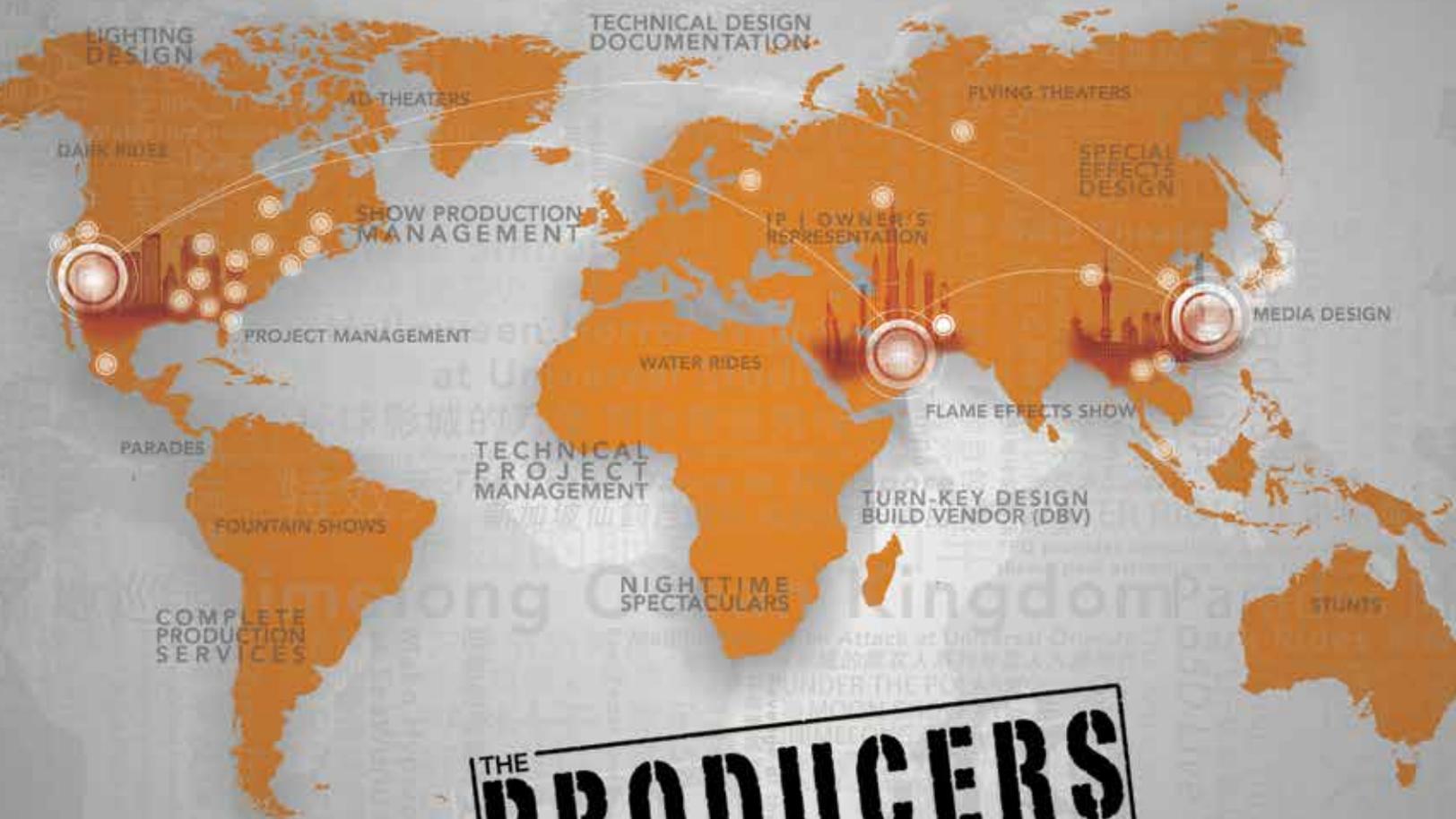


The Producers Group celebrates six years of global projects



THE PRODUCERS GROUP
LOS ANGELES | SHANGHAI | DUBAI
THE INTERNATIONAL THEME PARK PRODUCTION COMPANY

What's next in Asia?

ECA looks at the Asian project pipeline

Exclusive treasure!

Imagineer Luc Mayrand takes us through the creative process for Shanghai Disney's Pirates

Ultimate resolution

Digital cinema hits the 8,000 pixel/120 fps mark



STUDIO CITY MACAU
OPENED 2015 MACAU



RING OF HARMONY
OPENED 2012 SHENYANG, CHINA



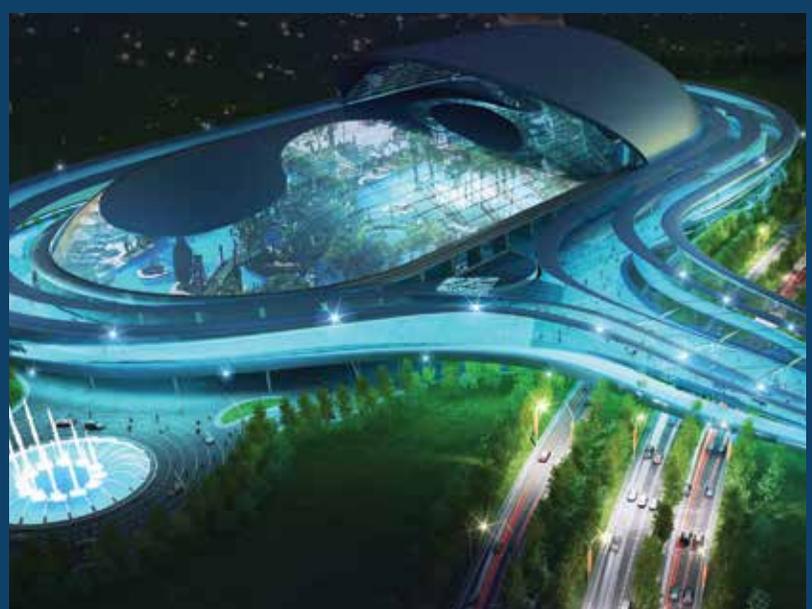
LOTTEWORLD "LET'S DREAM"
25TH ANNIVERSARY SPECTACULAR
OPENED 2014 SEOUL, KOREA



DREAMWORLD RESORT HOTEL
NOW UNDER CONSTRUCTION
OPENING 2018 FUSHUN, CHINA



HENGDIAN SHANGHAI BUND MOVIE WORLD
NOW UNDER CONSTRUCTION
OPENING 2017 HENGDIAN, CHINA



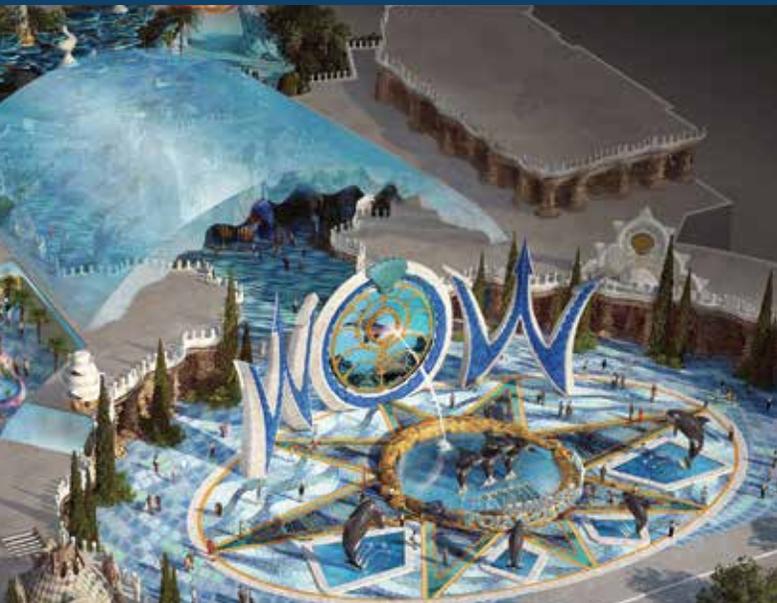
CHIMELONG PROJECT
NOW UNDER CONSTRUCTION
OPENING 2017 TBD, CHINA



GALAXY MACAU
OPENED 2011 MACAU



WORLD OF POSEIDON
NOW UNDER CONSTRUCTION
OPENING 2017 HARBIN, CHINA



POLAR OCEAN WORLD
NOW UNDER CONSTRUCTION
OPENING 2018 SHANGHAI, CHINA



#1 ENTERTAINMENT DESIGN COMPANY IN ASIA

#1

IN CREATING THEME PARKS, RESORT
HOTELS, AND ATTRACTIONS THAT
ACTUALLY GET BUILT

#1

IN CREATING SUCCESSFUL PROJECTS
THAT STAND THE TEST OF TIME

#1

IN CREATING ORIGINAL PROJECTS THAT
BECOME ICONIC DESTINATIONS

#1

IN CREATING MEMORABLE AND
EMOTIONALLY ENGAGING ATTRACTIONS

#1

IN CREATING INNOVATIVE AND
SHOCKINGLY AMAZING PROJECTS

GODDARD GROUP

CREATING THE GREATEST ATTRACTIONS,
THEME PARKS & RESORTS IN THE WORLD

Visit us at Booth # B1903,
Level B2

Holovis[®]

EXPERIENCE DESIGNERS

THE WORLD'S FIRST REAL-TIME, VIRTUAL REALITY, ROBOTIC MOTION EXPERIENCE

*HIGH CAPACITY EXPERIENCE WITH GESTURE TRACKED
INTERACTIVITY, FOR ENHANCED PERSONALISATION -
AN ATTRACTION THAT'S DIFFERENT EVERY TIME*



EXPERIENCE IT AT THE ASIAN ATTRACTIONS EXPO

BOOTH B2038

www.holovis.com



@HolovisInt

IN PARTNERSHIP WITH

KUKA



BEC ENGINEERING

Singing the praises of Singapore (and other Asian countries)

Martin Palicki, IPM publisher



The age of enlightenment (for entertainment technology)

Judith Rubin, IPM editor



After three years of visiting Chinese cities (Beijing, Hong Kong, Shanghai), the IAAPA Asian Attractions Expo is headed to Singapore. Although China deservedly gets much attention for the rapid growth of leisure based entertainment, Singapore should be recognized as an early adopter in the region.

To be fair, Japan and South Korea are also leaders. All three countries have been pioneers in Asia with regards to developing themed entertainment destinations.

In the 1970s Singapore established Sentosa Island as a vacation and entertainment destination. Today, the resort is home to Universal Studios, a casino, upscale hotels and a variety of attractions and shows, including the Thea-honored Wings of Time and the iconic Crane Dance.

Across the water, Gardens by the Bay (also a Thea recipient) combines horticulture with lighting, audio and entertainment in a delightfully inviting and fun way.

All of this is to say, of course, that while China holds the lion's share of potential for future growth, there are established markets elsewhere in Asia that have capacity for additional development, not to mention the virtually untapped or burgeoning markets in places like India, Vietnam, and Saudi Arabia.

In this issue, the experts at ECA update us on the projects and players in Asia, and we also examine the markets around the globe that The Producers Group has been involved in over the past few years.

If you're attending IAAPA's Asian Attraction Expo, be sure to pick up a copy of InPark in the publication bins. Keep an eye out for me, as well. If you're attending InfoComm, Joe Kleiman will be there, also with copies of InPark.

It's a great age of entertainment technology and the manufacturers are sharing directly in the vision and excitement, often participating hands-on in the creative applications of their product. Used to be, we'd query a manufacturer about what recent projects featured their products and they would shrug and lament that the information was hard to come by. But nowadays the manufacturer may well be the first to share such news.

Manufacturers are partnering with entertainment operators and creative groups. They collaborate ever more closely with integrators, technical designers and end users - setting up new verticals within their companies to address market niches, recruiting product specialists who are passionate and knowledgeable, enlisting end users as beta testers. Of course this includes themed entertainment - where seamless applications of technology are essential and the industry is exploding with growth on six continents.

Manufacturers have changed the way they talk about their products - they are not black boxes, they are tools of storytelling and experience.

InPark brings their voices directly to you through coverage of such companies as Christie, Evans & Sutherland and Panasonic. We chronicle how those technologies apply to content creation, media production and new forms of immersive storytelling via producers, integrators, designers, artisans, artists and operators such as WDI, TPG, Holovis, Alterface and iconpath.

We look at how guests experience them in the parks, from experts such as our new contributors from Rosen School of Hospitality. That is our job and our passion at InPark Magazine: to tell the never-ending story of an industry.



COVER: The Producers Group has offices and projects spread across the globe. InPark delves into the unique business culture of this company celebrating 6 years of international success. **p 28**



Joe Kleiman is News Editor for the InPark Magazine website. He has over 20 years management experience in the attractions and giant screen film industries and as a zookeeper, cared for animals ranging from penguins to rhinos.

★★★★★

..... Leave them with a
heart-pounding
hair-raising
spine-tingling
mind-blowing
jaw-dropping
..... kind of feeling

Create spectacular, one-of-a-kind
visual experiences with help from
the name you trust.

christiedigital.com/jawdrop

CHRISTIE®

8 Heavy Metal
Vekoma roller coaster products make tracks around the world • *interview by Martin Palicki*

11 Update on Asia
International IP development trends across Asia, from ECA's perspective • *by Edward Shaw & Christian Aaen*

14 Real time and immersive
Holovis story time for the attractions industry • *by Emily Burrows*

17 Meeting up for a day in the park
Season pass holders enjoy parks in their own special ways • *by Dr. Edwin N. Torres & Dr. Marissa Orlowski*

22 Connected Solutions
Panasonic targets theme park and leisure markets with new company division • *by Martin Palicki*

24 Inside the TEA Summit + Theas
A photo essay containing highlights from TEA's 2017 event • *by Martin Palicki*

26 Devouring with the eyes
ICONPATH's new dining experience debuts at AAE • *interview by Martin Palicki*

28 Around the world with The Producers Group
A global company in an increasingly global market • *by Judith Rubin*

34 Behind the headsets
A look at Six Flags' expanding on-ride VR program • *by Joe Kleiman*

37 8,000-pixel resolution
Specialty cinema reaches for E&S True8K • *by Joe Kleiman and Judith Rubin*

41 Greening Great America
The history of California's Great America and its path to sustainability • *by Joe Kleiman*

43 Dreamers and doers
CalArts is part of Walt Disney's remarkable legacy • *by Rick West*

46 Exploring 120fps
Christie explains what the technology means for the attractions industry • *by Judith Rubin*

51 Pirates, treasure & Luc
Imagineer Luc Mayrand on Shanghai Disneyland's Pirates attraction • *by Martin Palicki*

59 A darkride primer
Alterface looks at the evolution of dark rides • *by Anja D'Hondt*

staff & contributors

PUBLISHER Martin Palicki	DESIGN Martin Palicki
EDITOR Judith Rubin	CONTRIBUTORS Christian Aaen Emily Burrows
CONTRIBUTING EDITORS Joe Kleiman, News Editor Jim Ogul, World's Fair Editor	Anja D'Hondt Dr. Marissa Orlowski Edward Shaw Dr. Edwin N. Torres Rick West

advertiser index

Alcorn McBride	40	ICONPATH	36	Vortex	42
Christie	6	nWave	59	Wärtsilä Funä	50
Dynamic Attractions	10	PGAV	23	WhiteWater	16
Evans & Sutherland	18	Polin	back cover	WWA	49
ECA2	21	The Producers Group	57		
Eleventh Hour	45	ProSlide	27		
Freestyle Slides	20	Sally	13		
Goddard Group	2-3	Scruffy Dog	15		
Holovis	4	TechFulcrum	9		
IAAPA Expo	52	Vekoma	55		

InPark Magazine (ISSN 1553-1767) is published five times a year by Martin Chronicles Publishing, LLC, 2349 E Ohio Ave. Milwaukee, WI 53207. Shipping address: 2349 E Ohio Ave. Milwaukee, WI 53207. Phone: 262-412-7107. Printing by Johnson Press of America

Contents © 2017 InPark Magazine. All rights reserved. Nothing in the magazine may be reproduced or used in any manner without the prior written permission of the magazine. InPark Magazine is not responsible for unsolicited manuscripts, photographs or illustrations. Such material must be accompanied by a self-addressed and stamped envelope to be returned.

Postmaster: Send address changes to InPark Magazine 2349 E Ohio Ave. Milwaukee, WI 53207. Subscriptions are available annually for \$45 per year (\$70 international).

Opinions expressed in editorial matter are not necessarily those of InPark Magazine or its publishers, Martin Chronicles Publishing, LLC.

Heavy Metal

Vekoma roller coaster products make tracks around the world

interview by Martin Palicki

Charlotte van Etten (Account Manager) and Benjamin Bloemendaal (Senior Concept Engineer) of Vekoma Rides Manufacturing B.V. talk to InPark about upcoming installations and new ride concepts

Can you give us an update on the Space Warp launch coaster that opened at Energylandia (Poland) last year?

Benjamin Bloemendaal: Space Warp is the first model to debut of a whole new generation of Vekoma's sit-down thrill coasters. It is the first thrill coaster to be designed using our latest track design tools, built using our new track production method and sporting the new MK1101 trains - similar to how family coasters like Orkanen (Faarup Sommerland) and Raik (Phantasialand) came to be. The first model at Energylandia has been performing right on spec and the overall feedback has been great. In order to further improve the quality of the MK1101 ride system there will be some minor changes implemented to this train type for use in future installations.

This year you are opening a Fire Storm coaster in Vietnam, which is also a launched coaster. Can you explain some of the differences between the Fire Storm and Space Warp Launch?

BB: The Firestorm model is based on the same MK1101 ride system as Space Warp, but it is more intense. For both rides the same design principles were applied, though Firestorm is significantly faster, taller



Charlotte van Etten



Benjamin Bloemendaal

and longer than Space Warp. In fact, at 115km/h (71mph) it will be the fastest coaster Vekoma has ever produced and the track length is almost double that of Space Warp.

Are you finding customers tend to favor more thrilling coasters at present?

Charlotte van Etten: Currently, we are finding a greater demand for thrill rides in the Far East than in Western markets.

However, our line of Family Coasters is very diverse and while suitable for families, those certainly have some thrilling aspects to them. Our family coasters are popular with clients world-wide. Their straightforward technology and standard parts provide a smooth ride and allow for uncomplicated operation and low maintenance. Standard or custom designed Family Coasters can be built both outdoor and indoor as well as being adapted to dark ride requirements with lighting and other special effects, or easily integrated into any landscape or imaginative theme. Their versatility is valuable for park operators.

The relatively new Family Boomerang coaster [opened in May 2016 as the Family Boomerang Rebound Velociraptor and Suspended Family Coaster Flight of Pterosaur at Paulton's Park, UK] has also proved a great success, while the Vekoma Mine Train is still considered as one of the best in the industry.



Rendering of Vekoma's Bermuda Blitz coaster as Lech Coaster at Legandia (Poland) Photo: Legandia

Vekoma's new Bermuda Blitz coaster integrates some special effects into the ride. Can you tell us more about what is involved and where we will see this coaster installed?

BB: Bermuda Blitz, along with several other new designs, was designed with interaction with the ride area in mind. The special opportunities these designs provide regarding near-miss effects and close fly-by's are part of the key-selling points of these coasters.

Our concept is based on the idea of a wild plane ride over the Bermuda Triangle. The idea highlights different sections of the track layout, such as the track crossing over and under the station. It revolves around a central set piece, such as a shipwreck. Although it would be outside of Vekoma's scope of delivery, the ride can also integrate lighting, sound and mist effects.

The first installation of this coaster, dubbed Lech Coaster at Legandia in Poland, will include all the suggested theme elements from our Bermuda concept, but cast into the park's own custom storyline.

What drives decision making when a customer is choosing a coaster?

CvE: Customers are influenced by a wide variety of factors, depending on their target audience. There will always be parks that want to aim

for records, such as tallest, fastest or first, but that isn't important for everyone. Operators know that they must provide fun for all their specific target guests, which can be a mix of thrill and family attractions or sometimes just rides that are just suitable and fun for the entire family.

Vekoma partners with Brogent on media-based ride systems. Can you tell us more about that partnership?

CvE: Vekoma and Brogent entered into a partnership because we saw great potential for both our companies. Vekoma has a Business Development Manager who fully concentrates on the media based attractions. With Vekoma's network, engineering qualifications and experience with TUV and other approval entities there is great synergy and good cooperation between our companies.

Although Vekoma already has a wide variety of coasters and attractions, Brogent's i-Ride was a welcome expansion to our portfolio. With the panoramic flying theatre i-Ride, Brogent has very successfully captured a lot of interest in the market over the last few years. There are already quite a few installations around the world and three more are opening or have recently opened in Europe and the USA and Canada. Those are Mall of America (USA) Europa-Park (Germany), Ferrari Land at Port Aventura (Spain) and a cultural attraction, "This is Holland" (Netherlands). Further i-Rides are scheduled to open in the UAE, China and USA for 2017 and 2018. ...

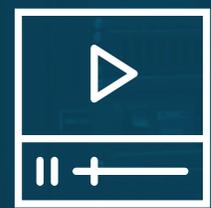
音频
Audio



表演控制
Show Control



视频
Video



为主题公园, 博物馆和景点提供设计, 咨询, 工程分析和技术指导
Design, Consulting, Engineering & Technical Direction
for Theme Parks, Museums and Attractions.



DYNAMIC
ATTRactions



Packages include everything you need for world-class attractions!
为您量身定做属于您的世界一流景点



动感影院



**BEST NEW
PRODUCT**
2016 Brass Ring Award

COMPLETE ATTRACTION DESIGN AND FABRICATION ~ PRESHOWS ~ DARK RIDES ~ FLYING THEATERS
~ ROBOTIC ARM RIDES ~ SFX COASTERS ~ IMMERSIVE TRAMS ~ MOTION THEATERS ~ INTERACTIVE
游乐设施的创意设计 with 建立制造 ~ 预演 ~ 黑暗骑乘 ~ 飞行影院 ~ 机械臂骑 ~ SFX过山车 ~ 仿真有轨电车 ~ 动态影院 ~ 交互式媒体

+86-13022156621 +1 (407) 240-3490 WWW.DYNAMICATTRactions.COM
ORLANDO ~ TORONTO ~ VANCOUVER ~ SHANGHAI ~ DONGGUAN

Update on Asia

International IP development trends across Asia, from ECA's perspective

by Edward Shaw and Christian Aaen, Entertainment + Culture Advisors (ECA)

It is imperative today for LBE developers and operators to differentiate their products with unique experiences and IP. In a fast developing and increasingly competitive market, compelling attraction content and an operator's ability to utilize it both to draw and entertain visitors is at the core of any successful LBE destination. (LBE=location based entertainment; IP = intellectual property.)

In retail contexts, where traditional tenants face rising competition from online shopping, developers are seeking unique attraction and entertainment anchors and licensing IP for cultural tourism, lifestyle retail and leisure projects to better compete with other shopping destinations. The unique attractions and IP allow operators to achieve pricing premiums over non-branded attractions. This phenomenon is especially visible in the rapidly evolving Asian LBE landscape.

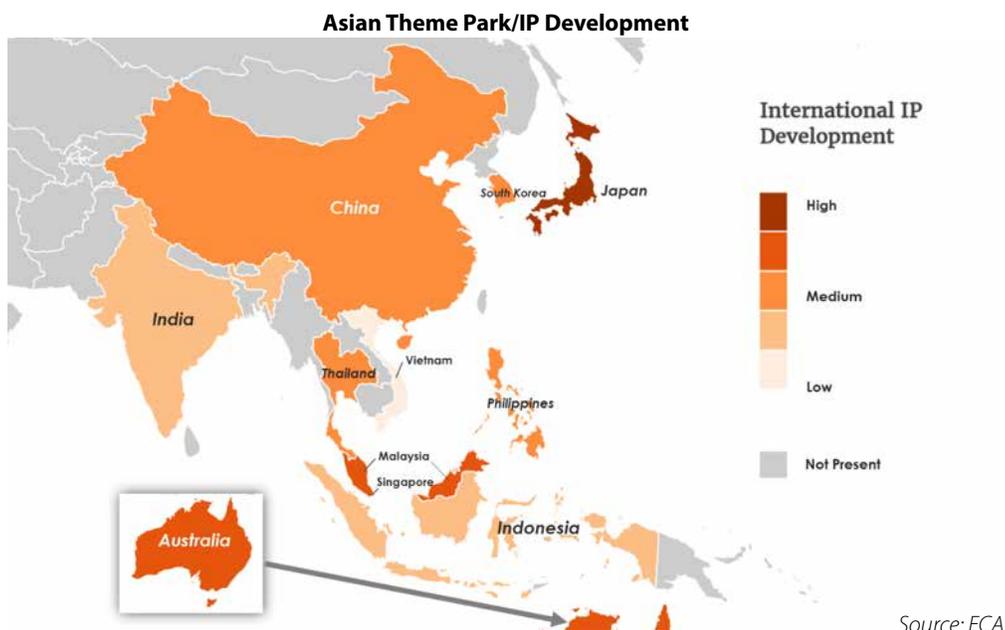
As developers look to incorporate IP into Asian LBE attraction projects, ECA sees two primary types of IP inclusion – domestically developed IP and internationally developed IP.

Established domestic operators tend to create their own themes, brands and characters and have limited interest in international IP for attraction projects – for example, Chimelong and Wanda Group in China. By comparison, newer domestic investors and developers entering the

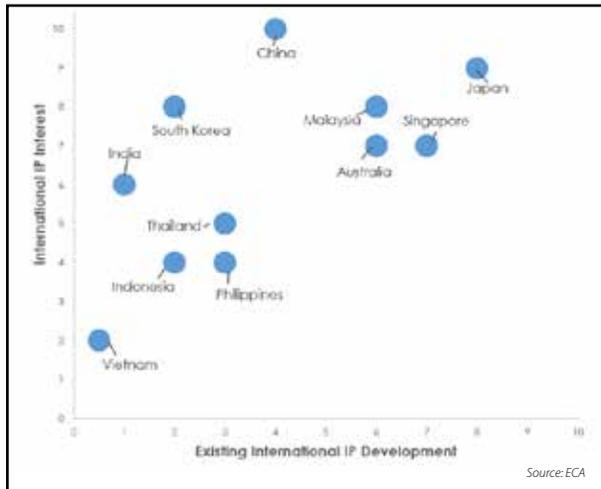
industry are increasingly interested in partnering with international developers, operators and IPs to bring internationally branded content that can help differentiate their destinations and extend their appeal beyond the regional market.

As a result, leading operating groups, such as Merlin Entertainments Group, Village Roadshow, Parques Reunidos, and iP2, among others are partnering with international IPs to improve their offer to developers throughout the region. The Novotown project in Hengqin (Zhuhai, China) exemplifies this phenomenon, where Zhuhai Hengqin Laisun Creative Culture City Co. Ltd. has partnered with Lionsgate Entertainment to provide the IPs and content, and with Village Roadshow to operate the planned 22,000-square meter indoor Lionsgate Entertainment World that will open at the end of 2018.

Asian markets offer varying levels of international IP inclusion. Japan exhibits the highest level, where Disney opened the first internationally branded theme park in Asia almost 35 years ago (Tokyo Disneyland; 1983). China is catching up quickly, though, with the recent opening of Shanghai Disneyland and upcoming projects from Universal Studios, LEGOLAND Parks, and Lionsgate, among others, in leading tier 1 and tier 2 cities.



Asian Theme Park/Attraction IP Development



ECA expects the Asian attraction industry to continue its strong growth trend with new opportunities for innovation driven by motivated international brands and licensors.

What's in the pipeline?

While Japan and Singapore have made international IP a fundamental tenet of their tourism offer, broader Asia is full of pipeline internationally branded LBE projects. ECA expects China, Japan and Malaysia to lead the way over the next decade in terms of these projects due to market dynamics (scale and income) and government support. One project that recently opened is LEGOLAND Japan in Nagoya, April 2017.

The following is a selection of projects that have been announced and begun to make progress in the planning and development process:

China/HK

- Hong Kong Disneyland Expansion – 2018-2023
- Liongate Entertainment World in Zhuhai – opening in 2018
- Six Flags China multiple projects – first in Jiaying in 2019+ and Chongqing 2020+
- Universal Studios Beijing theme park destination – opening in 2020+
- Eden Project Qingdao – 2020+
- SeaWorld recently announced a partnership with Zhonghong Group – intend to develop multiple projects for opening in 2020+, both theme parks and indoor LBE attractions
- LEGOLAND Shanghai/Beijing theme parks – 2022+

Japan

- Comcast Corporation recently purchased the remaining shares of USJ to take 100% control indicating their positive outlook for Japan and Asia and further reinvestment possibilities
- Moomin Theme Park Japan – opening in 2018/19
- Super Nintendo World land at Universal Studios Japan (USJ) in Osaka – opening in 2020
- Tokyo Disneyland Expansion – opening in 2020+

Malaysia

- Movie Animation Parks [MAPS] in Ipoh – opening in 2017
- 20th Century Fox World at Genting Highlands – opening in Summer 2018

South Korea and India

- There are several branded theme park/attractions under consideration in South Korea. India is considered the next emerging large-scale market for LBE development after China.

Who's in the market?

In addition to the publicly announced projects and beyond the traditional licensors, a multitude of entities are exploring ways in which to extend their brand into Asia. These groups include:

- "Big 6" Studios – Disney, Universal, Warner Bros., Fox, Paramount, Sony
- Major Studios – Lionsgate, MGM
- TV Networks – BBC, National Geographic, Discovery, Cartoon Network, Nickelodeon
- Toy/Crafts – LEGO, Hasbro, Sanrio, HIT
- Video Games – Electronic Arts, SEGA, Angry Birds, Activision, Nintendo, Ubisoft
- Specialty – Cirque du Soleil, Ferrari, Peanuts Worldwide, National Basketball Association (NBA)
- Merlin Entertainments and others - Operating groups like Merlin also have significant plans for rollout development in Asia that will utilize international IP. Merlin has announced plans for the development of 40 new Midway attractions globally by 2020, of which Asia will be a key focus with an expansion strategy based on 'cluster' locations where Merlin can achieve an operating cost, marketing and cross-selling advantage.

Integrated resorts and IP – who, what and where

Finally, integrated resorts (IR) may open a multitude of opportunities for internationally branded attraction development in Asia.

- **Malaysia** - As shown by the inclusion of Universal Studios in Genting's Resorts World on Sentosa Island in Singapore, internationally branded IP can play a critical role in expanding tourism drawing power for a city/country and in acquiring gaming license approval. Genting has also fully re-envisioned the theme park at Genting Highlands outside Kuala Lumpur (20th Century Fox World theme park) as part of the RM10 billion (USD2.3billion) Genting Integrated Tourism Plan in Malaysia.
- **Japan** - Japan is considering the approval of integrated resorts with final approval and city selection (Tokyo, Osaka, and Yokohama are the expected frontrunners) coming as soon as the end of 2017, and it is expected that IPs and themed attractions will play a central role in the winning bids.

- **Philippines** - The first IR opened in Manila, Philippines in 2013 and the City of Dreams Manila project, which opened in 2014, offers the 40,000-square foot DreamWorks branded DreamPlay children's attraction.
- **Macau** - Macau, which has long had integrated resorts, recently began to include internationally branded IP attractions to diversify the guest offer with the opening of the Warner Bros. Batman 4D flight simulation ride at Studio City.
- **Rest of Asia** - Other markets across Asia, including Vietnam and Korea, are in talks to develop IRs with international IP. . . .

About Entertainment + Culture Advisors (ECA)

Entertainment + Culture Advisors (ECA) is focused on delivering strategic economic insights for attraction, entertainment and cultural projects worldwide. Based in Los Angeles and Hong Kong, the ECA team has worked extensively in Asia including Singapore/Malaysia (Southeast Asia) during the past 15+ years, including advising on attraction strategy, business planning and feasibility of theme park and indoor LBE attraction development. For further information on ECA please visit: www.entertainmentandculture.com

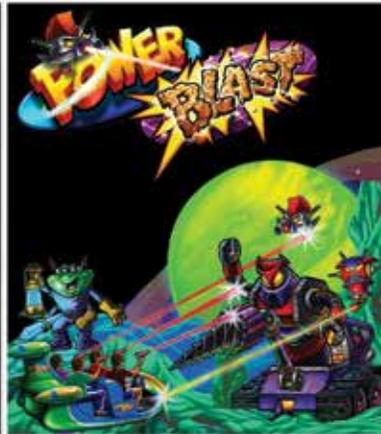
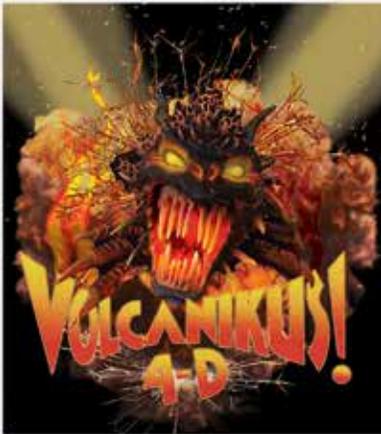
IP Impacts on Asian LBE Development

Based on ECA's global and Asian industry experience, we have summarized key impacts that IP provides for LBE development in the Asia-Pacific region:

- Provides higher project awareness and extended drawing power => higher attendance potential
- Stronger market positioning, differentiated image and profile
- Delivers premium pricing
- Appeals to a broader family market through a mix of entertainment and edutainment offerings
- Affords the ability to more easily target distinct age groups
- Drives retail and F&B spending through recognized story-driven content
- Raises the performance threshold for developers by requiring a seasoned, professional operations team
- Justifies lower anchor rents (if an indoor/mall-based LBE destination) to help overall attraction economics
- Encourages sponsorship

DARK RIDES

NOW AVAILABLE



ASIAN Attractions Expo	Visit booth #817 SALLY CORPORATION
-------------------------------------	---

www.sallycorp.com

Real time and immersive

Holovis story time for the attractions industry

by Emily Burrows, Holovis

Once upon a time, an attraction had just one story with a fixed beginning, middle and end. Not anymore! The advancement of real-time media is making multiple experiences possible for rides that become a personal adventure for each guest and have the ultimate ride repeatability.

Our experiential design firm, Holovis, has been at the cusp of this, using the digital platform accompanied by multisensory techniques not just to immerse people in media, but to offer a multi-variant approach. These adventures might take place within a virtual reality (VR) setting where each individual guest can have a completely different journey compared to someone else on the exact same attraction, or in a group experience where collective decisions can trigger a variety of ride profiles and storylines.

VR + robotic arm

The most advanced example of this from Holovis is a new, real-time robotic arm experience. Holovis has collaborated with Kuka Robotics and BEC Engineering to transform Kuka's existing two-person KukaCoaster system into a four-person capacity, mechatronic, immersive and interactive solution ready for launch later in 2017.

"VR technology is advancing at a rapid pace and is already delivering manageable experiences when used in limited-capacity and -throughput attractions and experiences," says Amy Steele, VP of Development at Holovis. "By adding in the extreme motion delivered from the Kuka robot, along with deeply immersive multisensory technology, we have created something unique."

A demonstration version will launch to the industry at the 2017 IAAPA Asian Attractions Expo in Singapore. The experience will envision what AAE and the host city might be like in the year 2031. Within the story, guests board the QuadCopter taxi service and launch out of the exhibition hall to weave precariously on a thrilling journey among some futuristic and existing sights of Singapore before eventually landing at a mysterious destination.

Interactivity is embedded into the overall design using Holovis Interact™ technology which tracks guests' hands - so each person can view their hands within the virtual world displayed on their headset and interact naturally with the game content. Head tracking supports the all-essential group experience, enabling each person to be represented in-character and in-location to their friends, ensuring a seamless experience connected with the creative gameplay design.

"Real-time rendering, real-time motion control and content personalization will allow guests an unprecedented level of control over their immersive journey," says Steele. This takes ride repeatability to a whole new level!"

Immersion + wooden coaster

Even the mighty rollercoaster, which is one of the oldest forms of theme park entertainment is being transformed by this media revolution with the most successful launches of today being all about the story. Mystic Timbers at Kings Island was voted the most highly anticipated new attraction opening in 2017 by USA Today.



Holovis will be previewing a VR and robotic arm attraction at AAE in Singapore.

Photo: Holovis

"With a traditional wooden coaster designed by Great Coasters International this proves that a good idea never gets old but can be made even more compelling when people feel involved in the story. The marketing campaign focused on 'What's In The Shed' sending park and coaster fan sites into speculation overdrive with some seriously well thought out theories."

Before discovering, guests first pass through a queue line preshow, delivered as a turnkey production by HoloVis, giving them the chance to delve deeper into the story and speculate over why the Lumber Mill, which is the setting of this attraction, was suddenly abandoned in 1983.

"The preshow gives guests a series of media based clues. Nothing that you see or hear when in the queue line is random, everything is a crucial part of a very clever puzzle that was scripted and designed by us" says Steele. "From the 1980s talk radio blaring from a crashed truck in the queue line to mysterious CCTV footage warning guests to turn back before it's too late." "It's great to see technology of the future bring applied to greats of the past to reinvigorate and evolve these methods of entertainment. For those still wanting to find out what is in the shed you will have to find out for yourself, but do ride it more than once."

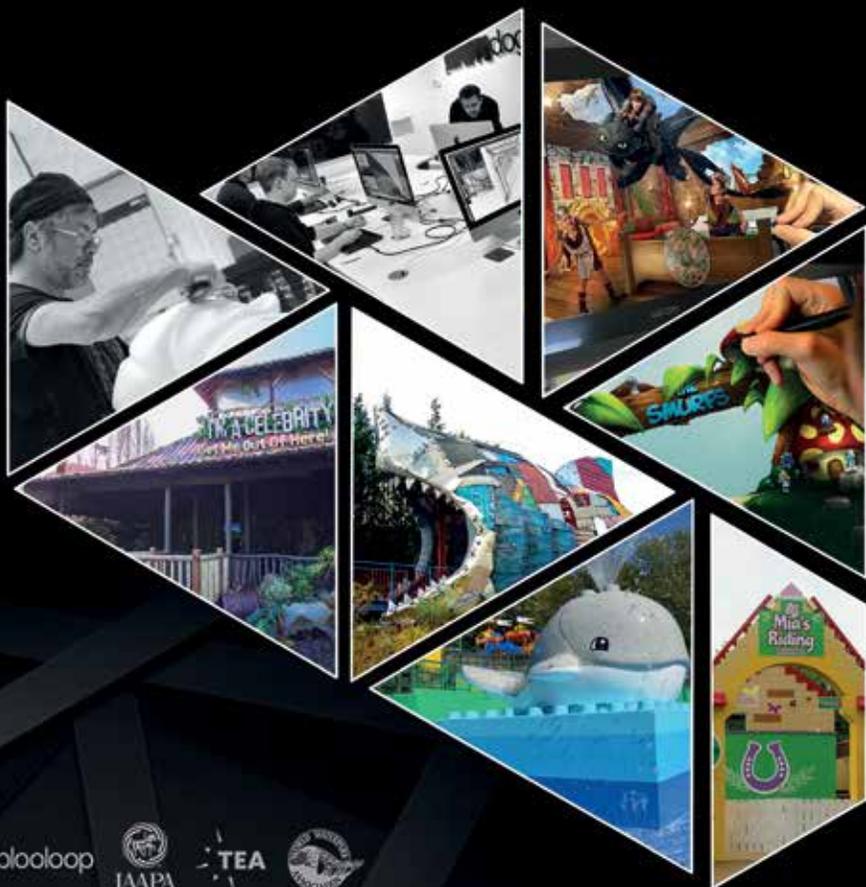
Turbo Track immersion

Ferrari World Abu Dhabi places a great importance on the story throughout the park, and General Manager Jesse Vargas is a firm believer

that "a good attraction tells a story; a great attraction is a story." Take Turbo Track, for example - a coaster-based ride that launches guests vertically up out of the center of the park and through its iconic red roof. This is an adrenaline-packed experience in its own right but it is made even better with a dynamic preshow to set the scene, place visitors at the heart of the story and provide a full immersion of the senses.

HoloVis scripted and show-produced all aspects of the preshow entertainment, which includes extensive media throughout the facility and a live, actor-led show within the attraction. Guests are invited to show that they've got what it takes to join Ferrari's world-class racing team. The attraction, which is set in Ferrari's Abu Dhabi testing facility for new test drivers, features several challenges that test their reflexes and precision, culminating in a High Speed Brake Test, the launch coaster, that tests their courage.

What might be next? HoloVis has some ideas about that, too. "The next level of this for us is to use multimedia pre-shows to determine the journey that the guests will go on when they board their coaster or dark ride," says Steele. "For example, score brackets can be defined so the story takes a different route depending on the level of success in completing the tasks. This has the potential to create a show that keeps guests' energy levels and excitement high throughout, while also adding the unique and memorable element of live audience participation throughout the attraction."...



SCRUFFY dog DESIGN CREATE DELIVER

DESIGN PRODUCTION & INSTALLATION OF LEISURE ATTRACTIONS, EXPERIENCES & ENVIRONMENTS



NOW OPEN
NEW LONDON
DESIGN STUDIO

Call today to discuss your project
Head Office UK: 0800 211 8604
Outside UK: +44 (0) 121 730 2400

www.scruffydogltd.com



OVER
10 DIFFERENT
ACTIVITIES IN
**ONE ICONIC
STRUCTURE**

WILL KEEP
750 FACES
SMILING
PER HOUR

The theme park: a modern tribute to family life, a fortress for leisure, and a respite for overburdened tourists. Early in the morning eager crowds await the grand opening in order to try every ride, view every show, and leave at night exhausted, pushing sleepy toddlers in their strollers with the satisfaction of a day well spent.

These are some of the traditional images associated with the park experience. However, in a recent study published in the Journal of Vacation Marketing, we profiled a different kind of visitor – a demographic made up of local, single, annual passholders who attend the park in groups organized through Meetup.com. Their behaviors are different than those of seasonal tourists and their experiences are self-customized.

Over the course of two years, we followed a sampling of these visitors who patronize a popular theme park resort in the state of Florida. At first, we operated in covert fashion, mingling with the passholders while at the same time observing and recording their behaviors. Later, we revealed our identities and interviewed several key members of the community.

Meetup.com is an online platform that facilitates individuals forming local groups to meet face to face around common interests. Meetup has some 27.4 million members, and more than 255,417 groups holding more than 570,000 monthly events, which members typically refer to as “meetups.” Unlike online communities that primarily interact online, Meetup crosses the boundary between online and face-to-face interactions and is therefore referred as an electronic-to-face (E2F) group. We will refer to the group discussed here as “Theme Park Meet” for purposes of anonymity.

Most members of Theme Park Meet lived close to the theme park and held annual passes. Their ages ranged from mid-20s to mid-40s, and the great majority were single. Whereas seasonal tourists might visit once a year or a few times in their life, and tend to put in one or more full days at the park, the members of Theme Park Meet visited every other week, with the average length of visit substantially shorter than that of tourists - sometimes just a few hours in the afternoon after work. Even on weekends, it was uncommon for Theme Park Meet members to spend more than six hours in the park at any one time.

Although several members had family or friends in the area, they often didn't share the same level of enthusiasm for the theme park experience. Meetup served as a platform to find others with the same interests. The group served as a vehicle for sharing information and creating positive memories together.

Given the extensive number of visits, a logical question emerged: Did the Theme Park Meet members experience satiation? In other words, at any point, was there the potential for members to become bored or tired of the same experience? Theme Park Meet members found this notion almost impossible, as their exploration of the theme park was often deeper and more creative than that of the typical destination tourist.

Meeting up for a day in the park

Hobbyists, scholars, foodies, walkers, bingers and light fans enjoy the park in their own special ways

*by Dr. Edwin N. Torres
and
Dr. Marissa Orlowski*

*University of Central Florida
Rosen College of Hospitality Management*



Dr. Edwin N. Torres



Dr. Marissa Orlowski



EXPERIENCE 8K
with

DIGISTAR 6



up to True8K™, including 3D and auto alignment/blending



Image Quality



Cloud Library



Domecasting



Ease of Use



Content

The world's highest resolution immersive dome system designed to surpass 15/70 film and offer a wealth of real-time content.

THE DIFFERENCE IS DIGISTAR

www.es.com



Members tended to avoid the park's peak days, which represents opportunities for parks to make the most of otherwise slow periods.

© Disney

A visit might entail trying a new restaurant, checking out a seasonal festival at the park, or creating their own event such as a scavenger hunt throughout the park.

In addition to the frequency of utilization and the amount of time spent in the park, there were other important ways the behavior of these passholders differed from that of tourists. One such difference was the practice of "park hopping"—visiting more than one park within the resort during the space of one day. Many tourists engage in this practice in an effort to experience as much as possible in the course of their trip, often focusing on the most popular attractions.

In contrast, passholders seldom moved from one park to the next in the same day. They tried to strike a balance between the most popular rides and those less frequented in an effort to maximize enjoyment. At times, Theme Park Meet members would go to the park and not visit a ride at all. Such a visit might involve dining, walking, and watching a live show. As passholders, Theme Park Meet members also understood the park's cycle of business and tended to avoid the park's peak days, generally preferring the off-season. Obviously, this represents opportunities for parks to influence or reach out to passholders in a way that makes the most of otherwise slow periods.

This brings us to the next point: passholders were more likely to try signature dining experiences, which are a source of additional revenue for the parks. We also noted that alcohol consumption was more frequent for passholders both inside the theme parks and, at times, in the bars and lounges of the theme park's hotels and resorts. One popular

activity for Theme Park Meet members was the theme park resort bar crawl: using the theme park resort's common means of transportation to move from lounge to lounge with drinks in hand.

To further the customization of their experience and the sense of community, various groups of theme park enthusiasts would gather twice a year to attend the park dressed in period costume. The main purpose of this event is people watching - to observe one another's choice of outfits, take photographs, and simply become a character in the theme park's story. This type of activity could be seen as operating in unison or compatibly with the theme park's intended purpose.

At times subgroups were formed within Theme Park Meet, based on common activities, interests, and opinions. For example, a handful of members joined the group from out of town. These passholders exhibited different behavioral patterns, and were noted to visit the park for longer hours and try to squeeze out every second of their theme park visit. We call this type of pass holder the "fun binger" and their behaviors are more like that of the seasonal tourist. At the other side of the spectrum are what we call the "light fans." These are individuals who purchase an annual pass to the parks in order to entertain visiting family and friends. They will go to the parks less often and might get the more inexpensive version of the pass available. A third group, the "theme park socialites," enjoy visiting the park at night and tend to visit the bars and lounges more than the park itself. For these individuals, the theme park is a substitute to an outside nightclub or bar by providing beverages and interaction in a more controlled environment.

There are also the “theme park foodies” who are passionate about food and beverage and savor every new taste. They show up for food and wine festivals, and other events that highlight their preferred activity.

“Theme park hobbyists” are passholders for whom the park is more hobby than vacation. These individuals use the theme park visit as a substitute for a visit to a nature-based park or a country club. It’s common for these hobbyists to visit the park for a few hours at a time. Then there are the “theme park walkers” who simply enjoy the park as a space for walking and people watching. The park is a place to stroll and become distracted. In general, these passholders have a more laid back approach to their visits and are less likely to patronize the rides. Finally, there are the “theme park scholars.” Perhaps the most intense of the passholders, these are individuals who know the history of the theme park and its attractions. Theme park scholars read blogs and scour the Internet (and magazines such as this one) thirsty for every bit of theme park information available. For the most part they’re purists and at times will resent changes to the park, such as a new attraction, if not done to the highest standards of excellence.

Whether a theme park scholar, a foodie, a socialite, hobbyist, walker, binger, or light fan, these are all groups that theme parks can learn from, target and serve with activities, events, and marketing efforts. By understanding the preferences and behaviors of their guests, theme parks can create an experience that is of greater appeal and generates excitement for visitors of all stripes. •••

Dr. Edwin N. Torres is an Assistant Professor at the University of Central Florida, Rosen College of Hospitality Management. Prior to his current role, Dr. Torres received a Ph.D. from Purdue University. His research, which focuses on consumer psychology, has been published in multiple scholarly journals and presented in multiple conferences.

Dr. Marissa Orłowski is an Assistant Professor at the University of Central Florida, Rosen College of Hospitality Management, where she also received her Ph.D. Prior to joining UCF, Dr. Orłowski spent 15 years managing operations for leading hospitality companies including Walt Disney World and The Cheesecake Factory.

For a deeper exploration of this topic, see the full study:

Torres, E.N., & Orłowski, M. (2017). Let’s ‘Meetup’ at the theme park. *Journal of Vacation Marketing*, 23(2), 159-171.

DOI: 10.1177/1356766716634152. URL: <http://journals.sagepub.com/doi/abs/10.1177/1356766716634152>

**FREESTYLE
HYBRID™**

**SLIDES IN STOCK!
ORDER TODAY**

THE WORLD’S LARGEST INFLATABLE WATER SLIDE

Recently awarded the world record for tallest inflatable slide as verified by the ultimate international authority in record breaking achievements.

The Hybrid™ XL is over 73 feet tall!



**FREESTYLE
SLIDES®**

freestyleslides.com
info@freestyleslides.com
866.694.4776



think spectacular



"WINGS OF TIME" | RUNNING EVERY EVENING SINCE JUNE 2014, SENTOSA, SINGAPORE

WORLD PIONEERS IN SPECTACULAR MULTIMEDIA SHOWS



"LAKE OF ILLUSIONS" | RUNNING EVERY EVENING SINCE JULY 2016, OCT SHANGHAI HAPPY VALLEY, CHINA

SPECIAL EVENTS | THEME PARKS & PERMANENT SHOWS | EXPOS & PAVILIONS

TEL: +33 1 83 75 80 80 | CONTACT: ECA2@ECA2.FR | WWW.ECA2.COM | FACEBOOK.COM/ECA2GROUP

Connected Solutions

Panasonic targets theme park and leisure markets with new company division

by Martin Palicki

In early 2017, Panasonic and Walt Disney Parks & Resorts announced a strategic corporate alliance allowing Panasonic to provide projection services for Disney's North American parks and cruise ships.

The partnership with Disney reflects the collaborative culture of the new Media Entertainment Business Division (MEBD) of Panasonic Corporation, launched in April to serve sports, leisure and entertainment markets under the leadership of Masaki Arizono.

"This alliance is a perfect example of our new, solutions-driven approach," says Arizono. "It allows us to be involved in the creative process with Disney from the beginning. Rather than have them come to us after the design phase and bid specific products, we can offer our product expertise at the start of a project. It's an invaluable technology strategic alliance for both parties."

MEBD is one of six divisions within Connected Solutions Company - a reorganization of Panasonic's former AVC Networks Company. Connected Solutions Company is headed by Yasuyuki Higuchi, former CEO and later Chairman of Microsoft Japan. It is based in Osaka, Japan. Its counterpart in the US, Panasonic Media Entertainment Company, is based in Newark with additional offices in Denver, Los Angeles, Orlando and Dallas.

As head of MEBD, Arizono is responsible for developing and selling proprietary technological solutions that incorporate high-performance projectors, large screen LED display systems, broadcast-related equipment, professional audio systems, and energy-saving LED lighting equipment to a wide range of customers in the entertainment business. The service component of these solutions includes system design and integration, installation, maintenance, and service support. MEBD will collaborate closely with consulting and system integration partners.

"The media and entertainment market is continuously growing," says Arizono. "As more venues began to rely on projection and media-based entertainment, we realized this aligned well with our strong core technologies in media, audio and lighting."



**Mr. Masaki Arizono,
head of Panasonic's
Media Entertainment
Business Division**

Arizono sees a wide swath of entertainment and leisure venues integrating video and audio in new ways with particularly strong growth in North America. "Half of our global business for MEBD is in North America, which is why Panasonic Media Entertainment Company is being established here," he says. MEBD will focus on four key segments: stadiums, theme parks, media and MICE (meetings, incentives, conventions, and exhibitions).

Panasonic has traditionally been driven by product manufacturing, and while that remains important, this new division reflects the company leaning into a customer-centric, collaborative business model. "Our strategy, particularly in this division, is to approach problems with our customers and develop solutions tailored to their needs," says Arizono.

Arizono will work closely with Panasonic Hollywood Lab (PHL), which is part of Panasonic's R&D operations. PHL was started some 20 years ago to build relationships with film studios in Hollywood and ensure content was readily available for VCR and DVD players. With the recent increase of streaming services, PHL has shifted their focus to a B2B approach, working with theme parks and film studios to develop technology solutions especially for those markets.

In the US, Panasonic Media Entertainment Company launched with 150 employees and expects to triple in size over the next five years. "Our initial team largely consists of staff moving from current groups within Panasonic North America," explains Arizono. "But we will be looking to hire a wide variety of engineers in the years ahead." •••

PGAV DESTINATIONS

TURNING RIDES INTO LASTING MEMORIES



THUNDERBIRD
Holiday World



Mako | SeaWorld Orlando



Wild Eagle | Dollywood



Cobra's Curse | Busch Gardens Tampa

Master Planners • Product Strategists • Lead Designers • Architects

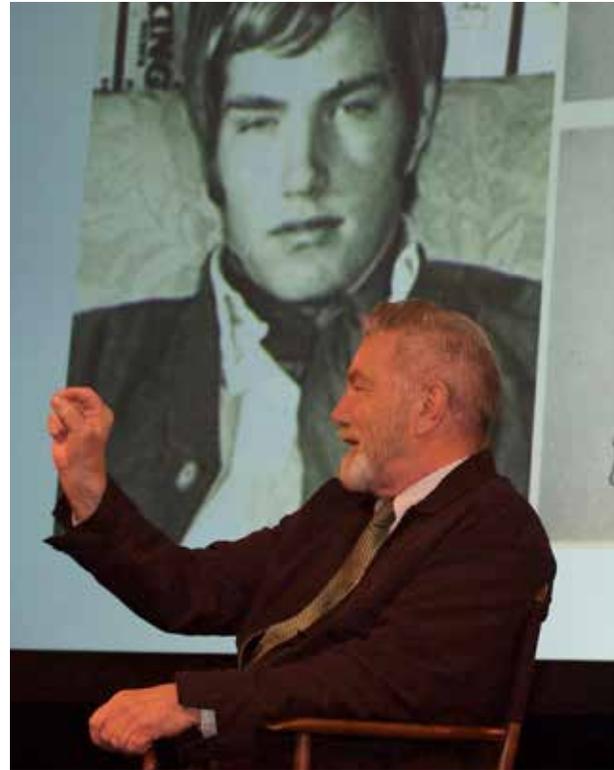
pgavdestinations.com | 314.231.7318 | find us on   

Inside the TEA Summit + Theas

The Themed Entertainment Association's annual two-day Summit and Thea Awards Gala recognizes leaders, ideas and projects shaping the industry. InPark Publisher Martin Palicki was on hand to take photos on behalf of TEA.



Olympic gold medalist and diving legend Greg Louganis spoke with Kile Ozier during the Summit's popular "Elephant in the Room" session. Ozier and "Elephants" Co-Chair Steve Birket selected topics to help inform attendees on issues they might not normally consider. Louganis spoke on keeping HIV status a secret and Ozier connected that to current health related concerns for workers traveling to projects in different parts of the world.



Jeremy Railton, recipient of the Buzz Price Thea Award for a Lifetime of Distinguished Achievements, highlights a key moment from his career during Day 1 of the Summit, while a version of Jeremy from his past gazes down from the presentation screen.



Former Disney Imagineer Bruce Vaughn discussed the future and potential pitfalls of Virtual Reality with Atari founder Nolan Bushnell. Both speakers felt VR would have a permanent home in the themed entertainment market, in parks as well as smaller attractions.

As the Summit and Theas were held at the Disneyland Hotel, there were special opportunities to meet other crazy characters throughout the weekend. Carlos Ortega from the Museum of Latin American Art and Alana Trejo from COTU Media had a chance run in with Goofy on their way to lunch.



Denise Weston demonstrated the proper riding position while Slideboarding during the Summit. While at WhiteWater, Denise helped develop the Slideboarding concept after watching her son and his friends slap joists on a waterslide to see who had the best accuracy. Slideboarding has since been introduced on a variety of new and retro-fitted slides.

“It was really important for me to not just think about the Millennial, but to not forget about Mom,” said Weston. The resulting slideboard is designed for a comfortable ride experience as well as for the gaming elements.

For the first time, TEA hosted an official after party for the Theas outside of the gala ballroom. A DJ ensured the dance floor was active while snacks and drinks provided sustenance for dancers and networkers alike.



TEA COO Jennie Nevin and TEA International Board President David Willrich pose for their official photograph. Willrich served as Master of Ceremonies for the Thea Awards Gala. Nevin later presented a bouquet of flowers to Thea Awards Executive Producer, Phil Hetteema (not pictured).



The team from Puy du Fou poses in front of the Theas banner wall before receiving their Thea Award on stage, the park's third since 2012. The park's creator, Philippe de Villiers, is pictured in the top row, center. . . .

Devouring with the eyes

ICONPATH debuts a new projected dining experience at the Asian Attractions Expo

Martin Palicki interviews ICONPATH founder Michael Reid



Martin Palicki: Tell us about PALATE and where it originated.

Michael Reid: We often hear somewhat abstract descriptions of flavor from sommeliers when trying a new wine or chefs experimenting with new ingredients but what does taste LOOK like, how does it FEEL? That was our inspiration - could the taste of a meal or bottle of wine be enhanced if your mind could taste in more ways?

We initially experimented with using projection on tables to tell a story at a Halloween themed dinner and the reaction was absolutely amazing so we looked at ways to take that to the next level - adding a bespoke environment that surrounded you, sound design that evoked different places, scents and live theatrical moments like choreographed wait staff and live performers.

Along the way we discovered we could not only tell a story but we were actually changing the way food or wine tasted - the experience combinations were truly endless like the combinations of flavor itself.

Are there size limitations?

Our original trials experimented with multiple configurations of tables and numbers of guests - small groups of people at individual tables all

the way up to long banquet style seating that ran near 20 meters (65 feet) in length.

Each had its own unique feel so PALATE has been designed to be scalable from 5-500 people to suit any environment.

How do you balance ambient lighting so it isn't too dark, but so that people can still enjoy the theming?

The beauty of projection is it's all light so we actually have more control over lighting levels than most restaurants would with standard lighting fixtures.

For certain courses, the intensity might be increased so people can see the individual ingredients or color of the wine, and for others, the room might go completely black so you only focus on scent and texture - it's quite exhilarating to take people on a journey they weren't expecting.

Is it a static show? Or does it change through the dinner? Is it responsive to gestures?

We really want people to focus on taste rather than technology so have consciously chosen not to make the projection responsive to guests.



Guests prepare to enjoy dinner on tables decked out with images of white flowers during a trial run of ICONPATH's new PALATE dining experience. Photo: ICONPATH

That said, the content does appear to “interact” with the physical objects on the table like plates and glasses, often in unexpected, playful ways. For example, projected water might flow around items in its path or a butterfly might land on a centerpiece before flying away.

In terms of the journey, each installation is unique and will reflect the menu but generally every course of the meal or flight of wine would have its own “chapter” of the story that changes the look and feel of the room to enhance the taste of what’s being served at that time.

The content of the experience would also change over time as the menu evolves making it a great way to encourage repeat visitation.

Is this designed for special event uses only?

Although we trialed the concept at special events, PALATE is intended as a permanent installation.

We work with the venue owner to determine the optimal size of the experience and the story they want to tell before designing a bespoke environment. We then produce the show content, oversee

the installation of the AV technology and work closely with the venue staff as they play such a vital role in making it all come to life.

There is an upfront capital cost for the infrastructure but we offer a number of licensing models for the creative and content costs to suit different business models and ensure the experience remains fresh and dynamic.

Can someone experience PALATE today? Has it been successful?

The first permanent installations will come on line in the second half of 2017 but based on our trials, the ultimate measure of success for us is the audience reaction and subsequent social media response.

The look on people’s faces when they taste something in a whole new way is incredible - there’s a real sense of wonder in experiencing something for the first time, all over again.

Will you have food at your IAAPA Asian Attractions Expo booth?

You’ll have to come to stand B1426 and find out for yourself!...

THIS IS TRANSFORMATION

TRANSFORMATION is the largest indoor water park in America.
TRANSFORMATION is iconic rides where they’ve never been before.
TRANSFORMATION is unique experiences and innovative differentiation.

ProSlide is TRANSFORMATION.

ProSlide® has pioneered every major water ride innovation in the past 30 years, constantly transforming the industry and enhancing the rider experience.

Our award-winning rides power the best, most successful and most recognized parks in the world.

If it’s world-class, it’s ProSlide.

Want to talk transformation? Visit us at IAAPA ASIA, Booth L1122

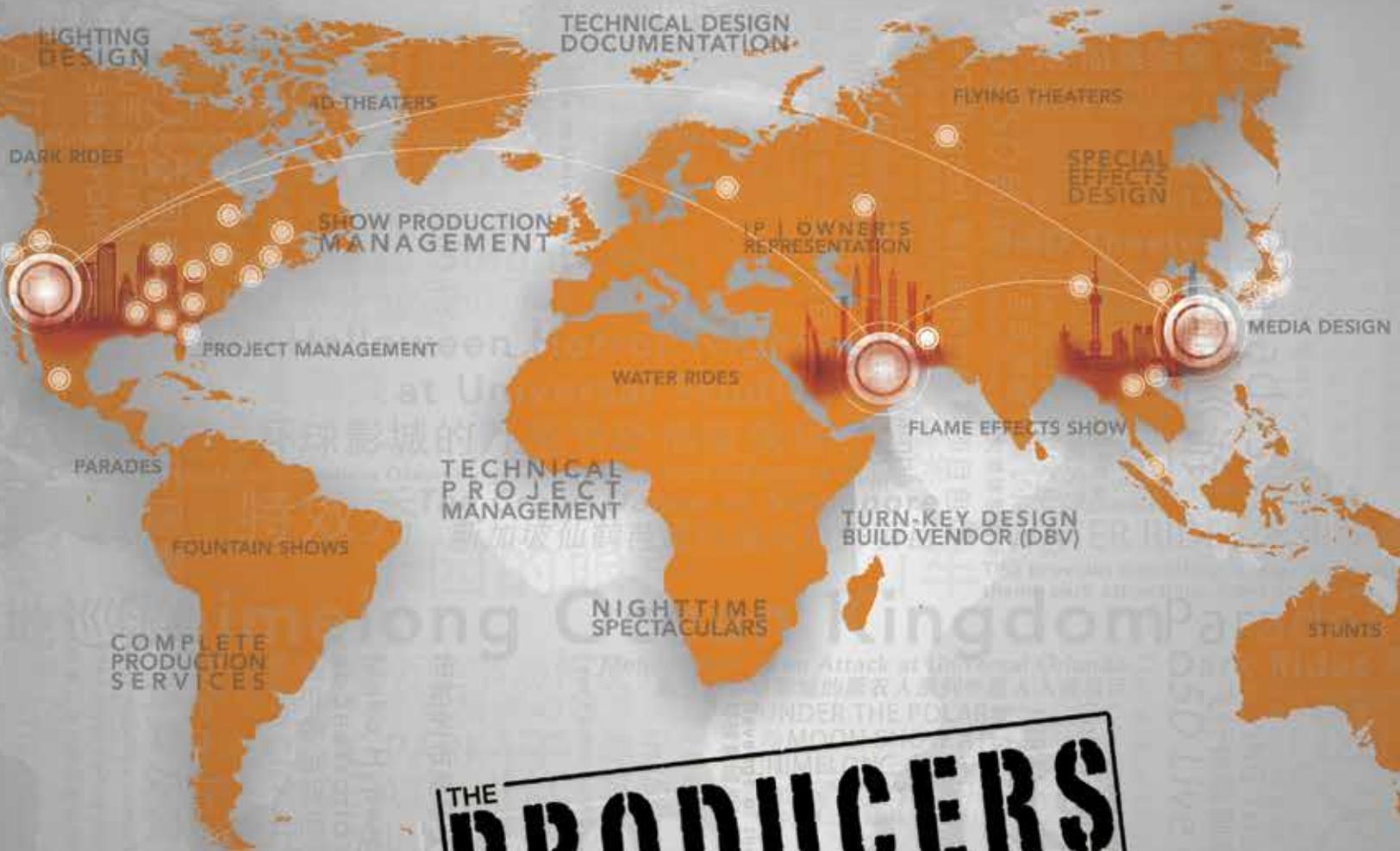
Or email transform@proslide.com



WORLD'S FIRST INDOOR TORNADOWAVE™ 60
KALAHARI POCONOS
RESORT & CONVENTION CENTER

AROUND THE WORLD WITH THE PRODUCERS GROUP

The story of an increasingly global company in an increasingly global market



THE PRODUCERS GROUP

LOS ANGELES | SHANGHAI | DUBAI
THE INTERNATIONAL THEME PARK PRODUCTION COMPANY

by Judith Rubin

The Producers Group LLC (TPG) has maintained a steady and growing stream of work, internationally, since co-CEOs Bob Chambers and Edward Marks formalized the company in 2011. At this writing, TPG has many projects in development on several continents, but none at the announcement stage. The company is headquartered in Los Angeles, with offices in Shanghai and Dubai, approximately 50 employees and a growing suite of services. The success and growth of TPG suggest that it is well aligned with the globalization and diversity of today's attractions industry. We delved into the company culture and markets to understand more about what informs the TPG approach to doing business around the world, particularly in China and the UAE.

**While Asia learns from the West, the West learns from Asia -
Tom Mehrmann, TPG Advisory Board**

TPG company structure includes an active advisory board populated with industry innovators and leaders. A recent addition to this board is Tom Mehrmann, probably best known as the former CEO of Ocean Park Hong Kong. Mehrmann has lived and worked in the industry in Asia and Southeast Asia for 13 years. Since leaving Ocean Park last August, he has become partner in a new company, Lan Kwai Fong Attractions Ltd., to support developers, investors and operators of visitor attractions. One of their clients is Universal Studios.

When TPG holds a board meeting, Mehrmann participates to offer insights and advice. He also helps the company identify opportunities in Asia. "My business is providing themed attraction advice - how to set a project up and how to lead it to be successful from the start. I help with strategy, vision statement, mission statement, core values, differential values and guiding principles.



Tom Mehrmann

"Many Asian developers are reacting to eye candy," he said. "They want something big, bold and different - that's the 'what' and the 'how' of a project; I'm more about the 'why.'" Currently, he said, "70% of parks in China are losing money, 20% are breaking even and only 10% are making money. For true success, you must ask more than logistical questions. Does the project align with core values? Will it drive business and attendance? A culturally entrepreneurial developer with a dream may not be thinking about markets and infrastructure, much less standards, safety, health and welfare. They may build the wrong product for the market. There are some pretty colossal failures out there, but there are some great successes as well."

Where a company like TPG comes into play, according to Mehrmann, is connecting the "hardware" of a project - the physical components and systems - with the "software" - meaning the people required to install, program, troubleshoot, maintain and upgrade. "The best equipment in the world will only be good for so long if you don't know how to run, operate or fix it. TPG are master problem solvers," he said. "They will step into projects, discover what's missing and get them back on track and completed. They can interface the creative with the nuts and bolts. They're selling the intangibles of production - what happens between design and construction."

Mehrmann acknowledges concerns about protecting Western IP and expertise to preserve the value of Western companies in the industry. But - "If you are too protection oriented, you will end up missing work and opportunity. We are watching an industry emerge. We are not yet seeing in China the capability to interface truly dynamic ideas into the hardware. We will see groups like TPG for a long time. The key thing, for Westerners trying to penetrate the market, is to form partnerships - find trustworthy partners who can help represent them, be with them on sites and with whom they have established a relationship. The best projects I have seen in Asia were the result of good partnerships." He acknowledges that it is happening quickly: "The mere fact of some home developers having emerged as dominant attendance drivers and with aspirations to lead the world, and having the financing and markets available, means we are watching a learning curve that is much steeper than what happened when this industry grew up in the West. If China doesn't have it today, they will get it very quickly. And while Asia is learning from the West, the West is learning from Asia."

**People knew where Mars was, but not Dubai -
Sumaira Isaacs, director of international relations, TPG**

In January, Sumaira Isaacs joined TPG's Dubai office, bringing her 25+ years' experience in regional tourism development, including Dubai and the UAE, Saudi Arabia, India, Qatar, Turkey and South Africa. Originally from Pakistan, she makes her home in Dubai and Toronto. "The Emirates, travel and tourism are in my blood," she said.

The UAE region depends heavily on tourism for visitation, but is well located to achieve this, and no one knows it better than Isaacs, who said, "All the tourism is international, but we are right in the middle, with nearly two billion people within a short radius. And Dubai is a business

The Producers Group – business milestones

- 2011 - TPG established in Los Angeles
- 2012 - TPG appointed owner's rep on reboot of Lights of Liberty (Philadelphia, USA)
- 2013 - TPG engaged on Chimelong Ocean Kingdom, Zhuhai China
- 2014 - TPG adds second office in Shanghai
- 2015 - TPG expands to three offices, adding Dubai; engaged on Shanghai Disneyland attractions.
- 2016 - Successful opening of TPG attractions: Cobra's Curse (Busch Gardens Tampa); Dabangg Live Action Stunt Show; Step Up - All In Live Musical Dance Show (Dubai Parks & Resorts)
- 2016 - TPG launches Extraordinary Voyages Adventure Dining (EVAD) with Premier Rides
- 2017 - Tom Mehrmann joins TPG board. TPG celebrating six years in business.

hub and central shipping point. All the trade partners represent tourism markets. We're looking at opportunities from South Africa to Ethiopia."

Isaacs, who since January has already traveled a great deal with Bob Chambers, exhibits huge enthusiasm for her new role in the region she knows so well; likewise for who and what she represents in TPG. "I am really enjoying learning about theme parks and attractions. It's a fun business, and Bob's enthusiasm is infectious. I wouldn't have touched this product at all if I didn't believe in it. TPG is a lean and mean company, and I like that: It is what my previous outfit was like, you ramp up the teams as the job requires."

She finds that the culture of doing business in the Middle East has some similarities to China. "There have to be certain relationships in place, and they are in the same kind of hurry. They love American culture. In the Middle East, however, business may be done over a handshake; not so in China." Language is sometimes a barrier; but English is a common business language, and Isaacs is fluent in English and Urdu, and reads and writes Arabic as well. "We work with relationships, we pay attention to simple things, cultural details here and there, from boardroom sensitivities to how you word a proposal. It's a pleasure to do it for TPG because they are thoroughly professional."

Isaacs has also had experience in relation to world's fairs, which is especially relevant as Dubai prepares to host Expo 2020, a six-month BIE-Registered expo. "I was honored to be part of a delegation of top organizations, sponsored and invited by Dubai EXPO, to visit the Milan Expo 2015 as an observer," she said. "MCI Brussels had the job of designing, managing and installation of the EU Pavilion, and at that point, I was representing MCI as Regional COO Middle East, Africa and India."

Developers in these regions tend to be more experienced with retail and hospitality than they are with entertainment, but recent theme park openings in Dubai are changing perceptions quickly, according to Isaacs. "These countries are waking up to the fact that they need something more," she said. She points out that when she began her career in tourism, Dubai was a little-known destination with few accommodations.

"People knew where Mars was, but not Dubai," she said. "I always say I am in the business of fighting perceptions and educating. We are now educating the destinations about a product. We know from experience that theme parks are a unique kind of investment. To ensure you have healthy occupancy takes time. You can only fast-track it so much. Some developers think a theme park can only happen successfully in America or China – we are showing them that it's possible in their region, too."

"We never close"

Edward Marks and Bob Chambers, TPG Co-CEOs

How has the themed entertainment landscape changed now that Shanghai Disney Resort has opened in China, and Dubai Parks & Resorts has opened in the UAE? "Raising the bar" (for quality and, therefore, budgets) is perhaps the simplest way to define it. There is reportedly a deeper awareness of what's needed to make such a project succeed.

"We are definitely in a post-Shanghai Disneyland world," said Edward Marks. "Operators are stepping up their game now they see what their real competition is. We see a desire for better work, better technology. Budgets aren't totally following suit yet, but that takes time."

Certainly, it's an environment that affords plenty of work for TPG, including four major projects in China. One of them is for the Evergrand Group, a new theme park on Hainan Island – Ocean Flower Park, for which TPG is producing three shows.

There have been other, related milestones for TPG. In November 2016, the company announced its first turnkey product via a new partnership with Premier Rides: Extraordinary Voyages Adventure Dining (EVAD), a themed dining experience. The first EVAD installations are expected to be announced sometime in the next 12 months. In July 2017 TPG will finish transitioning to its new Los Angeles office, nearly tripling the size of TPG headquarters and with the ability to enhance its main offerings - production, technical integration and consulting - with creative services such as show set design, art direction, storyboarding, CAD and media, when clients need them.



© Copyright 2016 The Producers Group, LLC. Patent pending. Extraordinary Voyages™ Adventure Dining™ is a trademark of The Producers Group, LLC. All rights reserved

Clockwise, from top: EVAD dining experience; Cobra's Curse, Busch Gardens Tampa; The Fortune Diamond, Galaxy Macau; Lagoon Spectacular, Chimelong Ocean Kingdom; DABANGG Stunt Show, Dubai Parks and Resorts; Crane Dance, Sentosa Island



For entertainment markets still on the road to maturity, one-stop shopping is often cited as the best way to ensure a continuity that streamlines the project process and preserves authenticity of vision. According to Edward Marks: "In China, companies with all services available under one roof are really what the market needs at its current stage. The successful firm is going to be a design-build firm – and the most successful developers will turn to those kinds of firms. That is, in fact, what we are now seeing."

This is in line with the producer-driven model of TPG. "As producers, TPG has one foot soundly in creative and one in technical," said Marks, who trained as a lighting designer. "We creatively get the story; we get the vision while understanding how to achieve both. We focus on both - always. It's our mantra and our constant communication on every team."

"Shanghai Disney works because they spent both time and money on it," said Bob Chambers. "If it were just money - or if it were just a lot of time on design - it wouldn't have worked. The example of Shanghai Disneyland – in comparison to examples of unsuccessful projects that have happened in the past 10 years or so - is helping Asian developers turn into more sophisticated, knowledgeable buyers, who are learning how to vet vendors, slice bids and projects differently, understand risks, and get a much better product. Ultimately, turnkey or design-build per se isn't the solution: understanding the process is the solution."

Chambers and Marks echo Mehrmann in emphasizing that the learning goes both ways between East and West. "Luckily for our company, we had early success in Asia," said Marks. "A lot of the Western firms that flooded Asia as the entertainment industry began to boom learned the hard way that you can't change China. You can't just say, 'this is how you create a theme park.' You don't change it, it changes you. It is a process."



Edward Marks & Bob Chambers

You have to take cultural factors into account. That said, we have found, the more countries we work in, that we're all more alike than not."

Increasingly, TPG is a company that belongs to all regions and time zones. "There is stability all over the world in many different regions, including countries that many might consider unstable. Take a closer look. Go there and meet them," said Marks. "We said we would put this company on every continent. We're truly a company that functions in a dozen time zones at once. We're never closed. With the possible exception of a tiny window where the weekends overlap, at any given time there is somebody working on regular payroll hours somewhere on the planet for TPG"...

To set up an appointment with The Producers Group during AAE Singapore, or for general inquiries, email info@producers-group.com.

The Producers Group - international contacts

TPG Dubai office

- Sumaira Isaacs, Director of International Relations, sumaira.isaacs@producers-group.com
- Ammar Hussain, Business Development Director MENA Region, ammar.hussain@producers-group.com

TPG Shanghai office

- Praveen Rao, Regional Manager, praveen.rao@producers-group.com
- Flora Duan, Business Development Manager, flora.duan@producers-group.com



Sumaira Isaacs



Ammar Hussain



Praveen Rao



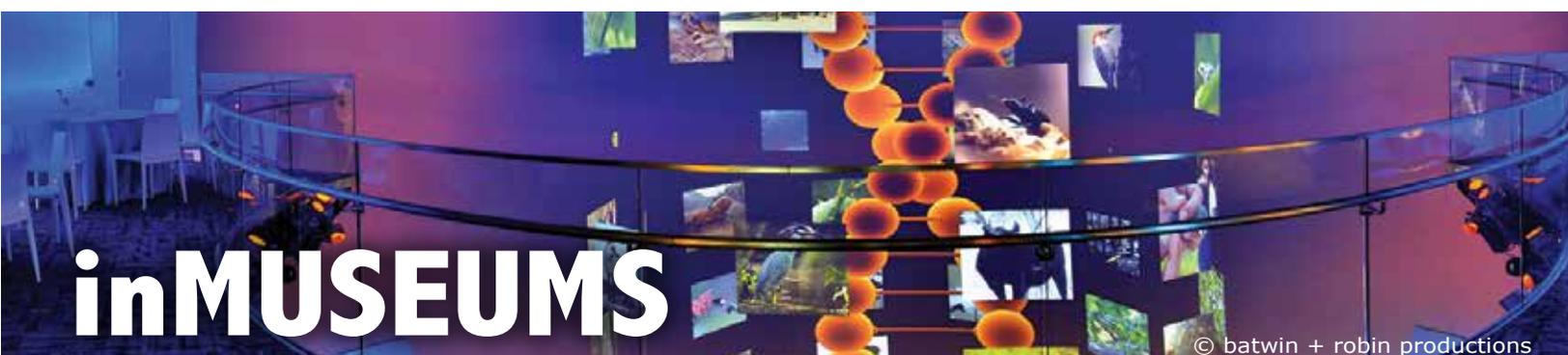
Flora Duan



inTHEMED ENTERTAINMENT



inWATER PARKS



inMUSEUMS

© batwin + robin productions



inAMUSEMENT PARKS



inpark
MAGAZINE

inparkmagazine.com

Behind the headsets

A look at Six Flags' expanding on-ride VR program

by Joe Kleiman

When Kong, an inverted looping coaster, opened in 1998 at Marine World/Africa USA, a combination marine life and zoological park located near San Francisco, it was one of the first coasters in the park, laying the foundation for the park's transformation into Six Flags Discovery Kingdom. Since then, it has been overshadowed by some of the top coasters in the Six Flags family, including Medusa, a Bolliger & Mabillard floorless coaster; Superman Ultimate Flight, the first triple launch coaster from Premier Rides; and The Joker, a Rocky Mountain Coasters overhaul of an existing wooden coaster, complete with inversions.

Last year, Six Flags began redefining the coaster experience by adding optional virtual reality experiences, in conjunction with partners Samsung and VR Coaster, part of the Mack Rides family.

This year, Discovery Kingdom's Kong has been added to the program with the Galactic Attack storyline, which incorporates augmented reality segments and a higher level of interactivity than previous iterations. The VR experience has breathed new life into the ride, now approaching its twentieth year of operation. After experiencing Galactic Attack for myself, I spoke with Sam Rhodes, Six Flags Entertainment's Director of Design.

How do you determine which coasters will receive VR?

A lot of it has to do with marketing opportunities, and there's a lot taken into consideration as to which one to promote and market. Six Flags New England was converting its Superman coaster back from Bizzaro, so

this was a great opportunity for the Superman VR program. Shockwave at Six Flags Over Texas has always been a great opportunity. We chose Magic Mountain's Revolution because last year was the coaster's anniversary.

You have the same VR programs operating on different coasters in different parks, each with its own profile. How do you make that work?

Most of the coasters we're using are older coasters, which generally have lower ridership, so we don't have AutoCAD documents for most of them. We do the mapping based on the individual ride by mounting a special mapping system on the vehicle. Based on that data we modify the virtual environment, creating a profile for each specific ride. In a way, it's like building a video game.

You recently announced that VR will be added to several drop towers. Is it more difficult to map VR for a tower?

Since the tower is just up and down, it's not as complex as a coaster. But our tower in Georgia rotates, so we had to take that into consideration. We added a lot of elements for the tower rides.

Mack has experimented with VR on flat rides, such as a swinging ship. Is this something Six Flags is considering?

We're currently not looking at flat rides, but we are considering other opportunities, including walk-through attractions.



In the Omniversum

Virtual reality programs on roller coasters and simulators are popping up around the world. In The Hague (Netherlands), the Omniversum IMAX theater came up with a simple, yet effective application of virtual reality for its guests. Joe Kleiman spoke with Berend Reijnhoudt, the Omniversum's Executive Director.

How did you decide on the VR program?

It actually happened by coincidence. A company in Amsterdam called Force Field makes video games. They became partners with XCOR Aerospace, which is offering space flights in the future for \$100,000 starting in 2025. Force Field made the simulation a sales tool, and we are the first installation commercially. In a way, we're the test site.

How does it work?

You get into the chair – a Sony Playseat with transducers built in. You then put on the Oculus Rift glasses. In the program, you sit next to the pilot/astronaut and fly into space. You get a view of Earth and the astronaut talks to you, explaining things. The whole experience lasts four minutes. We have a total of three chairs and laptops, each independent of one another.

Did you design the VR program to complement the giant screen programming in the theater?

With the VR, we've created a different kind of experience next to the theater. It's complementary to what's in theater, so the theme works well. Right now, the theater is showing Beautiful Planet and Fly Me to the Moon. In the future, we might change our program - maybe in a year or two.

How much does the experience cost?

We sell tickets for 3.5 Euros if an IMAX ticket is bought, 5 Euros without. So far, we have sold 2000 tickets to IMAX customers. It's in the lobby and it's something for them to do while waiting for the show to begin, which is important because we're not attached to a museum. It's fun for the people doing it, and fun for others to watch. There are no monitors showing what the person is seeing, so it's fun to watch people grab things or hang out a window that's not there.



Is Six Flags considering VR coasters for its upcoming parks in the Middle East and China?

It's my understanding that some VR is being looked at for overseas.

Why did Six Flags decide to pursue VR?

It was driven by our guests. We did thousands of guest surveys and we're always looking at new tech. We consider ourselves to be a pretty innovative company. Since guests are looking at cell phones all day while in the park, why not use them for VR? We talked with Samsung when we started out on this program and they commented, "It's like peanut butter and jelly." It just goes together perfectly.

How were the headsets designed?

Our operations group looked at all options. Safety was a major concern. We looked at ride operations – it's important to minimize slowdown. With tethering the headsets, there were questions on hygiene, so multiple headsets run through each train. We worked with medical doctors during the process. There have been a few iterations of the headset since we started, but it's now a patented design.

Riding Galactic Attack, I noticed that as you climbed the lift hill, looking at your surroundings through the camera, a starfield begins to appear, then you see the wormhole that takes you from augmented reality to full virtual reality.

Galactic Attack is a unique system. Anything about 10-15 ft away is rendered on 4K video, anything closer is on the game engine. As you go up the lift hill, you're riding in a sort of projection-mapped bubble. The live action uses an 8K rendered engine. We used both Unreal and Unity for the game engine.

What are some of the improvements you're looking at for the future?

We want more interactivity. We'll give people the opportunity to change their avatars. Our guests will be able to record their info on a RF chip. The VR experiences will become more social, more interactive. The more we can change the games, the more opportunities will be available. There are a lot of opportunities to link with cell phones that we're considering.

With a new Justice League movie hitting theaters this year, will we see a VR tie-in?

You never know. It's all dependent on guest needs. But it is possible we will see further DC theming on VR.

I noticed on Galactic Attack that I could control the guns by turning my head.

There's one other great thing you control by turning your head. There's no specific path on the program. At certain points, if you look left, look straight, or look right, you'll change the direction your ship heads. Each path uses a different rendered video. If you pick the right route, the right sequence, you'll defeat the alien mothership.

One of the great things about VR is that we can easily change the program. We've had seasonal programs, like Rage of the Gargoyles for Fright Fest and Santa's Wild Sleigh Ride during Holiday in the Park. Gaming is a very important part of the VR experience for us. The drop towers are gaming experiences too. It's also very important for season pass holders, as it encourages them to revisit the park and try and beat their best score. •••

PALATE™

A new way to experience taste.

ICONPATH is the leading creator of multi-sensory curated experiences that immerse guests in a new world. Each is a meticulously designed journey that unfolds in a bespoke environment with integrated digital content, scent, sound, live theatrical moments and signature features.

Our latest product, PALATE, heightens guests' sense of taste by transforming a restaurant, bar or cellar door into a dynamic canvas that brings to life your history, explores the provenance of ingredients and celebrates the inspiration behind flavour combinations.

Discover how PALATE can be the perfect pairing for your venue by increasing repeat visitation and social media engagement with a permanent turnkey solution scalable from 5 - 500 guests.

8,000-pixel resolution

Specialty cinema reaches for E&S True8K

by Joe Kleiman and Judith Rubin

The ability to project in 8K resolution on the world's largest screens is a milestone in the evolving field of digital cinema, especially in specialty markets.

On 19 April 2017, leaders and directors of more than 50 science museums across China gathered in the world's largest fulldome (digital dome) theater, at the China Science and Technology Museum in Beijing, for a demonstration of Evans & Sutherland (E&S) True8K™ technology. The demo was part of the Beijing International Film Festival.

According to local press and others who were there, industry viewers at the demo received True8K as an absolute breakthrough - achieving the highest possible image quality on a giant dome screen and definitively surpassing the longtime benchmark set by 1570 (15-perforation, 70mm) film. This breakthrough is of great significance for specialty cinema markets, especially planetariums and giant screen domes.

The planetarium community has readily embraced and adopted digital dome systems for the past 20 years. Operators of giant screen film domes have been more reluctant to convert. But each sector is coming from a different place. An existing planetarium making such a conversion is usually upgrading from optomechanical projection (starball) and slide

projection, to full blown cinema playback coupled with real-time image generation. The operator of an existing giant screen theater, on the other hand, is replacing 1570 film projection, which as noted has been the pinnacle of visual quality for decades.

However, as planetariums began to convert wholesale to digital systems (the first permanent fulldome installations were in the late 1990s) and these systems rapidly improved in quality, the two sectors have been converging, based on similarities of audience, mission, and content requirements. E&S has for many years served the planetarium community with its Digistar digital systems, tools, and content, and so it has been a natural transition for the company to step into serving giant screen markets as well.

Pixels, projectors, and versatility

The Beijing demonstration was fourth in a series showcasing E&S digital dome technology in a "shootout" with 1570. Each successive demo - from Richmond, VA in 2014 and San Jose, CA in 2015 (both 8K), to Toronto in 2016 and Beijing in 2017 (both True8K) - showcased advances in the E&S Digistar line, the latest being Digistar 6.

E&S Digistar projection fills the screen of a fulldome theater. *All photos courtesy of E&S*



Following the Toronto demo, Daniel Ferguson, director of the award-winning giant screen film Jerusalem (who contributed clips from Jerusalem in 8K resolution to be displayed during the demo) stated: "We've seen incredible image stability and clarity. We've seen a tremendous amount of information. I had a clip of material that I've seen in different formats – in xenon digital, in laser, in film - and today, I saw information that I had never seen before."

Theaters come in all sizes and requirements, and having rolled out True8K, E&S continues to offer a range of other options that allow an operator to put more or fewer pixels on the screen as needed with lamp-based, laser phosphor, and direct RGB laser projection – including 4K systems and the '8K' systems that preceded True8K. (See sidebar for more detail.) Sound systems within the theater can also vary, from 5.1 and 7.1 channels to 3D special audio systems, such as Dolby Atmos.

Several institutions are now in the process of converting their giant screen dome theaters to E&S digital projection. The latest is the Liberty Science Center in Liberty City, New Jersey, housing the western hemisphere's largest giant screen dome (88-foot diameter). This Digistar 6 theater with True8K will feature 10 Christie Boxer 4K projectors with 30,000 lumens of light each, combined into a single image with E&S auto alignment and auto blending software, along with its proprietary video synchronization. According to E&S, its solutions include facilitating

its giant screen theater customers to access the same software and programs as its traditional planetarium customers.

For the giant screen market, E&S pioneered an algorithm that allows traditional giant screen documentaries to be shown on the dome. This technology eliminates image stretching that would otherwise be visible when projected from a single film projector with a fisheye lens. Industry leader Jeffrey Kirsch, former head of the Fleet Science Center (San Diego) which houses the world's first permanent giant screen dome theater (installed in the 1970s) and doubles as a planetarium, stated after a 2004 screening of one such film converted by E&S: "That's what they're supposed to look like on my screen!"

While Liberty Science Center will use Christie projectors, the smaller Burke Baker Planetarium dome (50-foot diameter) at the Houston Museum of Natural Science (HMNS) - the first to feature True8K - is fitted with Sony phosphor laser projectors. Dr. Carolyn Summers, VP of Astronomy and the Physical Sciences at HMNS, says, "We wanted something that approaches what the human eye can see, and True8K is the closest thing to come to that. With our NanoSeam screen and Sony laser projectors, we're able to produce the darkest blacks, and you can't see any seams. Nobody in the theater sees any pixels. And when we run pre-rendered 4K shows, the system automatically increases the resolution and they look stunning in 8K."...



E&S Digistar 8K installations worldwide include:

- Milwaukee Public Museum, Milwaukee, Wisconsin - 8K
- Adler Planetarium, Chicago, IL – Grainger Star Theater – 8K
- Adler Planetarium, Chicago, IL – Definiti Theater – 8K
- Houston Museum of Natural Science, Houston, TX - True8K
- Liberty Science Center, Liberty City, NJ - True8K
- Zeiss-Großplanetarium Berlin, Germany - 8K
- Planetarium Hamburg, Germany - 8K 3D Stereo
- University of Strasbourg, Strasbourg, France – 8K
- The Pearl – Reykjavik, Iceland – 8K
- Swiss Transport Museum, Lucerne, Switzerland – 8K
- Griffith Observatory, Los Angeles, CA – 8K
- Science Centre Singapore – 8K 3D
- Katara Cultural Village, Qatar – 8K
- EC1 – Lodz, Poland – 8K
- Shanghai Natural History Museum (Cambrian Theater) – 8K
- Science Center of Virginia, Richmond, VA – 8K 3D Stereo
- Pilikula Science Center, Pilikula, India – 8K 3D Stereo
- National Museum of Natural Science, Taichung, Taiwan – 8K

Visitors travel through space thanks to the E&S Digistar 6 system

True8K compared with 8K, 4K and 1570

On the high end, E&S digital projection systems are available in resolutions of 4K, 8K, or True8K. 4K resolution is equated to Ultra High Definition (UHD) TV and high-end digital cinema. 4K resolution is essentially the equivalent of 35mm film.

To clarify "8K" vs "True8K": E&S 8K systems preceded the rollout of True8K. Existing 8K theaters display only 60% of what is required to be a True8K theater.

A projection frame in the 8K system, at around 30 million pixels, can be equated to 1570 film even though, technically, the pixel count of a 1570 frame is higher. In an interview on the subject published by CreativeCow.net, John Galt, Senior Vice President of Panavision, said, "When you take the entire system into account - from the lens of the camera, to the movement of the light through the projector, all slightly reducing resolution - you wind up with less than the full resolution you started with." According to E&S, the Digistar multi-projection system remedies this problem.

The 24 frame per second rate at which 1570 film runs through the projector also dims the image. Galt pointed out, "...it's the reason we watch such a dim picture on a movie screen, because if you pump up the screen brightness, you would notice the flicker from the 24 fps motion capture." Higher frame rates of up to 120 fps make this a non-issue in Digistar, according to E&S.

True8K resolution of 8,000 pixels means that all the unique pixels in a dome master (an individual fulldome frame) of at least 8,000 pixels in diameter are displayed, according to E&S. This is more than 50 million unique pixels (50,602,000 in the Houston planetarium).

Visit the company website at www.es.com for a full technical explanation and more info about all the various options.



Applicable to attractions

E&S is positioning Digistar 6 and other products for the attractions industry. Digital projection is a match for flying theaters, motion simulators, dark rides, 3D visualization and immersive storytelling. Because Digistar 6 includes real-time processing (equivalent to a gaming engine or image generator), it supports interactivity. Currently, the system can interact with XBOX and Kinect controllers, as well as smartphones and tablets. E&S has also just introduced VR capabilities into the system. E&S subsidiary Spitz, Inc. already has some presence in the attractions industry as its screens are in high-profile, media-based installations at theme parks operated by Disney, Universal, and SeaWorld, among others.



Digistar in Asia

In Asia, specialty theaters are often built from scratch in new entertainment or education venues, and reflect fresh approaches. A prime example is the Cambrian Explosion Theater at the Shanghai Natural History Museum. E&S customized an 8K Digistar projection system for this unique theater in which guests have a simulated experience of traveling under water into the prehistoric Cambrian sea. Imagery is projected onto a donut-shaped, Spitz NanoSeam screen that curves below the audience. It opened in 2015.

E&S began doing business in China in 1998. The company now has over 120 customers in Asia, with an office in Beijing and representation in Japan, Taiwan, Thailand, India, South Korea, and Southeast Asia. Recent projects include Bangkok Planetarium (Digistar 5 with two Christie Boxer 4K projectors), Science Centre Singapore (8K 3D system), National Museum of Natural History in Taiwan (8K system), and Pilikula Regional Science Center in India (5-projector 8K Digistar 6 in 3D stereo).

Professor Lim Tit Meng, CEO of Science Centre Singapore says, "We want to leverage the power of digital technology to enhance the way we educate and inspire interest in science and technology. The Digistar system provides access to a greater range of educational content - both in terms of shows and real time data - and the software capability enables us to create our own content in the future."

CONTINUED >>>

Real-time tools and content

For planetariums and other scientific institutions, E&S tools include User Interface and Show Builder. These support creating shows in-house, based on intuitive drag-and-drop architecture. Scenes can be snapshotted and then modified sequentially.

When clients purchase Digistar 6, they are also becoming part of an active professional community, the Digistar Users Group (DUG) that exchanges information and resources on a regular basis, in addition to collaborating on and sharing content. Digistar 6 includes some key features that enable content sharing across the Digistar community, including:

- DATA2DOME: Digistar 6 is the first digital dome system to fully integrate this new standard from the International Planetarium Society. With Data2Dome, videos, images, fulldome stills, and more are instantaneously transmitted from a variety of sources on Earth and in space.
- DIGISTAR CLOUD: Digistar users can upload their creations – anything from spaceships to weather patterns – into the cloud for others to download, incorporate, modify and re-share.

- DOMECASTING: Digistar theaters can broadcast live presentations to other theaters on the network, increasing the audience to view a live show simultaneously.

E&S also produces and cross-platforms a library of pre-rendered shows for playback in fulldome theaters. The company recently welcomed noted fulldome show producer Robin Sip as Director of Show Production & Content. Sip's first production for E&S will be "Mars: One Thousand One," a 45-minute film that combines live action with computer animation and details the first manned mission to Mars.

E&S's subsidiary Spitz Inc. is a longtime leader in the industry with its own line of products and content. Notably, Spitz is a leader in screens for dome theaters, with over 2,000 in place on six continents. Since 2007, some 150 theaters have installed Spitz NanoSeam screens, which feature flush panels that eliminate all seams from view. The Fleet's Jeffrey Kirsch remarked, "It's like sitting in an eggshell," while Mark Webb of Chicago's Adler Planetarium, a recent recipient of two 8K Digistar 6 systems, noted, "Having the screen surface 'disappear' from the scene adds depth and realism to the experience."

Problem Solved.

**Alcorn
McBride
Inc.**

Introducing RIDEplayer!

The ultimate onboard audio and show control solution. Easily synchronize vehicle audio with the entire attraction.



DARK RIDES • PARADE FLOATS • COASTERS • TOUR VEHICLES

Products designed for Themed Entertainment

Learn more @ alcorn.com

Greening Great America

The history of California's Great America and its path to sustainability

by Joe Kleiman

When Marriott Corporation opened its Great America theme park in the agricultural fields of suburban Santa Clara, CA, in May 1976, Apple Computer had not yet been incorporated and its first computer was months away from going on the market. Now entering its forty-first season, California's Great America lies in the center of California's famed Silicon Valley, surrounded by the global headquarters of technology powerhouses like Intel and Cisco Systems. Inside the park, Apple iPhones can be found everywhere, with guests chatting on Facetime, snapping photos, and using the park's unique app. Positioning itself as a showcase of Silicon Valley, California's Great America has embarked on a number of tech and green initiatives as it prepares to redefine itself for the future.

The future comes into question

In 1983, Marriott put the park up for sale and it was eventually purchased by the city. The City of Santa Clara owned Great America until 1989, when Kings Entertainment purchased the park. However, the city retained ownership of the land.

Fast forward to 2006, when after a series of acquisitions, the park became part of the Cedar Fair portfolio. Shortly thereafter, the 49ers of the National Football League announced that they were considering leaving their home stadium in San Francisco and constructing a new one in Santa Clara. On June 8, 2010, Santa Clara voters passed a ballot measure approving construction and financing of the stadium, which would be known as Levi's Stadium. The location chosen was an overflow parking lot for California's Great America, placing the park's future in jeopardy.

On September 19, 2011, Cedar Fair announced that a deal had been reached for the sale of California's Great America to a partnership of real estate firm JMA Ventures and the York Family, owners of the 49ers, for \$70 million. Cedar Fair announced the proceeds would be used to reduce the company's debt.

On December 6, 2011, Matt Ouimet, a former Disney executive who was at that time Cedar Fair's President and incoming CEO, announced that JMA Ventures had backed out of the deal and Cedar Fair would retain ownership of the park. Almost immediately, plans were set in motion for a number of initiatives designed to position the park as a good neighbor to the 49ers, the city, and the surrounding Silicon Valley.

Good fences (and tech) make good neighbors

In 2013, Gold Striker, a 3,200 foot long wooden roller coaster dramatically changed the look of the park's entrance plaza. To address noise pollution concerns, wooden acoustic barriers were placed at various stages along the track, resulting in its 103 foot, 50 degree initial drop taking place inside a tunnel.

As with the rest of the Cedar Fair chain, technology initiatives can be found throughout the park - in its newest attractions, shops, and online. In 2016, a partnership between Cedar Fair and video game company Electronic Arts resulted in the unique Mass Effect: New Earth attraction (see InPark issue #65), a simulated and rambunctious ride through space featuring a live actor interacting with the largest 3D LED screen ever installed in a permanent attraction, a unique near-field audio system, motion seats, and in-theater effects.

During its 2016 Halloween Haunt, the park briefly offered a virtual reality experience where guests were able to experience a film in 360 degree VR, synched to environmental effects. According to the park's Vice President and General Manager, Raul Rehnberg, "We still own the



Raul Rehnberg, VP and General Manager of California's Great America and John Roukema, Director of Silicon Valley Power. Photo: Joe Kleiman

VR headsets and the facility, so we're looking at different options for bringing a new VR program for this year's Haunt." Rehnborg also points out that the park plans to open an interactive VR center similar to the VR Showdown in Ghost Town that opened this year at sister park Knott's Berry Farm near Los Angeles.

On the retail and food & beverage fronts, the park is expanding two existing programs for 2017. FunPix allows guests to download or purchase ride photos. This year, the program is being expanded to include photos taken by park staff. Guests can access their photos via the park's app, which also allows them to photograph QR codes at specially designated photo spots in order to unlock special themed photo borders. In addition to FunPix, the park's app allows guests to locate their car, their friends, and even purchase tickets and amenities.

The park is also expanding touch screen ordering to three dining locations. According to Wilf Seymour, Director of Food and Beverage at California's Great America, "Our guests can order using either a credit card or their all day dining pass. We've reassigned the cast that would normally be working as cashiers, so it's not eliminating any positions, and we've kept someone at the ordering area in case people need assistance. Overall, it expedites the entire process." According to Seymour, one of the most difficult aspects of making the new system successfully operate was to integrate its software, provided by micros, with the existing front gate POS and CRM system, which was developed in house under Paramount. This connection was essential, given that a number

of different dining plans are sold through the ticketing office, each with their own restrictions.

Red, white, blue...and green!

Since 2003, California's Great America has been using recycled water for irrigation, cleaning, and fire suppression systems. This year, the park announced another big green initiative—a partnership with Silicon Valley Power to purchase 100% wind energy for powering the park. According to Tom Mertens of Silicon Valley Power, the park will not have to make any infrastructure changes, as the power company will be able to direct batches of energy directly from wind turbines to the park. As one of the first theme parks in the United States to convert fully to green power, California's Great America will utilize the equivalent of four large scale wind turbines per year. At the same time, it will eliminate seven million pounds of carbon dioxide annually from the park's carbon footprint.

Wind power is not less expensive, in fact it's more. Raul Rehnborg points out, "We want to make sure that we embrace our responsibility to be good stewards of the environment. We've already been doing that in a number of ways. We've been working on water conservation initiatives for a number of years and have been working with VTA, the Valley Transportation Authority, to promote alternative means of transportation to the park. This is the next step." Rehnborg adds that the park is looking at other green options for the future, including solar energy. . . .



SAFRA PUNGGOL | SINGAPORE

RE-THINK YOUR POOLS AND TURN THEM INTO ACTIVITY HUBS

Create engaging multi-level adventure in a stimulating environment with unique aquatic play. **All through the wonder of water.**



World leader in aquatic play solutions with over 6,500 installations worldwide
1.866.586.7839 (USA/CA) | info@vortex-intl.com
VORTEX-INTL.COM



JOIN US AT
BOOTH L547





Walt Disney shows an early model of CalArts to Lulu May Von Hagen Photo: CalArts

Dreamers and doers

CalArts is part of Walt Disney's remarkable legacy

by Rick West

California Institute of the Arts has been a source of world-class talent and skill, directly benefiting the entertainment industry in Los Angeles and beyond for more than 50 years. The school's history is unique, and CalArts remains more relevant than ever, supplying the film, television, music, and themed entertainment industries with young professionals who will dream and create for global audiences for years to come. Many leaders and luminaries within the themed entertainment industry got their own start at CalArts. In turn, many of those leaders come full-circle, drawing talent from the prestigious college to fortify their own companies and projects.

CalArts is part of the remarkable vision and legacy that Walt Disney left across Southern California. In creating Disneyland, Walt formed a division of his company called WED Enterprises (now Walt Disney Imagineering): a group of artists, engineers, writers, and tradesmen all tasked with bringing the magical kingdom to life through attractions, shows, and themed lands reflecting the Disney company brand.

Walt Disney saw the need for a go-to source of new talent on a regular basis. A perfect storm presented itself in the late 1950s, with the Chouinard Art Institute and the Los Angeles Conservatory of Music both falling on hard times. By 1961, Walt Disney became involved in coordinating a merger between the two institutions. The well-planned, albeit complicated, process lasted well past Disney's death in 1966. Though Walt didn't live to see this portion of his legacy come to fruition, he saw what it would be and the purpose it would serve. There is no doubt that his hand in the process absolutely was a benefit to the entertainment industry in Southern California.

"I want people to graduate from there really able to do things," said Disney. "I don't want a lot of theorists... I want to have everyone in that school come out capable of going in and doing a job."

CalArts isn't a huge campus. By design, the school focuses on artistic quality as opposed to scholastic quantity. In 2016, the student body



Wild Beast Theater at CalArts Photo: Scott Groller for CalArts

consisted of approximately 1,500 pupils. In sharp contrast, mainstream colleges such as Cal State Long Beach can see upwards of 40,000 students enrolled per semester. Needless to say, graduates of CalArts are a special, select breed.

On October 5-6, 2017, CalArts hosts the Themed Entertainment Association (TEA) annual SATE Conference on Experience Design, which approximately 400 participants will attend. Having this event on the CalArts campus highlights the important role it continues to play in today's themed entertainment industry.

Walt Disney said, "If I can help provide a place to develop the talent of the future, I think I will have accomplished something." The vision for such an institution more than 50 years ago has been fulfilled. CalArts has fostered generations of artists, artisans, and professionals enriching our industry all over the world.

Keys to the kingdom: alumni and faculty honor CalArts legacy

Since opening in the early 1970s, CalArts has grown to serve the themed entertainment industry tremendously, as Walt foresaw. Many look to CalArts for fresh, upcoming talent; many who hold high-profile positions within the industry were students there. Some even teach at CalArts.

Bob Rogers: There when it started

Bob Rogers, Founder and Chief Creative Officer of BRC Imagination Arts, reflects on his CalArts student days with great fondness, and explained why the school is still relevant today.



"I was there when it started," said Bob. "In CalArts' first year, it felt revolutionary to gather filmmakers, animators, dancers, artists, musicians, writers, actors, theater people, and designers. But at the time, I was totally focused on film, so the other schools felt irrelevant. I failed to appreciate the amazing synergy of having all these arts and their creators in the same place. That was then. Things change. Sometimes what you initially ignore, returns as fate. Today at BRC Imagination Arts, I preside over an organization of artists, filmmakers, animators, designers, musicians, actors, theater people, writers, and even the occasional dancer. BRC is

CalArts as a company. All of us collaborate in the creation of destination experiences around the world. We are one of many enterprises made possible by the same cross-disciplinary creative synergies nurtured by CalArts. Companies like ours confirm the original vision of bringing together all of the arts into one school. This is how the arts often collaborate in real life. This is yet another reason why the world needs CalArts."

Christopher Merritt: Mentored by Marc and Alice Davis



Alumnus Christopher Merritt is currently a Senior Show Designer at WDI. "CalArts was a big step forward for me," he said. "I had decided to pursue theme park design after working as a Jungle Cruise skipper at Disneyland and seeing an early exhibit at the Disney Gallery back in 1989. In particular, the stunning attraction designs done by Marc Davis made a big impression on me."

He enrolled in 1990 in the Character Animation department. "During my freshman year, I had amazing instructors like Bob Winkquist and Mike Giaimo. However, by the end of my first year, I had decided that I didn't want to become an animator - but rather a theme park designer. I was fortunate to have met Marc and Alice Davis, and we had become friends." Christopher was on the point of dropping out, as CalArts didn't offer a program for theme park design, and told Alice Davis this. "Her comment was, 'Like hell you will!'" Davis contacted Winkquist, who was running that department, and had gone to Chouinard with her in the 1950s. They arranged for Christopher to work on ideas for an attraction on his own: "concept it, do artwork and model work to show how it would work. I can't imagine a more supportive environment than CalArts - if I hadn't been given that freedom, I don't think I would have learned to be a self-starter as early as I did.

"I consider my formative years at CalArts invaluable. Some of the projects I was able to work on in later years include Sindbad's Storybook Voyage, and Porto Paradiso at Tokyo DisneySea; Pooh's Hunny Hunt at Tokyo Disneyland; the Sleeping Beauty Castle Walkthrough renovation at Disneyland; Ariel's Undersea Adventure, and Radiator Springs Racers at Disney California Adventure; Enchanted Airways, Shrek 4-D, Donkey Live, Puss In Boots' Giant Journey, and Madagascar Crate Adventure at Universal Studios Singapore; and Mickey Avenue at Shanghai Disneyland. I'm currently at work on new attractions for Tokyo Disney Resort."

Scott Ault: Collaboration



Scott Ault, President and CEO of Rethink Leisure & Entertainment, carried much of what he learned at CalArts into the daily operation of his design firm in Burbank.

"I graduated Class of '88 from the School of Theater with a degree in set design," said Scott. "What I loved most was the constant multi-disciplined,

cross-collaboration with other students. Whatever I needed – lighting designers, photographers, actors, illustrators – was all easily accessible, which proved to be incredibly instrumental in my own journey. I have kept in touch with many former fellow students, and many are respected professional colleagues.

"At CalArts, some referred to me as 'Mr. Fix-It' because early on I was able to work with different types of artists, removing any roadblocks and clearing the way for success. That is something I took with me and continue to do to this day with various project teams and clients. CalArts teaches students how to think above and beyond just drawing or one particular skill; to see things dimensionally from all different perspectives."

Jonathan Casson: Skills to succeed

Jonathan Casson has worked with such prominent companies as BRC Imagination Arts and 20th Century Fox, where he was Director of Business Development. This industry executive also teaches a course at CalArts.



"I designed the Advance Studies in Location Based Entertainment class around what I wish someone had taught me when I was 21 years old," explains Casson, who developed the course in 2014 while he was with Fox. His students are graduating MFA and BFA students from a range of academic disciplines, such as technical direction, production

management, costume design and film direction. Each week, Casson's students venture out in the field to meet with and learn from working creative professionals in the LA metro area.

"By exposing students to this range of venues and disciplines, I hope to inspire them to consider ways they can apply their creativity they may not have considered before," said Casson. He also brings industry leaders in to talk to the students. In recent classes, Evan Sroka, Corporate Finance Executive at Creative Artists Agency (CAA) shared how product development and new business opportunities are evaluated and pursued to fulfill a strategic plan. Brian Morrow, Vice President of Theme Park Experience Design for SeaWorld, talked about fostering environmental, social and economic sustainability across park development and employee culture. Brian Hinckley, President of Electrosonic, shared how the integration of technology is inseparable from operations and the creative process.

"I want students to emerge with a passion for the industry and be prepared to enter the professional world with an active ability to look at design challenges from the viewpoint of the companies and clients they will serve," said Casson. "Positioning design intent and production development as complimentary parts of an overall strategic goal is a recurring theme throughout the course. Witnessing how big ideas are brought to life in practical and realistic ways - including the challenges and downfalls - allows students to see their creative and career possibilities."...

eleventh hour

LOOKING FOR NEW TALENT?

CREATIVE RECRUITMENT for THEMED ENTERTAINMENT

LOOKING FOR A NEW JOB?

CONCEPT - DESIGN - ART DIRECTION - PROJECT MANAGEMENT

WWW.HOTFRESHTALENT.COM | 310.821.6900

VISIT US! IAAPA ATTRACTIONS EXPO 2017 - BOOTH #865

The advertisement features a dark background with a stylized banner at the top containing the text "eleventh hour" in a white, lowercase, sans-serif font. The banner is decorated with green and white striped patterns on the sides and a green starburst graphic on the right. Below the banner, the central text "CREATIVE RECRUITMENT for THEMED ENTERTAINMENT" is displayed in a large, bold, white, uppercase font, with "for" in a smaller, pink, lowercase font. To the left and right of this central text are two speech bubble-like shapes: a green one on the left containing the text "LOOKING FOR NEW TALENT?" and a pink one on the right containing "LOOKING FOR A NEW JOB?". At the bottom, the text "CONCEPT - DESIGN - ART DIRECTION - PROJECT MANAGEMENT" is written in a smaller, white, uppercase font. Below that, the website "WWW.HOTFRESHTALENT.COM" and phone number "310.821.6900" are listed in a large, white, uppercase font. At the very bottom, the text "VISIT US! IAAPA ATTRACTIONS EXPO 2017 - BOOTH #865" is written in a white, uppercase font.

What does 120 fps projection mean for the attractions industry?

A crisp, clear conversation with Christie

by Judith Rubin

The standard cinematic frame rate for many years has been 24 per second. Even on the biggest, specialty screens and in the highest resolutions, there have been only a few exceptions to 24 frames per second (fps) projection. All that is likely to change quickly, because now, we have the technology... in fact, many operators may be interested to discover that they already have the technology, or at least a major component of it, in their projection booths – especially if their projectors are Christie projectors.

Readers who are up to the minute on the cutting edge of AV will already be thinking of two recent applications of 120 fps projection – one in the form of the Ang Lee film, *Billy Lynn's Long Halftime Walk* (not its general distribution format, but as it was shown in special debut screenings, in 120 fps 3D; Christie worked closely with Ang Lee to help him achieve his vision) and the other in a popular attraction at a Universal Studios park, where Christie is the official projection system provider.

There have been some pioneering instances of high frame rate (HFR) projection even before digital cinema technology evolved to its current level of sophistication. In the attractions industry, many will remember Showscan, a 60 fps format developed by Douglas Trumbull. There was also "IMAX HD" – a 48 fps application of the 1570 film format, showcased at a world's fair in the 1990s. More recently, *The Hobbit* broke new ground for mainstream rollout of a movie - distributed and screened in a wide range of formats, including 48 fps.

Special venue has always been the laboratory for cinematic innovation and experimentation - whether giant screen theaters in science museums, 4D experiences in theme parks, motion simulation theaters, dark rides, projection mapping, multimedia spectacles, digital planetarium systems or today's non-linear, immersive and interactive environments.

Larry Howard, Christie's National Applications Manager – Large Scale Experiences, anticipates that trend will continue, and Christie is there to help it along, not just with projection equipment but also with guidance for producers, operators and distributors about what else is needed to successfully create and present content in 120 fps and raise the bar yet again for media-based attractions and themed entertainment experiences.

"Special venue remains the ideal proving ground for 120 fps because the screens are big, the storylines are exciting, the runtimes are short, the theaters are custom-built and operators are bound to continually re-invest in order to remain competitive," says Larry Howard. "In themed entertainment, a 120 fps project doesn't have to roll out in a large way to justify itself. But, it will take time to perfect the craft, and Christie is standing ready with the tools and information."

As a world leader in HFR projection and processing, Christie is said to be the only projection company that provides true 120fps at 4K



Jeevan Viveganathan



Larry Howard



The Christie Boxer projector (top left); the Christie RGB Laser (bottom left) and the Christie Mirage 4KLH (above) Photos: Christie

resolution, with true live video processing capability. The Christie Boxer, Mirage Series and RGB laser projectors are product lines the company recommends for 120 fps.

So, exactly what does this mean for those who wish to adopt HFR, now or in the future? Christie typically hosts events at its headquarters in Kitchener, Ontario or at client's locations to help them learn about and experience 120 fps projection and to discuss methodology and tools. [Contact Larry Howard (larry.howard@christiedigital.com) for more information.]

Christie Senior Director Product Management Jeevan Viveganathan: 120 fps basics for the attractions industry

Workflow and production

It's important to understand the workflow and the signal flow, and to make sure every component in the content delivery system is truly 4K 120. Ask your supplier if they support 4K 120 through the entire flow - when you ingest signal, transport, process, display, with no scaling or compression involved.

For multiple 4K 120 fps systems, projector alignment is critical. Christie offers a software product that can help attraction designers design an optimal solution and can help them both install it to pixel perfect accuracy and to help maintain that alignment over time.

Typically, what happens in the attraction production process is that you have a media company and an AV company for the integration, and the two groups must collaborate on the design. With Christie Mystique, we are trying to help that collaboration occur at an earlier stage and more smoothly. It improves the process and the end result.

The media production equipment already exists. Whether for animation or live action, most tools can already create 4K 120 content. We assume stitching and blending happens in most projects, and those are easy to do now, with Mystique. That said, you can't just shoot the way you used to shoot at 24 fps. Anybody investing in HFR displays will have to gain some new experience with storytelling in this format.

Much existing content is eligible to be adapted from existing digital assets.

AV system integration

Let's say you've got an existing attraction, and you're going to change your content for 120 fps playback.

Your existing media server may not support 4K 120 and you may have to upgrade that component. Then there's transporting the signal from the media server to the display. Christie has ready-made solutions for that, using fiber or cable. And if you own Boxer 4K projectors for example, they are already 4K 120 fps capable and can easily be upgraded to the Mirage 4K 120 fps version.

If it's an older attraction, you may have to replace pretty much everything. You can approach it incrementally: buy a 4K 60 fps (120 fps capable) projector and have a 4K 60 workflow, then budget to upgrade the projector and remaster or recreate the content at a 120 fps standard.

If you are doing a brand-new attraction, you'll probably do it all at once.

Cost containment

Supposing you are developing new content, there are ways to test images at lower frame rates or in HD for your dailies, which helps make the cost of production manageable and lets you use existing equipment or infrastructure. At the end, you complete a final render at 4K 120. While production costs for 4K 120 are higher, the movie industry continues to see a downward pricing trend.

In terms of playback and projection, you don't have to invest all in one go with a lot of dollars, you can upgrade your way there, as noted above. Much of Christie's equipment allows you to invest initially at 4K 60 and upgrade later.

Storytelling and guest experience

We have all gotten used to cinematic experiences with a certain softness that is aesthetically pleasing. But you can say goodbye to motion blur.

For experiences with fast action and a lot going on - dark rides, interactive experiences using image generators and with movement - this format keeps everything nice and crisp. It also reduces the chance of motion sickness by minimizing latency, which refers to the system time lag between signal and response with a gaming engine or image generator.

Producers and directors who adopt 120 fps will show us how to best use it to tell their stories. Live action is going to be more challenging than animation, but Ang Lee has already started us on that path of art and excitement.

In terms of creating an immersive, projected piece of media or environment, HFR is more realistic, more punchy, more visceral. Where it is ultimately going to make more of a difference is in the world of live movement, and dynamic environments. In those settings, we believe HFR will become critical to system design, engaging guests with realistic moving objects and interacting with lighting, effects and other components. New effects will be enabled. We're having really interesting conversations with some of our creative partners about this.

With 120 fps projection Christie is providing a tool with which creatives will make magic, to produce amazing guest experiences and bring a new dimension to storytelling. 4K 120 was something Christie invested in early and fast, and did with the guidance of partners, and the knowledge that this would become part of a storyteller's medium. ...

Ang Lee (right) on the set of "Billy Lynn's Long Halftime Walk" with the 120fps camera rig. Photo: Sony Pictures



UNCOVER GREAT IDEAS HERE

OCTOBER
16-19,
2017

WORLD
WATERPARK
ASSOCIATION
SYMPOSIUM &
TRADE SHOW

WEST PALM
BEACH, FLORIDA

WWASHOW.ORG

Experience the water leisure industry's once-a-year gathering where leaders collaborate and share their knowledge and best practices to help you bring out the best in your teams and deliver safe, memorable experiences to your guests. Questions? Call +1-913-599-0300.





THANKS TO WÄRTSILÄ FUNA,
FRED DANCES FOR THE FIRST
TIME SINCE 1984

**We take
fun seriously**

**WE ARE THE RELIABLE INTEGRATOR
WITH COMPELLING AUDIO AND
STUNNING VIDEO SYSTEMS**

**WÄRTSILÄ HAS ALL THE
ELECTRICAL AND AUTOMATION
SOLUTIONS YOU NEED**

WÄRTSILÄ CONNECTS THE DOTS

Wärtsilä is the world leader in shipping, with the only complete marine offering. It includes all the electrical and automation solutions you may possibly need. Because we know how all the parts are made, we are the best at integration as well. We are very serious about fun – and know how to ensure the optimal experience at sea or on land.



Read more at wartsila.com/funa

Meet us at SEATRADE CRUISE GLOBAL, 13 - 16 March 2017, Florida, USA, Stand 407

Pirates, treasure & Luc

Exploring Shanghai Disneyland's Pirates of the Caribbean: Battle for the Sunken Treasure attraction with Disney Imagineer Luc Mayrand



interview by Martin Palicki

Luc Mayrand joined Walt Disney Imagineering in 1999, and is currently Creative Executive for Shanghai Disney Resort and Hong Kong Disneyland Resort, focusing on future developments for those parks. "It's a pretty amazing job," says Mayrand.

Most recently, Luc held leadership positions with the creative ideation team for Shanghai Disney Resort tasked with mapping out initial concepts for the park. He was Executive Creative Director for Treasure Cove, the first land in any Disney park based entirely on Pirates of the Caribbean. The land and attraction have been so popular and so tightly tied to the movie franchise that the world premiere of Pirates of the Caribbean: Dead Men Tell No Tales happened earlier this May in the Shanghai resort.

InPark Editor Martin Palicki sat down with Luc at the 2017 TEA Summit in Anaheim, California to talk about the Thea Award winning Shanghai Disneyland and Pirates of the Caribbean: Battle for the Sunken Treasure.

Martin Palicki: How did your career path lead you to Walt Disney Imagineering?

Luc Mayrand: I have always loved inventing things and reading books. I loved the combination of designing things and telling stories, which led me to pursue industrial design. To me, that was all about creating anything that could be part of telling a story – every object and place and material.

My initial work was in movies and television. Then I was hired by a company to be a production designer on a TV show that was cancelled a week after I was hired. The company also worked on theme park projects. Wanting to keep my job, I started working on that and fell in love with it. I ended up going to Japan working on projects there and leading projects in Asia and Europe and also here in Las Vegas and Orlando for other companies. After doing that for about 12 years it seemed to be an interesting time to get in touch with Disney. I started working on Mission: SPACE at Walt Disney World Resort and enhancements to Space Mountain attractions at the Disneyland Resort and Disneyland Paris.



Pirates of the Caribbean: Battle for the Sunken Treasure is the anchor attraction in Treasure Cove at Shanghai Disneyland Photo: Disney



JOIN THE

CREATION nation

2017

CONFERENCE:
NOV. 13-17
TRADE SHOW:
NOV. 14-17
ORLANDO, FL, US

Come together with your peers and be inspired.
As technology evolves and customers demand more interactive, personal experiences, you need to find innovative ways to deliver.
Source creative solutions for your business by connecting with the global attractions community at IAAPA Attractions Expo 2017.

REGISTRATION OPENS SOON!
www.IAAPA.org/IAAPAAttractionsExpo/InPark



In this large scene, guests discover Davy Jones' sunken treasure at the bottom of the sea. A combination of lighting, sound, projection and animatronic effects creates a realistic underwater environment. Photo: Disney

I guess I was doing a lot of work “in space” for a while, but at Shanghai Disneyland I saw a real opportunity to do something different with the Adventureland side of the park. I initially developed both Adventure Isle and Treasure Cove. Eventually, it became time to focus on one area, so I continued on with Treasure Cove, building the team and leading the attractions.

What was your first project in the industry?

Sanrio Puroland in Japan was my first project. There was an interesting coalescing of people there that went on to become strong leaders in the industry. It was a great training ground - we had to make up so much on our own. I came away knowing a lot more. It was great.

Many of us stayed friends after that project. I think part of that is going to another country, which was similar to Shanghai Disneyland, in that you are in a new place and learning and working with people from other cultures. It opens your heart and mind to everything. I found it to be a wonderful discovery because you are creating together, and it ends up being incredibly life affirming. It's not just a cool creative experience, it's a great human experience.

How did you go about building the concept for Pirates of the Caribbean: Battle for the Sunken Treasure?

At the very start when working on the story, I wanted to first explore what would drive the show. I had an idea to begin with for a hyper-immersive long format experience that would be a motion base on the water – which was very complicated. But we needed to hone the story and figure out what would be different about these pirates from the pirates of the original park - which were great in their own, but they were from 1967 and we wanted today's pirates.

One of the significant takeaways was that we felt the boat should move in very unpredictable directions and really be used to put you in the situation. That led to our ride group being brought in and asked how we could accomplish that. Imagineer Mark Sumner suggested a boat powered by a new, submerged ride system and so we said: Let's develop a whole ride that would be based on that!

We wound up committing to doing this entire experience around a ride system that didn't exist. We went from something that was going to be difficult to something that was going to be really difficult and high risk, but we measured the risk all along and tried to be very careful.

Early on I asked Mark Sumner what I would need to know about building water attractions. He told me that every time you do a water attraction, water is going to teach you something. And boy we learned a lot! There is so much, you can't know all the things that are going to happen with the physics of water. Fortunately it worked and it allowed for the attraction experience to really shine.

Just like a movie is continuous and you follow the camera all the way through, during Pirates of the Caribbean: Battle for the Sunken Treasure, you are in that perfect spot to catch everything that happens, and that happens to be the greatest story of Pirates ever told.

The attraction successfully blends fabricated sets with giant screen media. Is there a specific ratio you think is ideal for a media-based attraction?

We didn't design around a number, we just did what we thought would be right for the story [Editor's Note: *The attraction feels roughly 30-40% media based*]. I do like the visceral feeling of being in a real set. Film has the capability to do that as well to an extent, but you put them together and the experience is multiplied. Things are much more than what either one of them could be.

One thing I think really works is that sometimes you take your time in those scenes. It's not always about whipping you here to look at this, and then spinning you around you to the next scene.

One of our early important realizations was to embrace the transition. Don't try and just get out of it, don't try and just mask it or make people forget about it. Embrace the fact that you are going from here to there and design it until it is just perfect. And that turned out to be a

Diving deeper into the story

Although understanding Chinese is not necessary to enjoy the ride or follow its storyline, there are two moments in the attraction that Martin Palicki specifically asked Luc Mayrand about.

Who are the two characters in the underwater stockades?

They are the guards of the treasure. They've been on duty for about 50 years. The back story is that they were pirates and part of Davy Jones' crew. They did something wrong and got stuck on guard duty. Now they are so addled and encrusted that they don't even remember why they are there.

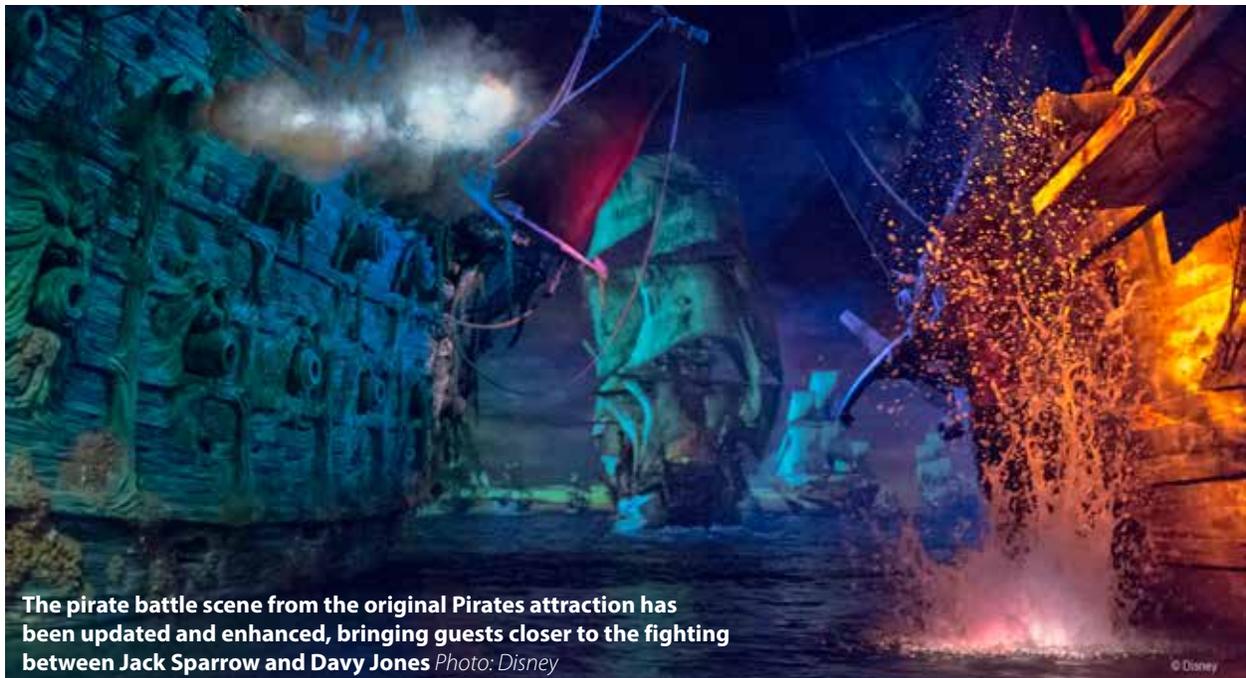
It's a little bit of comic relief. When we were going through and did a lot of 3D pre-visualization work I could sense when there was something a little too quiet, and that's why we put them there.

They have a handful of different lines, each one is different. Some of the lines tell their story a little bit more. One of them is about us coming to steal the treasure, but they have forgotten why they are there. In another sequence, one remembers that the other tried to steal a spoon and that's why they are in the stockades. There's one whole back and forth routine where they say "It's your fault; No, it's your fault; No, it's your fault..." and guests like that.

What is happening at the end when the treasure disappears?

The story is you and Jack Sparrow have made it out with the treasure and you are about to divvy it up. Jack says: Thanks we couldn't have done it without you. Let's enjoy this together.

Just as he says this, Davy's voice says: Oh come on, Jack, you didn't think it would be that easy...you can't come in and just steal my treasure. Davy uses his magic to turn the treasure into crabs and algae and seaweed. The final injury is that Davy doesn't just make the treasure disappear, but he also makes Jack's table, goblet and bottle of rum vanish as well. There is also a surprise ending that plays at random intervals, where we and Jack actually keep the treasure; Jack then sings the Yo-Ho song ... in Chinese!



The pirate battle scene from the original Pirates attraction has been updated and enhanced, bringing guests closer to the fighting between Jack Sparrow and Davy Jones Photo: Disney



INDOOR FAMILY COASTER



**FOR ALL YOUR COASTERS & ATTRACTIONS!
STANDARD & CUSTOM DESIGN, FROM CONCEPT TO REALITY!
WE WELCOME YOU TO MEET OUR TEAM IN SINGAPORE
TO DISCUSS YOUR PROJECT!
BOOTH NO. L929**



FAMILY COASTER



FAMILY BOOMERANG REBOUND

T U R N I N G Y O U R W O R L D A R O U N D

huge payoff because there is this sense of wonder from guests on the attraction.

In this version of Pirates of the Caribbean, language seems to play a more important role in the storytelling. The characters actually speak to us, and not just “above” us to one another.

What was your experience being a storyteller in Chinese?

That was really a fascinating process. First I watched a lot of Chinese movies and tried to immerse myself in a lot of Chinese entertainment to try and figure out what that balance should be. We know that our guests don't get on an attraction to listen to the words, but if you get the right words in the right place then you are helping to explain the story.

We tried to locate the most significant narration or explanation with Jack Sparrow when he appears and also when Davy Jones appears. I wanted you to have your moment with Jack. Then you can move on and proceed to the action without trying to do both at the same time. So you spend your time to get that explanation and see that character up close and then you can move to the rest of the experience. So there is more dialogue than other iterations, but I think a lot of it is functional. We wanted to set up the story and make it clear.

To begin with, we really needed to establish first the voice of Jack, because it's not the English voice of the actor for Jack Sparrow. One of the decisions we made throughout the park in the “Authentically Disney, distinctly Chinese” approach was that the whole park would be in Chinese, including Pirates of the Caribbean: Battle for the Sunken Treasure, so we had to cast those voices with regional talent.

I wanted to have the ghostly voice follow you around, and establish himself as Jack. So there's a little bit of that in the beginning. “Ah treasure...that's what it's all about, mate. That's why you're here. You want to be a pirate - like me, Jack Sparrow!” So it establishes that character voice, but it's also the thing that says why you're there.

After that it's more of the story mechanics: why we are going after THIS treasure, why it's at the bottom of the ocean and what we are going to do to get it.

In many Western languages there are so many words associated with nautical and pirate activities, and these words are baked into our language. But they don't exist in the Chinese language because their relationship to seafaring is very different. We had to find the right kind of words that would work to convey the character and feel like they were the right atmosphere for the pirates. Fangxing Pitcher wrote the Chinese dialog, guests love it.

Pirates of the Caribbean evolved from an attraction into a film and now an entire land - how did it become clear that it had to be more than a ride and turn into a realm?

I think that is a direct result of the magic of the team. Basically, working with Imagineers Nancy Seruto and Ric Turner as we built the attractions, coupled with the multiplying effect of Bob Weis, president of Walt Disney Imagineering. The idea of Pirates was initially part of an Adventureland. Pirates of the Caribbean was a huge element but at some point Bob said, you know what, let's divide it up into two things. We will have the kind of classic Adventureland content in Adventure Isle and let's just allow Pirates of the Caribbean to be all the ideas it can be. That's when it really took off. We then created the complete story and place of Treasure Cove. We added water activities and canoes and such. All of that really started to make sense as a place. As ideas kept coming out, we thought we had to find a place to fit them in. I'm so happy Bob gave us a chance to make a place for all of that to happen.

Why didn't you simply import one of Disney's other Pirates of the Caribbean attractions?

Early on we felt like we needed to raise the bar. You ask any Imagineer and they are going to want to keep inventing something new, given the license to do so. This felt like a great opportunity with a brand new audience.

We did have people look at the existing Pirates of the Caribbean attractions. While they appreciated them, Chinese guests politely told us they would like something more active.

It makes sense because the films changed everything for the audience in China. They knew the movies but not the attraction. So we chose to make the adventure about the film characters. It's a brand new place and brand new adventure, but its those characters in it and so it makes sense to the audience.

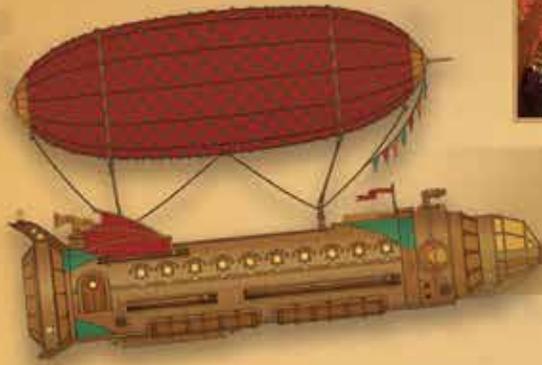
Even though I grew up with the mystique and incredible excitement of the original attractions and felt their presence baked into me, going into a brand new place with a new audience was actually kind of freeing.

Does this sense of realm design inform other projects going forward?

As far as Pirates of the Caribbean goes, it's such a great world, I'd love to explore it more. I don't know where it's going to go from here, but there is another movie coming out and who knows what happens after that. People love the pirate life and pirate world and we have plenty of imagination with which to deliver more. . . .



 **InPark 杂志 订阅网**
www.inparkmagazine.com



THE FORTUNE DIAMOND
 GALAXY WHEEL & CASINO
 MACAO, CHINA 2010



CRANE DANCE
 BANGSANG WORLD ENTERTAINMENT
 PHILIPPINES

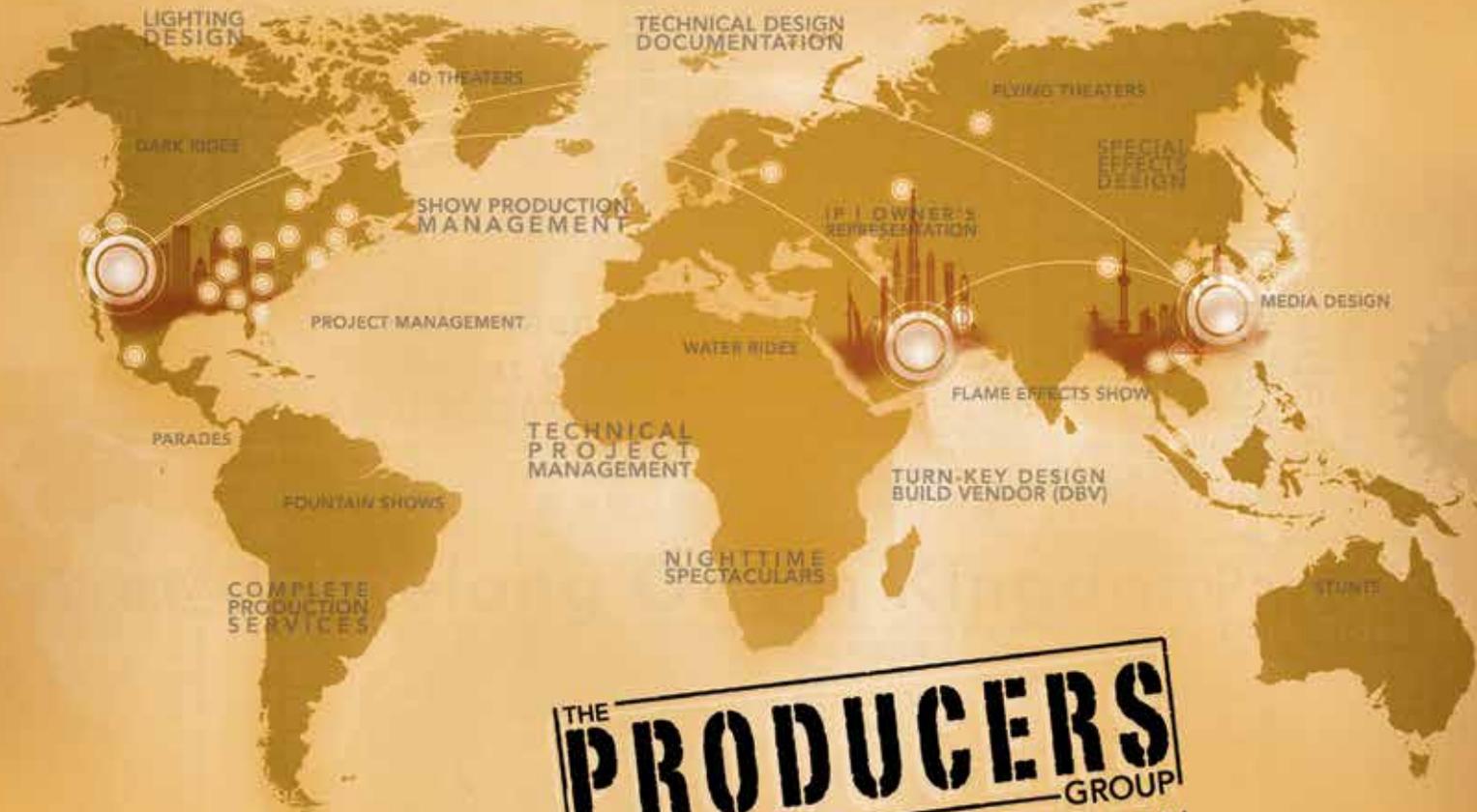


EXTRAORDINARY VOYAGES ADVENTURE DINING™
 WITH ZWILL



DABANGG STUNT SPECTACULAR
 CHILDWOOD PAGES
 PHILIPPINES

FROM PROJECT DEVELOPMENT TO INSTALLATION AND OPENING, WE KEEP YOUR HIGH-TECHNOLOGY GUEST EXPERIENCE ON SCHEDULE AND ON BUDGET. CONTACT US AT INFO@PRODUCERS-GROUP.COM | WWW.PRODUCERS-GROUP.COM



THE PRODUCERS GROUP
 LOS ANGELES | SHANGHAI | DUBAI
 THE INTERNATIONAL THEME PARK PRODUCTION COMPANY



LAGOON SPECTACULAR & MARINE MAMMAL SHOWS
 DUBAI | DUBAI MALL | DUBAI
 HONG KONG



JURASSIC PARK RAPIDS ADVENTURE
 WARRICKAL | TRINIDAD
 TANGKOR



LAKE OF DREAMS
 BANGSANG WORLD ENTERTAINMENT
 PHILIPPINES



COBRA'S CURSE
 BUNDI GARDENS
 TRAVEL SAC | INDIA

VISIT US AT THE ASIAN ATTRACTIONS EXPO BOOTH B1516

A darkride primer

Alterface looks at the evolution of dark rides

by Anja D'Hondt

For more than one hundred years, dark rides have been a staple of visitor attractions, utilizing special effects and theatrical techniques to create scenes that immerse guests into an imaginary world. During the 19th century, amusement rides like old mills or tunnels of love, where two riders in a boat floated through a man-made canal, were precursors to the dark rides and attractions we experience today.

Flumes advanced to track systems, eventually using electric motors to power cars throughout the ride. Now, instead of static scenery, digital media and new technologies have helped upgrade dark rides into high tech entertainment.

Converging shots

One of the first technologies to be integrated into dark rides was a gun concept that borrowed heavily from popular shooting galleries. A beam of light from the gun activates targets within the scenery. Sally Corporation presented the concept at IAAPA in 1986, later building their first interactive dark ride, The Great Pistolero Roundup, at Family Kingdom in Myrtle Beach in 1997.

The traditional shooting gallery also inspired us at Alterface. In May 2006 park visitors could mount a saddle at the Desperados interactive theater and shoot at characters on a large screen. Installed at several parks, the Desperados attraction allowed people to sit together and have fun, competing in a saloon-like cartoon environment.

The benefits and options of the modern dark ride

Many parks start seeing the many advantages of interactive dark ride attractions as they can be easily fit into smaller footprints, including repurposing existing spaces. Additionally, they are impervious to weather, shielding guests from temperature swings and rain.

The modern interactive dark ride is perfectly suited for IP theming and storytelling in a customized way for the park and local culture. Most rides are also designed as a team or family experience, but with individual scoring, everyone is included in the fun; everyone gets a chance to compete.

Although the majority of these attractions rely on the concept of shooting items or characters on the screen, it doesn't have to be that way. Other non-shooting rides will keep the device but configure it for an activity such as taking pictures of animals with a camera, fixing a problem with a wrench, or casting a spell with a magic wand.



These are great alternatives for parks appealing to smaller visitors or those avoiding violence. Nonetheless, the hero narrative is timeless, and guests gravitate to attractions where they can defeat the villain and save the day. A great example is Justice League: Battle for Metropolis at Six Flags, which places visitors in the middle of the action, with interactive and state-of-the-art gaming elements developed by Alterface.

The next generation

Looking ahead, there are many routes the next generation of dark rides may take. While VR and AR integration is one possibility, we see higher potential gain in creating more natural experiences for guests, and incorporating dark ride ideas into other types of attractions.

One thing we at Alterface have been focusing on for years is what we call "natural interactions," the kind of things people do under certain conditions without instruction. We started with human gesture detection and found out that things as simple as 'finger pointing' could result in many different results, even among a homogeneous population.

Whether interacting with your hand or with a device, once you turn away from the simple "click & shoot" you enter a gigantic territory of unexpected behaviors. Therefore, triggering people to do something becomes as important as detecting the very action they perform. This is the reason why Salto!, Alterface's interactive show control system, has so many vision-based sensors to detect both activity and behavior. If you want to get more sophisticated reactions of the player, you need an even more sophisticated system to track those actions and keep players focused and entertained, all the way through the attraction.

Similarly, we see great potential as dark rides get blended into other attractions as well as opportunities to showcase the ride to guests outside of the building. One elegant case study can be found at Europa-Park with the Arthur ride. The attraction, designed by Mack Rides, incorporates a suspended family coaster with the articulation and programmability of a dark ride. Although most of the attraction takes place indoors, several short segments take the ride outside and over the heads of riders waiting in line. A similar concept just opened at Dubai Parks & Resorts in Motiongate park. We suspect that the dark ride + coaster combination is just getting started in the industry, and we will see more "teaser" moments like those provided by Arthur. Provided there is the right balance between thrill and media, this is a recipe for dark ride success in the coming decades. •••

Anja D'Hondt is based in Belgium and handles PR strategy and media outreach for Alterface.

▶ Access our film catalog on nWave.com



- ✓ BREATHTAKING 4D/3D ATTRACTIONS
- ✓ THRILLING 3D/2D RIDE SIMULATION FILMS
- ✓ IMPRESSIVE 3D/2D GIANT SCREEN/ IMAX THEATER FILMS



NTH/STH AMERICAN SALES

Janine Baker
jbaker@nWave.com
+1 818-565-1101
California Office

Jennifer Lee Hackett
jleehackett@nWave.com
+1 386-256-5151
Florida Office

INTERNATIONAL

Goedele Gillis
ggillis@nWave.com
+32 2 347-63-19

CUSTOMER RELATIONS

Melanie Siberdt
msiberdt@nWave.com
+32 2 793-79-64

LEGENDARY KING COBRA®

EUROPEAN STAR AWARD
Europe's Best Waterslide Award
2012, 2013, 2014, 2015, 2016

SILVER MEDAL
2016

**THE BEST
EXTREME ATTRACTION
OF THE YEAR**
2015

**THE MOST
INNOVATIVE PRODUCT**
2013

EXPERIENCE WHAT IS NEXT!

Polin Waterparks®, WORLD'S LEADING WATERPARK SUPPLIER, WELCOMES YOU AT
IAAPA ASIAN ATTRACTIONS EXPO IN 14-16 JUNE '17

TO EXPERIENCE WHAT IS NEXT IN THE VERY NEAR FUTURE OF THE INDUSTRY.

MARINA BAY SANDS, SINGAPORE BOOTH L913

polin.com.tr      polinwaterparks


PolinWaterparks
THE EXPERIENCE