33 Firing Modules on catwalk

Other constraints
- Seawater requires all elements to be fabricated in high grade stainless steel. All steel fabricated items needed to be corrosion and sea salt resistant.
- Special show control under ECA2 with redundant control, touch screens, and feedback information from all show elements in real time.