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MAGAZINE

#70 • volume 13, issue 5 • 2017  
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## Anniversaries abound

**Martin Palicki,**  
IPM publisher



The IAAPA Expo has always been a big party in many ways, but this year the celebrations seem even more special. As we've put together this issue (our 70th issue, wrapping up lucky year number 13), we realized many companies are celebrating milestones.

From the 15th anniversary of our cover story company, The Hetteema Group, to Sally Corporation's 40th birthday, there are success stories for companies of all sizes.

This is good news for all of us. While startups and new ideas are the lifeline of an industry, the stability that established companies provide is critical for expanding into new regions and marketplaces.

So while you are walking the aisles on the trade show floor in Orlando, don't forget about the decades of experience and expertise surrounding you.

And while you're there, be sure to stop by the InPark booth (#1771) – we're having a beach party and YOU'RE invited!

## Immersion and IP

**Judith Rubin,**  
IPM editor



People want to be immersed in stories and increasingly, the latest tech allows us to do that seamlessly. That seems to be what is demanded by today's IP-centric media-based experiences

What are the benefits of immersion? Guests stay longer, forget the day-to day-world, are emotionally engaged, spend more money and return more often.

Immersion is a product, somewhat intangible. Success is in the results. Immersion maintains the bubble of the experience. Is that a physical thing? A technological thing?

You can surround the guests with screens but if you also cue their brains, they can enjoy the fruits of their own imaginations. We get so immersed in our phones that we don't know whether the plane has landed, our date has arrived, or the light has changed. Why? We're part of a dialog or interface that we find compelling.

The guy texting, the teenager gaming, the woman reading a comic book have already blocked the outside world. It raises the question: What do we most need the technology to do?



**COVER:** Phil Hetteema celebrates 15 years of fantastic projects with The Hetteema Group **p 58**



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.

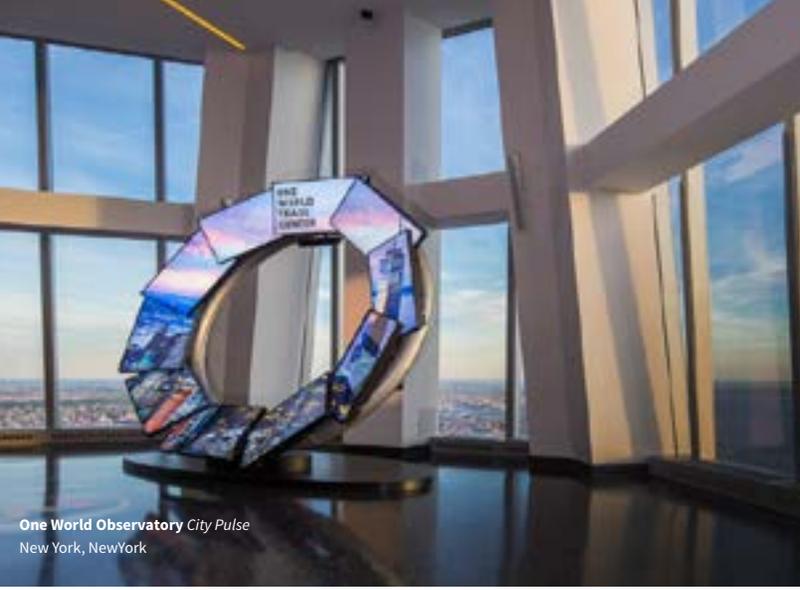
## team & contributors

|  |   |
|--|---|
| <p><b>PUBLISHER</b><br/>Martin Palicki</p> <p><b>EDITOR</b><br/>Judith Rubin</p> <p><b>CONTRIBUTING EDITORS</b><br/>Joe Kleiman,<br/>News Editor<br/>Jim Ogul,<br/>World's Fair Editor</p> <p><b>DESIGN</b><br/>Martin Palicki</p> | <p><b>CONTRIBUTORS</b><br/>Dawn Allcot<br/>Bill Butler<br/>Mira Cohen<br/>Robert Coker<br/>Benoit 'Ben' Cornet<br/>Rona Gindin<br/>Dawn Kirby<br/>Daryl Leblanc<br/>Greg Meyer<br/>Clara Rice<br/>Dr. Edwin N. Torres</p> |
|--|---|

|   |                     |        |
|---|---------------------|--------|
| ● |                     |        |
| ● | 11th Hour           | 49     |
| ● | AAA Expo            | 57     |
| ● | ADG                 | 65     |
| ● | Alcorn McBride      | 40     |
| ● | Alterface           | 45     |
| ● | Brainsalt           | 68     |
| ● | Brogent             | 41     |
| ● | Christie            | 11, 61 |
| ● | Color Reflections   | 85     |
| ● | D3D / Birdly        | 56     |
| ● | DEAL                | 87     |
| ● | Dynamic Attractions | 2-3    |

## advertisers

|                    |            |                   |    |
|--------------------|------------|-------------------|----|
| The Elumenati      | 33         | Sally Corporation | 36 |
| Freestyle Slides   | 26         | Scruffy Dog       | 16 |
| Garner Holt Prod.  | 71         | Stantec           | 18 |
| The Goddard Group  | 46-47      | Super 78          | 75 |
| The Hetteema Group | 6          | TEA               | 23 |
| Holovis            | 27         | TechFulcrum       | 30 |
| JRA                | 22         | Technifex         | 54 |
| Don MacBain        | 80         | Unlimited Leisure | 81 |
| nWave              | 37         | Vekoma            | 9  |
| Paragon            | 20         | Vortex            | 10 |
| PGAV               | 21         | Wartsila Funa     | 4  |
| Polin Waterparks   | back cover | WhiteWater        | 31 |
| Raven Sun Creative | 91         |                   |    |



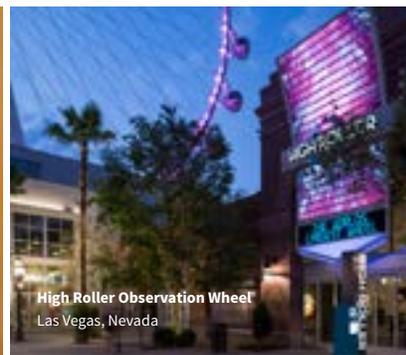
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- Leader of the pack**  
**8** Martin Palicki speaks with Andreas Veilstrup Andersen, IAAPA's new incoming chair
- Enjoy the dark ride**  
**12** Alterface shares expertise on IP and game-play • *by Benoit 'Ben' Cornet*
- The psychology of play**  
**14** WhiteWater offers more than one way to play in the park • *by Dawn Kirby*
- Riding the eye**  
**18** New CEO Rosemary Rose sees opportunities at I-Drive 360 • *by Rona Gindin*
- Fear the Fremont Street**  
**24** Las Vegas' newest themed entertainment attraction • *by Martin Palicki*
- Delight and outrage**  
**28** The highs and lows of customer emotions in theme parks • *by Dr. Edwin N. Torres*
- Recipe for a dark ride**  
**32** Jora Vision's recipe for dark ride development • *interview by Martin Palicki*
- Themed education & immersive museums**  
**34** Using tech to empower face-to-face interaction • *by Mira Cohen*
- Flying with Stantec**  
**38** Designing a new aviation-themed park in China • *by Daryl Leblanc & Greg Meyer*
- From hurricanes to Bigfoot**  
**42** nWave continues its growth in various markets • *by Joe Kleiman*
- Specialty projection screens**  
**48** Turnkey screen solutions from Strong/MDI and Eclipse Screens • *interview by Martin Palicki*
- A league of their own**  
**50** Sally Corporation celebrates 40 years of dark rides
- Year of the dog**  
**52** Cedar Fair deal shows Snoopy is good for the brand and park • *by Judith Rubin*
- Secret sauce**  
**58** The Hettema Group turns 15  
*by Judith Rubin*
- Are you being served?**  
**66** The video servers that feed media-based attractions • *by Dawn Allcot*
- Amusement park cleanup boy makes good**  
**72** Meet Geoff Thatcher of Creative Principals  
*by Judith Rubin*
- Truly, virtually, Birdly**  
**76** Birdly VR soars into Orlando for the IAAPA Attractions Expo • *interview by Joe Kleiman*
- From floats to starships**  
**78** Rando Productions and the action behind show action • *by Joe Kleiman*
- Super 78**  
**82** Two decades in business; Eight secrets of success • *by Robert Coker*
- It's a dimensional thing**  
**88** Garner Holt Productions' animatronics are making faces at the future • *by Bill Butler*
- Honoring the past, anticipating the future**  
**90** JRA celebrates 30 years  
*by Clara Rice*

# Leader of the pack

Martin Palicki speaks with **Andreas Veilstrup Andersen**, IAAPA's incoming chairperson of the board

## **W**hen and how did you first become interested in the industry?

The interest has always been there. I had a huge fascination with amusement parks as a child and young adult, but it was not until the emergence of the internet that I realized I was not the only one in the world with this particular interest. And it was not until I got my first real job, after university, that I could afford to travel the world, pursuing it as a hobby.

## **W**hat career path in the industry led you to where you are today?

I graduated from Law School in 1996 – and later added a degree in Financial and Accounting Management, because I didn't really like law that much. But it was not until 1999, after working four years at the Danish Ministry of Finance, that I got my first shot at the industry. I applied for, and got, the job as a company lawyer at Tivoli Gardens in Copenhagen. One thing led to another, and here I am, almost 20 years later. My mother still occasionally asks me when I will get a real job.

## **W**hat led you to become more involved in IAAPA?

In my first job at Tivoli Gardens, I also looked after the Danish Association of Amusement Parks, FFD. And through that, I got involved with IAAPA early on. It was also through this work with FFD and IAAPA that I realized how important it is to have a strong voice representing the industry, both on a regional and a global level.

## **W**hat led you to become more involved on the board of directors?

I worked for IAAPA, relaunching the European Office in 2008 – 2010, together with Karen Staley, the former Senior VP of IAAPA Europe (currently Senior VP of IAAPA North America Operations). Through that work I got a good sense of the inner workings of the association. I am a huge believer in IAAPA's mission, and although there is always an element of personal ambition when being involved as a volunteer, I – quite frankly – want to make a difference and give back to an industry that I love, and that has given me so much.



Andreas Andersen

## **W**hat do you think are the primary responsibilities of the chairperson?

IAAPA would be nothing without its staff. Being on the board of directors (or really any IAAPA committee) your primary responsibility is to support the people that the association employs. That being said, the chairperson's role goes a bit further, and I think one of the main objectives of the chair is to help facilitate constructive discussions on the board, and through that drive the association's agenda forward.

## **W**hat do you hope to accomplish during your time as chairperson?

Being part of an association governed by volunteers is very much a team sport, and I think it would be presumptuous to think that I, alone, can drive a specific agenda. Especially in times where there is so much going on already, from the HQ move to Orlando to IAAPA expanding into new regions and constituencies at a fast pace. That being said, I hope to help support the continued globalization of IAAPA. And I would like us as an association to work much more fiercely on embracing the sustainability agenda – an agenda I care a lot about, and that I think can have a huge impact on our industry in a few years' time.



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**What skills do you think you bring to the table for the IAAPA organization?**

Being Danish, and rather direct, I guess it is not well developed diplomatic skills that I bring to the table! Seriously, though, having worked in so many roles and capacities in the industry over the last almost 20 years, I do think that I bring a lot of knowledge with me...and passion! I really love this industry. And I really love the association.

**What parks do you most enjoy visiting?**

I guess it has changed over the years. When I started travelling and visiting parks, I was really looking for the thrills, the wows, the immersion. In other words, behaving like any other park guest. Today, I have a hard time not wearing the professional cap while visiting a park. I look at operations, signage, logistics and all the nuts and bolts. In that sense, I guess I have lost a hobby.

**What makes you say “wow”?**

I appreciate creativity. I’m “wow”ed when I experience something really unexpected or clever. It does not have

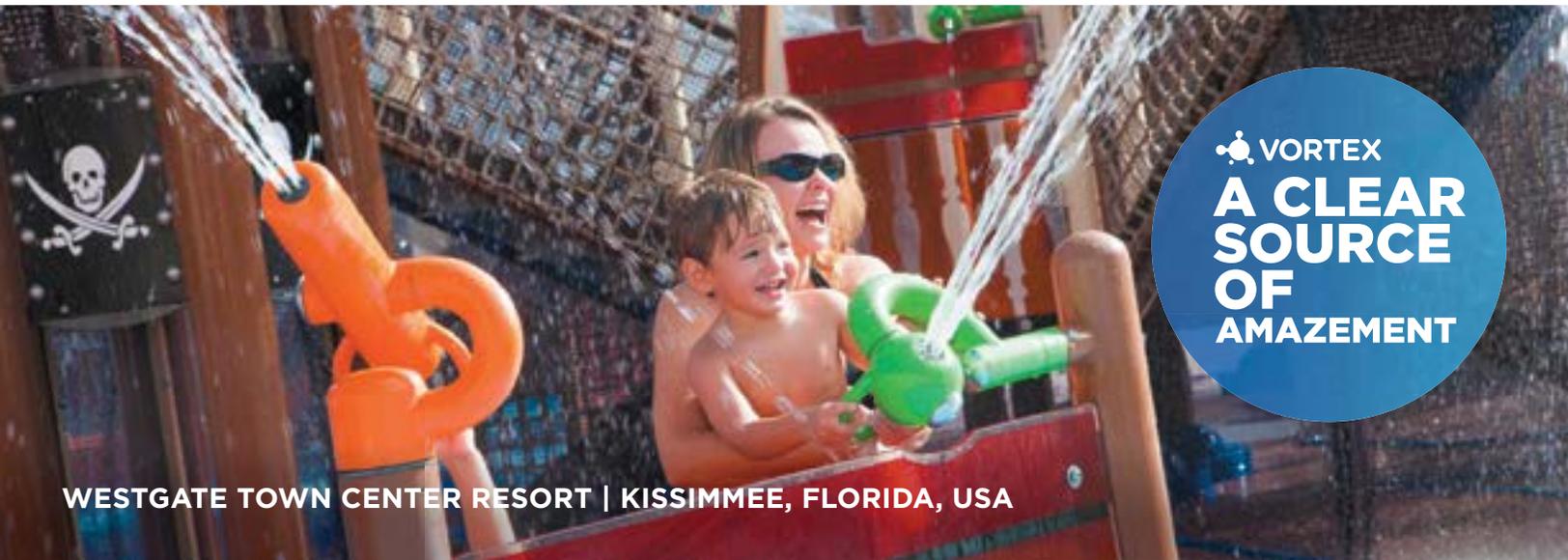
to be the biggest, most technologically advanced, most expensive or flashiest, but anything smart, with a creative or artistic flair, will win me over.

**What challenges do you see the industry facing in the near future and how do you suggest we address them?**

I think the sustainability agenda will become increasingly important, and with that I mean sustainability in the broad sense, not just the environmental. The ongoing and escalating discussions on animals in human care or the increasing importance of safety of products and services are examples of this agenda knocking on the door. As an association we can address it the same way as we address safety – sharing of best practices, education, standards, anything that can lift the general knowledge curve.

**What would the readers of InPark be most interested to learn about you?**

I am a big foodie. And therefore, an enthusiastic runner. I have to balance it, because I just love to eat. A lot. All the time. To an extent where I can almost embarrass myself. But I am pretty much a ‘what you see is what you get’ kind of guy. •



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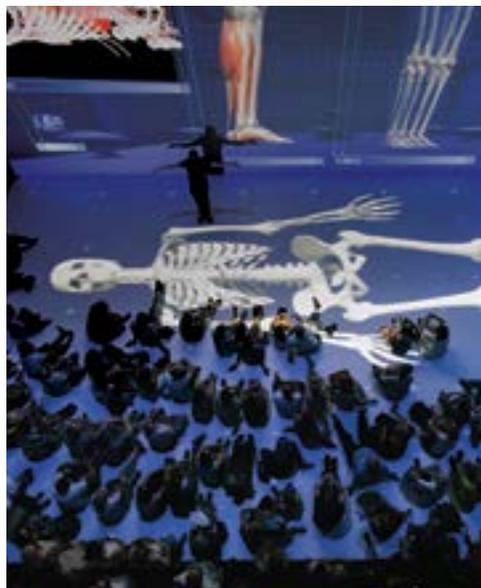
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# Enjoy the dark ride

The CEO and founder of Alterface shares his expertise on IP and gameplay for the creation of a successful interactive dark ride.



By Benoit 'Ben' Cornet

## The IP Challenge

In today's highly mediatised world, media-based attractions are gaining more traction. Visitors are craving more emotionally engaging moments and experiences they can share. An interactive dark ride represents the perfect formula for this requirement.

In the past, a cute park-branded mascot was often used as a character in attractions. And some parks stretched it by developing an entire family of characters with dedicated story and branding. This hasn't lost its appeal, but nowadays, technology allows for more sophisticated and dynamic attractions as well. With state-of-the-art storytelling tools, we can take things to the next level.

To do so, however, raises new considerations: the character must have enough dimension to 'act' during the ride, and 'interact' with the players. But costs must be kept within reach of the operator. Even with today's plummeting cost of media production, the pricetag for creating a quality, durable character and story can easily get out of hand. As a result, characters and their vocabulary often do not get beyond steel and mortar...

As the development of a new, dedicated IP is not always practicable, it is tempting to use existing characters, preferably famous ones from movies or the gaming industry. Whereas this route may be taken by larger operators that command significant budgets, it is not always within reach of the smaller parks. There may be extremely stringent rules for IP deployment at a park. Gaming IPs may offer a great opportunity for the location-based entertainment industry, but they have their own potential drawbacks: achieving meaningful



differentiation from the in-home experience is one, and having broad enough appeal for the entire family is another. And even when all this is achieved, the challenge remains to meet the IP owner's profit expectations.

At Alterface, we have taken a different approach to the IP challenge: we created a series of proprietary characters that can be slightly amended to reflect the specific requirements of each park. We invested heavily in the Popcorn Revenge® IP, an evergreen story with universal appeal yet offering parks the opportunity to add their own flavor. Our Desperados Interactive Theatre has been operating successfully around the world for the last 10 years and has been shown to stimulate significant repeat visitation. Another recent example is the Bazyliszek attraction we are building in the Polish Legendia park. The IP is based on authentic Polish folklore, and the ride takes guests on an exciting journey through the magical forests of Poland.

## Not a video game!

Compared with a game or a movie, a dark ride is all about movement and flow rather than singular actions. Shooting or interacting on a screen is not as important as the way the transitions from scene to scene are done. An effectively themed, media-based dark ride, with a good balance between theming and screens is the best guarantee of a long lifespan. The last thing you want is driving players from one scene and screen to another, resulting in a very expensive and tedious "video game on wheels" that will last as long (and as briefly) as the actual video game.

The Alterface gameplay philosophy is based on a few simple rules. Firstly, the non-linear shooting session: some can be very intense and others more peaceful, but always with a grand finale as apotheosis. Secondly, the gameplay should be suitable for all audiences of all ages, entertaining young and older visitors. The third rule is the regulation of the game. Scenes cannot be overloaded but there can also be no empty scenes, while target numbers can be adjusted based on accuracy and game level of the players. And finally, the theming and how it is implemented determines the success of every attraction. Strong themes and characters should be reflected in immersive themed scenes with animatronics, projection & video mapping, shooting and special effects.

Provided they are produced bearing those requirements in mind, interactive dark rides are one of the most effective investments a park can make. Furthermore, they have an excellent repeat business ability. From the many best players pictures we get to see on our attractions, a large portion of players are becoming very dedicated to particular rides and are motivated to keep coming back to improve their ranking.

Alterface helped create Kingdom Quest for LEGOLAND Images courtesy of Alterface.



### Avoid these three mistakes

Here are the top three common mistakes to avoid when creating a dark ride:

- Not creating a compelling experience with the right mix of media and non-media components. It is not a video game but an immersive experience with a storyline.
- Buying equipment first and then trying to design around it. The choice of ride systems is extensive and you will do much better to first get your concept right.
- Being tempted by unproven, bleeding edge solutions. Revolution very often falls short; tried and tested is a safer and more solid route.

After 16 years of dedication to media-based interactive attractions and over 50 successful interactive dark rides installed around the world, Alterface offers its know-how and expertise to the market. We want to continue fueling the progress of this type of attraction by advising customers on the best possible ride with exciting IP and gameplay for their park. This is not altruism: this is the only way for us all to remain successful and secure a great future for our industry. •

# The psychology of

# PLAY

It's not about whether an attraction is wet or dry:  
It's about offering more than one way to play in the park

By Dawn Kirby, WhiteWater West Industries

**P**lay is our first universal language. It's a primal need that speaks to our desire to participate, to explore, and to have fun. From our earliest days, we react to and learn from each other as we develop the basic skills of social interaction.

Play is the cornerstone of both amusement parks and waterparks, designed to give guests of all ages the chance to interact and create memories together. But do parks appeal to all play styles? We invite you to re-evaluate play, "because the nature of our industry tends to think that we have play covered, when there's actually more to it than meets the eye - it is why playability and play types are key factors in new product development," says Mark Weston, WhiteWater product manager and published child psychologist.

We know that there is more than one personality type; in fact, depending on the circumstances, people may display different personality types at different times. The same can also be said for play. There is more than one way to play, and each individual, while leaning towards one type, will

Adventurers like the interactivity of AquaPlay. Images courtesy of WhiteWater.



display elements of all. WhiteWater's team, who include psychologists, have identified four fundamental play styles based on academic research and their experiences. Why? Because we know that providing rides and attractions for all of the play styles increases guest satisfaction, keeps visitors in parks longer, and helps create fond memories of a day out at the park. It's about ensuring that everyone has the opportunity to play their way.

When designing parks or attractions, are you considering every play style? Does the park have something for each type? The park might already cater to the four types – but if it doesn't, there are simple solutions you can employ to boost the playability score.

Let us now examine the four types and how they translate into attractions for amusement and waterparks.

## The Adventurer

Ensuring that a park has something for The Adventurer can start by providing plenty of interactive elements, giving The Adventurer the chance to flex their problem-solving muscles. The Adventurer wants to choose his or her own path and experience a different excursion every time.

Interactive structures, which tend to abound in waterparks, are the ideal activity for The Adventurer. That's not to say, however, that amusement and theme parks can't also increase their interactive attractions. Adding a multifaceted play structure (such as WhiteWater's No Boundaries) to an amusement park or even a waterpark may be an ideal solution because of the numerous harnessed and unharnessed activities it provides. No Boundaries, for example, allows riders the flexibility to choose from climbing, zipping, sliding, and balancing adventures all in one structure and gives different age groups the chance to play together. Adventurers can spend the day picking different activities to try and figuring out how to traverse them.

On the wetter side of things, an Adventurer type visiting the park is likely to welcome the challenges of something like WhiteWater's new AquaForms product, which serves all play types with multiple levels of play decks and interactive water features.



Dreamers may imagine an adventure while on a log flume.

In terms of waterslides, an Adventurer is the type who enjoys the unknown of dropping into the dark, where the path may be unexpected. Enclosed slides, such as an AquaSphere, provide the thrills and dips that an Adventurer needs.

### The Dreamer

According to Ryan Snyder, WhiteWater creative design and development manager and AquaForms product manager, “Dreamers are typically the most under-served play type in the aquatics industry. With just a little bit of effort in design and planning, we can create suggestive opportunities to inspire the Dreamers to do just that.” That might mean creating quiet spaces for Dreamers to escape into their own imaginations or adding theming to areas that might not normally have it, such as a queue line or lazy river.

Dreamers tend to enjoy cerebral and creative pursuits that allow them to express themselves and their imaginations. Their leisure preference is for experiences that are rich with story, thematic overlay, and artistic features. For the Dreamer, a simple stick becomes a sword, an interactive water play structure is transformed into a castle, and a wave pool starts to look a lot like a pirate’s cove.

In a park, they can relax and let their imagination wander, provided that there are opportunities to do so. The Dreamer may enjoy floating down a lazy river, creating a world of their own on a RainFortress, or imagining an adventure on a log flume.

### The Challenger

Challengers want to test the limits of their capabilities and encourage others to do the same. They are driven to succeed and will apply themselves to an activity in the effort of improving their time or score. In a park, this means repeating the same ride or attraction to gain satisfaction from learning how to incrementally improve each time.

It’s not hard to think of rides that will appeal to the Challenger. A mat racer slide that displays everyone’s times at the end will give this play type the chance to see their time, and those of their friends, spurring them to best it. A skill-based attraction, such as a WhiteWater FlowRider, creates the opportunity for a Challenger to want to improve their surfing proficiency by attempting the surf simulator again and again.

Thrill slides, such as the Abyss or Boomerango from WhiteWater, or a water ride like WhiteWater’s Shoot the Chute, give Challengers the dramatic speed and height they seek in an attraction.

### The Socializer

Socializers want to spend time with family and friends. They value interactions with other people. Their fun is heightened by being able to relive experiences and talk about all the feelings an experience created for the participants.

Rides and attractions that can be simultaneously shared - either as a participant or a spectator - rate high for the Socializer. Family raft rides, especially where riders can

Challengers enjoy thrilling rides like Boomerango.



see each other's faces to watch reactions, are a big draw for Socializers. Wave pools, lazy rivers, and river raft rides, which give Socializers the chance to talk and pass the time, also create ideal scenarios. And of course, interactive play structures - such as an APX or AquaCourse from WhiteWater - also create a great platform for social interaction and can help encourage intergenerational play, providing an activity for different age groups to interact as part of the experience.

Do your attractions check all of the play type boxes? Ride mix considerations aren't just about meeting the needs of different demographics, you also have to plan for different play types. Curious about your own play type? Take the quiz at [campaign.whitewaterwest.com](http://campaign.whitewaterwest.com) to find out where you rank, then register for the full report, which will help you audit your play type mix and learn how to apply these insights to your park.

Be sure to visit WhiteWater, booth #2240, at IAAPA to learn more about the different play styles and products which can help meet the needs of the types you may be underserving. •



Socializers like sharing their experience with friends in a lazy river.



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# Riding the Eye

## New CEO Rosemary Rose sees big opportunities at I-Drive 360

by Rona Gindin

As Rosemary Rose steps into the position of CEO at Orlando's I-Drive 360 complex, a polished new retail and dining facility with a handful of ticketed attractions, she is switching from being a small fish in a big pond to a big fish in a small one. After many years with two of the area's hospitality giants, the earnest executive now heads up one of the market's more ambitious mid-level tourist draws. She says the still-expanding tourist facility is part of a desirable niche.

"People come to Orlando for the big boys, Disney and Universal, and we acknowledge that," she admits matter-of-factly. "Initially, they do not come here to ride the Coca-Cola Orlando Eye," I-Drive 360's iconic attraction. "We want to change that by offering a half-day park experience that is fun and doesn't break the bank." While a one-day theme park visit for two people can easily cost more than \$300 for tickets, food and parking, she notes, I-Drive 360 offers smaller yet compelling activities at a far lower price point.

Rose brings to the complex a fitting background. She was born and raised in Florida – "I was actually at Disney

World on opening day as a young child," she recalls – and climbed the corporate ladder at major local enterprises including Disney and Darden, the restaurant company. During those years, she worked in finance, marketing, menu operations, merchandising, and food and beverage. Her most recent major position was seven years as the chief operating officer of Strayer University. "I believe my background helps make me uniquely qualified to understand who the I-Drive 360 guest is and what that person might be looking for," Rose says.

### Mix and location

Opened in spring 2015, I-Drive 360 is a \$250 million, 19-acre destination that is best known for the Coca-Cola Orlando Eye, a 400-foot revolving observation wheel that looks like an amusement park Ferris wheel but is far more pampering. Visible from great distances, the Eye invites guests into its 30 air-conditioned cars – with 10 panes of glass apiece – for a 22-minute revolution that reaps 360 degree views of Central Florida. The Eye is steady, with no swaying, and each car is equipped with a tablet for interaction plus audio and visual effects.

The Eye shares a ticket office and property with other attractions, and tickets are sold both a la carte and in bundles. A Madame Tussauds wax museum and the SEA LIFE Orlando Aquarium are both owned by Merlin Entertainments, which also owns and operates the LEGOLAND Florida park in nearby Winter Haven. Other investors are behind the Skeletons – Museum of Osteology and Arcade City, additional sizeable draws. Merlin Entertainments, which owns the London Eye, operates the Coca-Cola Orlando Eye for its owners, who also own I-Drive 360 at large: Paul and Dayssi Kanavos and Adam Raboy of Flag Luxury Group, together with Brett Torino of The Torino Companies, and Chuck Whittall of Unicorp National Developments.

Beyond the attractions, I-Drive 360 is made up of restaurants, entertainment venues and stores, plus vast public spaces that are used for public and private events. The property is an easy walk, or trolley or taxi ride, from the Orange County Convention Center (the nation's second-largest convention center and location of the annual IAAPA Attractions Expo) and the many hotels surrounding it.

Since I-Drive 360 came of age during the social media boom, many of its tenants cater to travelers of the modern age. Inside the SEA LIFE Aquarium, for example, fish tanks were designed with indents meant for visitors' heads; guests simply duck down, pop their faces into these cleverly integrated nooks, and smile while friends or family members snap photos. The wax museum – one of two dozen around the world – has always been ripe for photos, but now that most customers have smartphones, the realistic models of, say, Hollywood A-Lister Brad Pitt and locally based basketball star Shaquille O'Neal, are more likely to show up on Facebook or Snapchat. Even some I-Drive 360 restaurants cater to the Instagram crowd. At Sugar Factory, an ice cream restaurant with food and a candy shop, sundaes meant for groups to share are delivered with sparklers. The Mexican restaurant Uncle Julio's serves sweets inside a chocolate piñata that guests are invited to break open as it swings from a hook. Video social media posts are common.

Many international travelers come to town for 10 days or two weeks, Rose reports, and they often choose I-Drive 360 as their main destination for the day, since they have plenty of time for theme parks also. "Families with young children might go to a waterpark during the day, then come over to see us around 4 or 5 p.m. They'll eat dinner at a neat restaurant, ride the Eye, or maybe buy a cluster of tickets so they can visit the wax museum or aquarium, then go home. If they have teens or kids in their 20s with

them, they'd do the same museums, but maybe come later and have dinner afterwards, even take in some live music."

### The competition

I-Drive 360 is far from being the only multi-concept, Tier 2 attraction in the area, but it is the most talked-about as 2017 draws to a close.

Small and mid-size attractions are big business in Orlando. After all, 68 million people visit the destination each year. Theme parks, conferences and conventions may be the reason most folks buy their plane tickets or gas up their cars. Once they're in the tourist area, though, out-of-towners have plenty of hours to seek out less-pricey, easier-to-reach attractions. Most of these options take two to four hours to visit and lack mammoth, expensive parking lots. These range from oddity museums to indoor go-kart racing or laser tag, from old-fashioned amusement parks to putt-putt courses. The vast majority, like I-Drive 360, are located on or near a grand strip called International Drive, referred to locally as I-Drive.

I-Drive 360 is just a bit north of the similarly conceived Pointe Orlando, a multi-level facility with a multiplex plus clubs, restaurants and designer goods. Its Main Event arcade and café with a virtual-reality element joined the line-up last year. Pointe Orlando has had its struggles at times, despite being even closer than I-Drive 360 is to the city's convention center and convention hotels.



Rosemary Rose  
Opposite: I-Drive 360's iconic attraction, the Coca-Cola Orlando Eye. Photos courtesy of I-Drive 360.



Three other newbies are going for the same customers. To the north, a \$500 million, 14-acre entertainment complex called Skyplex Orlando is scheduled to break ground soon. It will include an indoor theme park with three thrill rides – one claiming to be the tallest roller coaster in the world. Predicted opening: 2019. Its developers, Joshua and David Wallack, are also engaged in building the Hollywood Plaza Entertainment Complex, with a big-dollar Circo restaurant, a Hulk Hogan-themed store and an 880-space parking lot. Those will open incrementally through 2018. The Wallacks already own Mango’s Tropical Café, a large nightclub and event venue. In the same area, another cluster is home to Kings Bowl, a bowling alley with cocktails and restaurant food, as well as several large restaurants.

That’s just the new development. Elsewhere on International Drive, Fun Spot and Magical Midway draw families with classic thrill rides. And a host of one-feature vendors beckon with escape rooms, dinner theaters and a host of other tourist-gear storefronts.

### ‘Bring all good ideas’

Given the amount of competition, despite a strong lineup of tenants and a central location, I-Drive 360’s future success is not a given. Rose will need to embrace and effectively market what she inherited, and expand the offerings wisely. After all, travelers have plenty of other choices for their half-day entertainment.

Rose expresses confidence that I-Drive 360’s foundation poises it for success. “Extreme high-intensity thrill rides won’t be for everyone,” Rose points out, referring to some competitors. “You’d be hard-pressed to say that the Orlando Eye, aquarium and bone museum don’t work for everyone. My mother is not going to go on a thrill ride, but she would definitely ride the Eye, she would definitely go through the aquarium. I think that’s the difference.”

The 56-year-old is poised to make her charge that much more attractive. The main parts of I-Drive 360 are essentially built out, but Rose sees plenty more opportunity. “We have three undeveloped pads totaling 48,000 to 50,000 square feet,” she says. “In addition, pads right behind us are parking lots but don’t need to be. We have aggressive plans to make use of our space.” Some of that land is spoken for, she notes, saying lease negotiations are underway, but that does not shut out newcomers with on-target ideas and resources. In fact, a small trackless kiddie train recently started up because a kiosk suggested adding it. “Bring all good ideas and our team will vet them to see how they fit,” Rose encourages innovators.

One slice of that opportunity may be the sizeable courtyard at I-Drive 360’s center, which has lush



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waterscapes and a dancing fountain and hosts events. “I love the courtyard,” Rose says. “It’s a beautiful ... a beautiful piece of grass. I look at it and say, ‘Ooh, what else could that be?’” For now, she’s eyeing additional events, “You know, maybe every Sunday afternoon I-Drive 360 will do X.” Its events, such as a Latin fiesta held in the northeast parking lot, attract as many as 5,000 people, providing opportunities for food and beverage, telecommunications and entertainment sponsors and purveyors. Rose is even open to the idea of capitalizing on the “terminal building” – the cavernous ticket office. “When you walk in, there’s not much going on,” she admits. For now, she hints at the addition of “some special greeters from a thematic standpoint that will better connect guests to their options as they walk in the door.” Does that mean costumed characters? She didn’t rule it out.

Private events are a natural add-on business for I-Drive 360. One favorite venue is a secluded room near where riders load on to the Eye. “We have a very private space for up to 100 guests in our Sky Lounge on the ride platform. It has a catering kitchen,” Rose notes. That’s only one of many venues, and enhancements are on the

way. “I think we’ll see expansion in terms of special events for convention guests,” Rose speculates. “We’re designing options that I call pop-up and permanent, plus we can make better use of our indoor and outdoor event spaces.”

### Florida pedigree

Rose is also savvy enough to know that sometimes competition is helpful, that a variety of similar destinations can reap a larger influx of potential customers. “With more of a mix of quality offerings, all boats will rise,” Rose predicts. “It’s a positive when there are quality opportunities for all of us. This part of International Drive is almost like a glove that fits around the big theme parks.” •



*InPark is pleased to welcome new contributor Rona Gindin (rona@ronagindin.com), who writes about tourism, business, travel, restaurant and lifestyle issues. Her work has appeared in Zagat, foodnetwork.com, Brides, Parenting, Endless Vacation and other publications and websites.*

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# Fear the Fremont Street

Las Vegas' newest themed entertainment attraction combines a popular IP with technology and immersive environments

by Martin Palicki

Leading up to the opening of the new Fear the Walking Dead Survival attraction, the most common question seemed to be: What exactly is it?

It was a fair question. Prior to its unveiling, developers and owners were tight-lipped about what was hidden inside the 10,000 square foot space on Fremont Street in downtown Las Vegas. Now that it's open, the challenge lies in accurately describing it.

At its core, Fear the Walking Dead Survival is a walk-through attraction that combines highly themed sets, brief, actor-led experiences, haunted house elements and a simulator ride – all comprising a new platform for experiencing the world of the TV show in a new and visceral way. Triotech licensed the brand from AMC, producer of the “Fear the Walking Dead” TV show (a spin-off and prequel to the popular “The Walking Dead” series) and created the attraction based on components from specific episodes in the show.

However, it's not fair to parse the attraction into those components. It's really a fully integrated, immersive

experience. In other words, the whole is greater than the sum of the [body] parts.

Triotech, a Canadian company most widely known for its simulator rides and games designed for FECs and theme parks, developed the idea for the experience nearly two years ago. “Fear the Walking Dead is characterized by strong storytelling elements as well as action and thrill,” explains Triotech founder and CEO Earnest Yale. “These are also the key elements that make a top-notch attraction and therefore we thought this would make a superb basis for our next design.”

After creating the concept, Triotech sought an operational partner to help develop the attraction. They identified Fremont Street Experience, which operates the SlotZilla zip line in downtown Las Vegas, as an ideal partner and began negotiations.

Triotech designed the entire attraction - each room, storyline, gameplay, software and the technology - in accordance with AMC's intellectual property. Triotech says the process hinged on creating an experience that would

put guests “in the show” – cast into the world of Fear the Walking Dead. Because the series is built upon a narrative of mystery, uncertainty, and psychological elements, the objective was to replicate this atmosphere and remain true to the brand. The core gameplay systems and overall design were handled in-house by Triotech and certain other specialties such as fabrication were subcontracted.

Triotech maintains an interest in the project (similar to a revenue-share mode) and it’s the type of vendor-operator partnership the company is committed to pursuing. “It is important for Triotech to remain on the cutting edge. Attraction ticket sales provide a steadier income stream than projects and allow us the resources to develop the next concept and technology,” says Yale. “The key is having a balance between development and operations.” It’s a business model that appears to be gaining popularity in the industry. When a vendor becomes an operator it generates an obvious income stream diversification for them but also provides a testing ground for new ideas and concepts (think: Mack Rides - Europa Park).

### Experiencing the Dead

After purchasing a timed-entrance ticket, guests are led in groups of 12 into an environment designed as a militarized school campus. There, they are guided by actors through a series of rooms and activities including body scanning, decontamination, a few escape-room-style puzzles, a simulated elevator experience and haunted house maze.

All this leads up to the experience finale, where guests don 3D glasses and board a “transport vehicle” that will whisk them away to safety. Two rows of seats are placed back to back, so six guests are looking outside of the left side of the “vehicle” and six guests look out the right side. In front of each group of guests stretches a 10’x25’ screen. The seats are on a motion base and they rock and shift enough to enhance the experience but not so much as to require belts or restraints. This adds to the urgency of the storyline and also facilitates a quick load/unload process. Guests pick up themed weapons to defend themselves from the Walking Dead who are attacking their vehicle.

### Design & production process

Triotech chose to sub-divide the experience in zones. Each zone has its own situation and psychological signature: Expectation, Unknown, Stress, Threat, Danger, Fear, Fight and Escape. They used those concepts as keys to designing the experience and determined that a crescendo approach would be best.

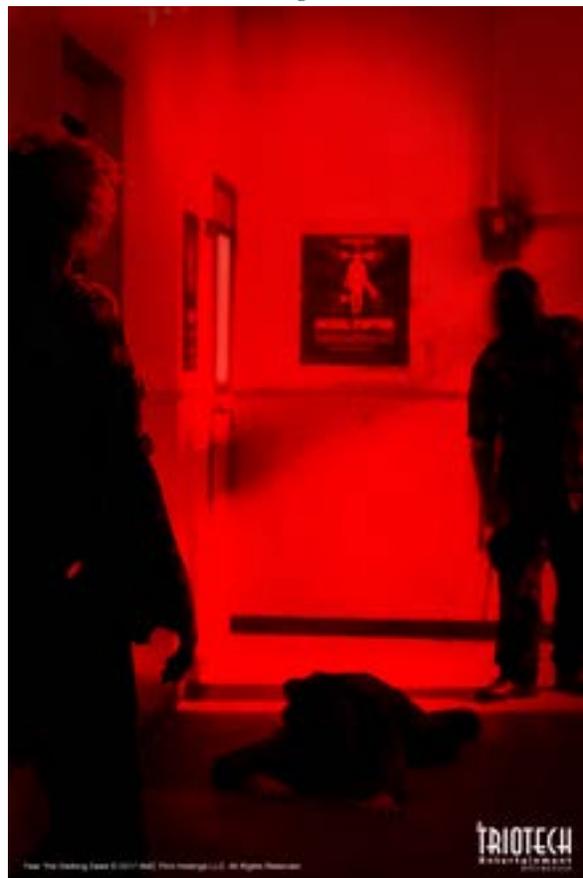
The team constructed the entire attraction at their home office in Montreal. The proximity to the creative team,

the engineering group, software specialists and all others involved in the design allowed major adjustments as well as fine-tuning of details. It also made it easier to adapt the experience after testing with focus groups.

“The biggest challenge was ensuring flow and a steady throughput,” says Yale. “We had to design so that not only the experience would be fun but that people would spend a precise amount of time in each room or stage of the attraction.” Triotech accomplished this with a combination of live actors, technology, and storytelling.

Fear the Walking Dead Survival has been compared to an earlier, ground-breaking attraction that was popular in Las Vegas: Star Trek: The Experience, which ran at the former Las Vegas Hilton from 1998-2008. Both rely on IP-driven, highly themed walk through experiences punctuated with technology and entertainment components, all enhanced by talented actors. Fear the Walking Dead Survival actually hired a veteran of the Star Trek attraction to help coach the new team on the importance of developing their character and creating the best guest experience possible.

The present attraction benefits from advances in technology that enhance immersiveness. Unlike the Star Trek attraction, all of Walking Dead’s media content is



digital, and so in addition to being able to tweak actor performances to enhance and improve the attraction over time, the media content can also be changed out easily. This provides Triotech with the flexibility in the long run to change or update the storyline to drive repeat visitation.

### Why Vegas

Star Trek: The Experience opened when Vegas was still more or less in a period of identifying itself as a family destination, with themed resorts, attractions and waterparks. The city largely drifted from those plans in the early 2000s as it refocused on luxury experiences and high-end shopping. Today, Fear the Walking Dead Survival might be representative of another shift in Vegas – the shift toward one-of-a-kind experiences that complement gambling and shopping, such as the High Roller observation wheel and zip lines on Fremont Street and at The Rio.

According to Yale, the development of themed entertainment attractions around the world will continue

to increase for the foreseeable future. He sees two reasons for this growth. “First, guests are getting used to more ‘immersion’ in their entertainment experiences. Second, entertainment itself is being integrated into other experiences, such as shopping,” explains Yale. “In particular, tourists flock to Las Vegas and they are looking for more than just gambling. They are looking for shows and experiences that they can’t find elsewhere.”

That doesn’t mean Vegas is the only spot where such an attraction could work. Yale confirmed that Fear the Walking Dead Survival can be opened in other locations, subject to AMC’s approval. For the time being, however, Fremont Street will remain home to this innovative attraction that nearly defies explanation. “Part of the value is the mystery,” explains Yale. “To fully immerse guests in the world of Fear the Walking Dead, it’s helpful if they are a little unsure and uneasy about what they are about to experience.” •

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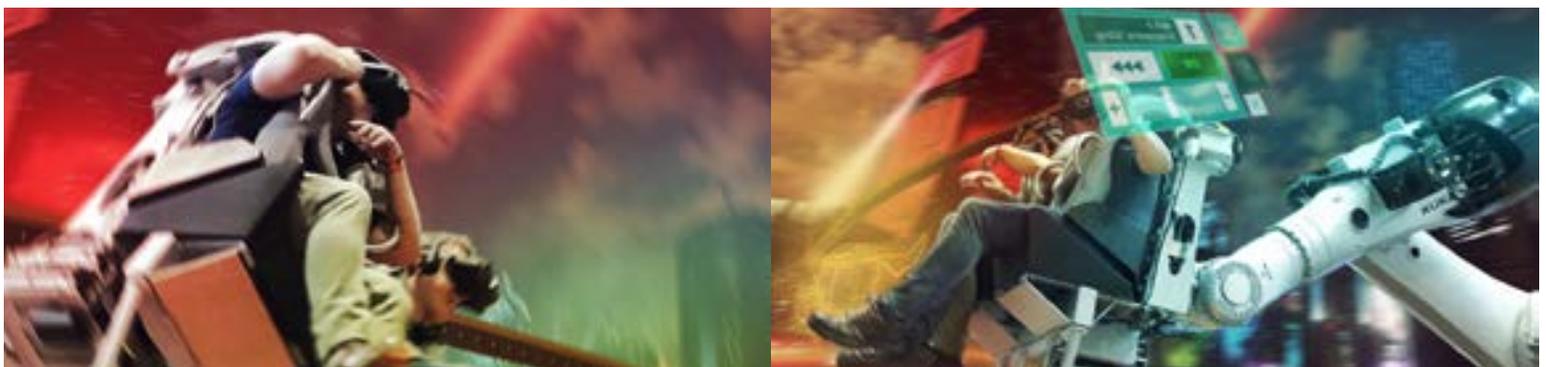
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# Delight & Outrage



The highs and lows of customer emotions in theme parks

by Dr. Edwin N. Torres

Theme parks constantly strive to improve the customer experience. In order to measure their effectiveness at meeting customer needs, they often employ customer satisfaction surveys. These tools help managers determine customers' attitudes in general - and more specifically, their levels of satisfaction and dissatisfaction. In recent years, it has been suggested that examining the extreme emotions of delight and outrage might be a better approach to understanding the customer experience. Prior studies defined customer delight as an emotion composed of joy, exhilaration, and thrill<sup>1</sup>. Beyond understanding the meaning of customer delight, it's imperative to understand what delights (and, alternatively, enrages) customers in the theme park setting. We are assuming that theme park operators would naturally prefer transporting their guests to a state of "joyful and thrilled."

Accordingly, earlier in 2017 a research team - consisting of myself, Dr. Ady Milman and Ms. Soona Park - engaged in a systematic effort to ascertain the main causes of customer delight and outrage within the theme park setting. We focused our energies on the Top 20 Theme Parks in North America, as set forth in the annual TEA/AECOM Theme Index, which ranks parks by attendance.

Turning to TripAdvisor, we examined customer feedback for each of those top 20 parks, with an emphasis on extreme comments (5-star and 1-star postings). Using a qualitative software package, we analyzed more than 6,500 TripAdvisor posts for information. Keywords and patterns were identified signifying "delight" and "outrage" - and today we're happy (delighted, actually) to report some of the main themes we uncovered.

## Delight

Delighted guests used many words to describe their theme park experiences. For example, keywords such as "ride," "roller," "coaster," and "show" rose to the top of the word count. These words all fit within the theme of a theme park's core product, thereby highlighting the critical nature of these attractions in order to delight visitors. Words such as "great" and "fun" stressed the positive guest experiences. Another theme we discovered throughout our research relates to the emotional component of the guest experience - with the prominence of such words as "love" and "amaze."

In many cases, customers were delighted with lower-than-expected wait times, or by the combination of

<sup>1</sup> Kumar, A., Olshavsky, R. W., & King, M. F. (2001). Exploring alternative antecedents of customer delight. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 14, 14-26.

their planning efforts and technology making it possible to reduce their personal wait times. This trend was evidenced by multiple posts containing the term “fast pass” and using the word “line” in the context indicated.

The traveling party was also relevant to a guest’s delightful experience with words such as “family,” “kids,” and “little” among the most frequently written. Furthermore, for many adult guests, the theme park served as a magical escape from adulthood and an entry into a fantasy world reminiscent of their childhood dreams.

Seeking to uncover the reasons behind these themes, we engaged in root cause analysis. This analytical procedure entails asking “why” (typically five times) until the root cause of an occurrence is revealed. Delighted guests expressed positive emotions, a favorable sensory experience, limited wait times, and positive value perceptions. Some of the root causes behind delight included: a quality core product (i.e. rides, shows, and attractions), favorable customer-to-customer interactions, quality food and beverage, a well-designed and maintained servicescape (i.e. physical setting of service), pricing decisions, and customer demand and park admissions policies. These four factors are critical to any theme park operator wishing to delight their customers.

### **Outrage**

The findings for outraged guests were also enlightening. Just as the core product of the theme park serves to delight many guests, failures with the main attractions of the theme park seem to enrage customers. Words such as “ride” and “show” were often accompanied by the word “down” (or some variation indicating a dysfunctional, decaying, or closed attraction). Additionally, several words associated with waiting, such as “wait,” “time,” “hour,” or “long” were discovered in many postings. Wait times have been an endemic problem for the theme park industry. Not only are waits a problem, but simply the perception of overcrowding can be problematic for the guest experience.

Negative customer-to-customer interactions were also noted among enraged guests via their online feedback. Multiple guests stated negative value perceptions with words such as “money,” “ticket,” “pay,” and “price” rising to prominence. Equally problematic were negative interactions with the park’s employees - with words such as “staff” and “service” among the most frequently mentioned by outraged guests.

After applying root cause analysis, we uncovered some of the main reasons for outrage among visitors. A low

quality, dysfunctional, closed core product (i.e. rides, shows, and attractions) was one of the main causes of customer outrage. Similarly, low-quality food and beverage, and poor maintenance and upkeep, were also to blame. Overly aggressive pricing decisions caused negative value perceptions among visitors. Poor service could be attributed to various employment decisions including training and working conditions. Extremely high levels of customer demand as well as park admissions policies were also found to be causes for overcrowding and long lines which ultimately enraged customers.

### **Response and emotional appeal**

Having obtained word counts for the most frequent catalysts of customer delight and outrage, there are some important courses of action that can be undertaken by the industry. Perhaps one of the most relevant implications relates to measurement of guest experiences. By revealing key themes associated with customer delight, managers can develop specific questions (via survey method) to assess whether their customers are delighted or outraged.

Another important finding relates to having good, well-developed, well-maintained and functional attractions - which generate delight. In contrast, underwhelming and outdated attractions can generate the opposite effect. Therefore, managers should pay close attention to the design of new and creative attractions, and the renovation or replacement of those that are no longer delighting customers.

Throughout our analysis, we discovered that many guests relate the theme park experience to magic, fantasy, and the nostalgia of childhood. In light of this, it becomes critical to appeal to guest’s emotions via the park’s marketing campaigns, its theming, attractions, and staff interactions. Furthermore, creating opportunities for guests to interact with one another can further stimulate delight.

### **Avoiding outrage**

In addition to generating delight, theme park operators should avoid enraging their customers. In this regard, the findings of our study shed light into some of the guests’ hot buttons in the theme park setting.

The park’s pricing and value proposition are among the hottest of the hot buttons. However, theme park operators need to generate enough revenues to sustain their operations and earn profits. Perhaps a strategy to deal with poor value perceptions is to create more packaged experiences with greater inclusions despite more elevated prices. Future studies further assess the role of customer demographics and segmentation in value perceptions.

In our fast-paced society, people seldom desire to wait. Although this might not come as a surprise, outraged customers noted waiting, queues, delays, and overcrowding as some of the top problems. Theme parks have engaged in efforts to reduce wait times via virtual queues, and enhanced queue design among others. These investments in queue technology and design can ultimately be beneficial in minimizing guest outrage.

Rude staff and poor service also are likely to generate outrage among customers. Thus, theme park operators should seek to detect the signs of outrage among customers, and correct the causes among staff (through training and other means).

Of particular concern to our research team was that many of these negative postings on TripAdvisor had received no response post from a park representative. Authentic and personalized (as opposed to generic) responses to customer problems can turn outraged customers into delighted ones. An additional suggestion

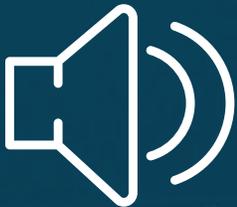
for theme park operators, therefore, would be to involve their consumer analytics divisions in performance analyses similar to the one employed in this study and compare the results to their competitors in order to ascertain strengths, weaknesses, and best practices.

More detailed findings from this study have been submitted and are awaiting review in the Journal of Hospitality and Tourism Insights. •

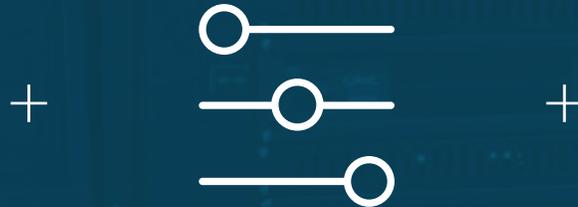


*Dr. Edwin N. Torres (Edwin.TorresAreizaga@ucf.edu) is an Assistant Professor at the University of Central Florida, Rosen College of Hospitality Management. Prior to his current role, Dr. Torres received a Ph.D. from Purdue University. His research, which focuses on consumer psychology, has been published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

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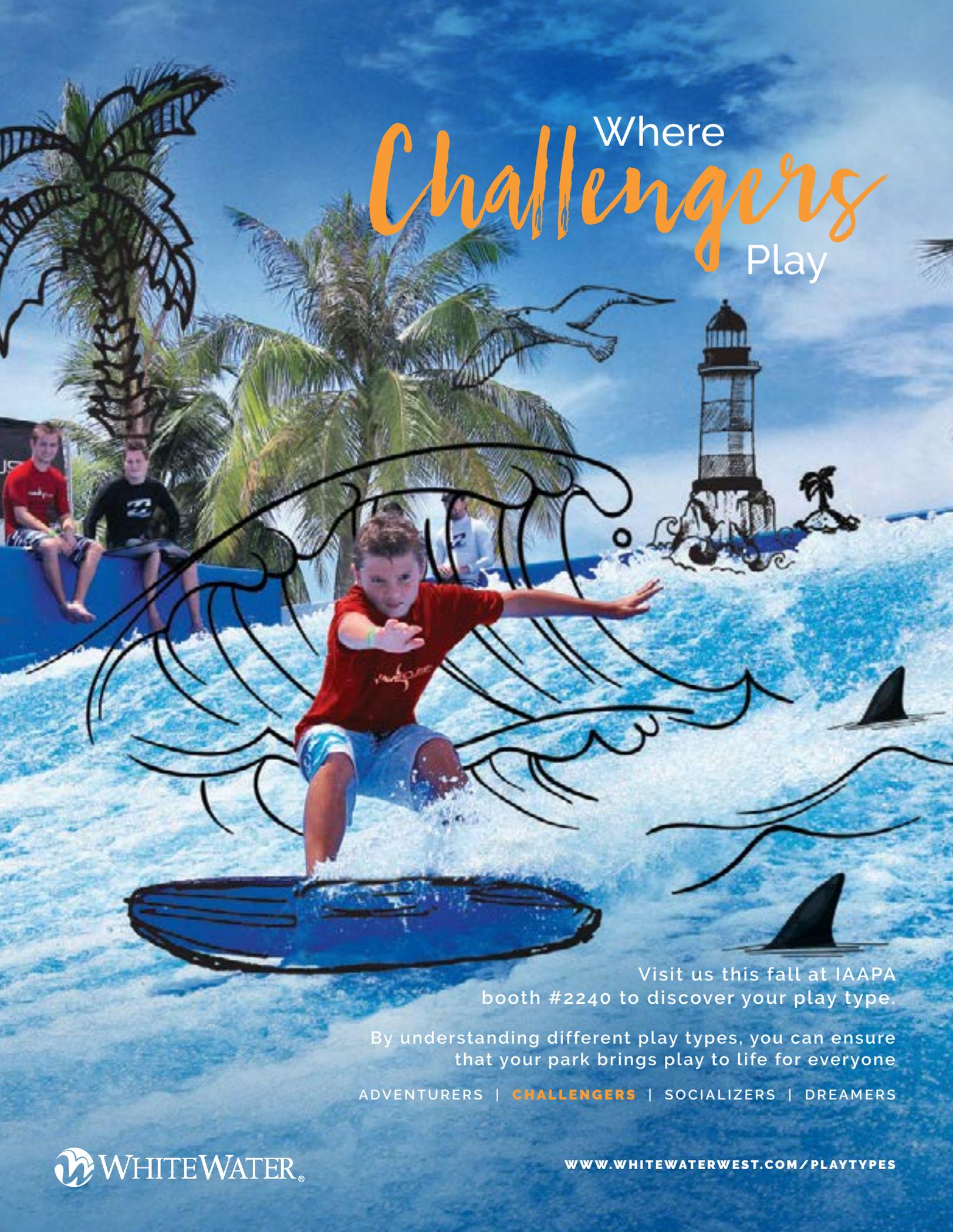


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# Recipe for a dark ride

Themed attraction experts Jora Vision talk about dark ride development

interview by Martin Palicki

**D**utch creative firm Jora Vision specializes in creating highly themed attractions for theme parks and has been involved in dark ride projects all around the world. Two of their dark ride attractions, Arthur Adventure 4D and the Raving Rabbids Time Machine, both for Futuroscope Park (France), received Thea Awards.

Jan Maarten de Raad started the company in the 1980s initially selling theming for retail stores and restaurants. Soon, the company founded a design department and expanded into theming and fabrication for theme parks, zoos, FECs and museums. Today, designing and building dark rides has become one of Jora Vision's core strengths as the company works on projects around the world.

InPark spoke with Jora Vision to find out more about the company's philosophy on dark rides.

## **What are some things parks and operators should know about dark rides, and planning for dark rides?**

*Robin van der Want, Project Development Director:*  
Dark rides give parks the opportunity to tell their own unique story and offer a compelling experience that can be enjoyed by the entire family, together.

A great dark ride tells a great story, and tells it well. We are storytellers, and designing and building dark rides is one of our core strengths. There are many components involved. Dark rides incorporate not only scenic decor, but

also sound, lighting, visual effects, projection, music and a ride system. The list also often includes animatronics, set pieces, show action equipment and custom seats.

Creating dark rides can be a challenging exercise due to the many components and disciplines involved. It requires close collaboration with the client and seamless teamwork.

It's vital to have a strong network of creative collaborators and partners. With those partners, we can form teams to realize a client's vision, and we can also create turnkey concepts and products for dark rides. Recently, Jora Vision partnered with Simworx for a new version of the Immersive Tunnel product that we named "The Curse of Blackstorm Bay."

## **How does Jora Vision approach dark ride design?**

*Simeon van Tellingen, Creative Director:*  
At Jora Vision we have three company rules for creating a successful dark ride.

The first rule is to balance the components. Similar to cooking a good meal, the recipe must be right and ingredients balanced. For instance, it's out of balance to try to create a ride based on one piece of technology - even if it's the ride system. If there is not enough care and budget for the other ingredients like sound or special effects, the ride system and experience will disappoint.

A scene from Jora Vision's Raving Rabbids Time Machine dark ride at Futuroscope Park in France.

Opposite: A scene from the new Bazylyszek dark ride currently under construction at Legendia park in Poland. Images courtesy of Jora Vision





In our approach we allow the attraction's story to be our guide and become a recipe for balancing the other components. That is why we always advise clients to create a design first, from which decisions can be made on allocating budget for specific ingredients.

The second rule is to create a clear story. Every element designed in the ride should support the story and concept. Many dark rides have complicated storylines. We believe there should always be a clear reason why the visitor is invited to participate in the experience. Layers of

backstory can always be incorporated into the scenes, but the main reason and concept of the attraction should be very clear and understandable by every target group.

The third rule is to ensure all the ride components are seamlessly integrated. A successful ride blends show sets with media content, and all of that is reflected in what is felt, heard and experienced in the ride vehicle. A dark ride is a theatrical experience and should be considered as such.

**What are some of your upcoming projects?**

*Robin van der Want:*

Currently Jora Vision is working on several dark ride projects. The first one to open will be the Bazylyszek in Legandia park (Poland), which is a collaboration with Alterface, scheduled to open in March, 2018. Other exciting dark ride projects are currently in the design phase and unfortunately still confidential – but we hope to share more announcements very soon. •

**For more information on Jora Vision and their dark ride projects, visit [www.joravision.com/dark-rides](http://www.joravision.com/dark-rides). To set up a meeting with Jora Vision at the 2017 IAAPA Attractions in Orlando this November, contact Robin van der Want, [robin@joravision.com](mailto:robin@joravision.com)**



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# Themed education and the immersive museum

Using tech to empower face-to-face interaction

by Mira Cohen

At the Reagan Presidential Library, we like to say that if we can engage and excite students, then we can educate them. That's the idea behind the Situation Room Experience, a 90-minute, fictional foreign-policy crisis simulation for 20-53 students. We take students, assign them roles, then plunge them into a real-time crisis in which their decisions change the outcome of the narrative. Is this an experience they can get in a classroom or at home? So far, no. And that's the point.

The intersection of themed entertainment and interactive education is emerging now at museums around the country like never before. These experiences are firmly grounded in the meaning of their physical or historical space as well as the social opportunity to share something unique with others. And it's happening now because the technology is finally available to make these interactive simulations possible and affordable.

Some of my museum colleagues shared their experiences and perspectives with me. These examples show how we learn from one another in the practice of what I call "themed education."

## **Pacific Aviation Museum Pearl Harbor: Decision Center**

The site of Pacific Aviation Museum Pearl Harbor is at the center of one of America's most important historical events. Visitors are able to engage with the history of the Pacific theater in World War Two with the real aircraft from that period within the actual historical hangars. But from their location on Ford Island within Pearl Harbor, the museum is also looking forward. In addition to having an impressive collection of aircraft up to the modern period, the museum benefits from its location at the nexus of modern disaster relief efforts within the Pacific Ocean. Across the road from the museum is NOAA's Pacific Tsunami Warning Center, which issues instantaneous real-time alerts across half the globe. Also, across the water, is Hickam Air Force Base, where the 535th Airlift Squadron of C-17 Globemasters provides the backbone of any humanitarian relief effort across the Pacific Ocean.

Shauna Tonkin, Director of Education for the museum, wanting to take advantage of the unique location, became interested in the concept of creating an experiential space on a visit to the Army War College. She heard about the space-based, decision making simulations at the Truman

Students make informed decisions at the Pacific Aviation Museum Pearl Harbor. Photo courtesy Pacific Aviation Museum Pearl Harbor.





The Listening Post at the Spy Museum. Photo courtesy International Spy Museum.

and Reagan Libraries, and became curious about the effect such an experience could have on educational audiences at PAMPH.

After a visit to see the Situation Room Experience under construction at the Reagan Library and subsequent talks with the team behind it, Shauna decided that creating a socially engaging, disaster relief game on site would immerse audiences in what is often seen as dry content to young people. Her goals were to “create an understanding of the value of the space” and to “create an open-ended simulation that could be mined for results.” The resulting “Decision Center” challenges players to respond effectively and efficiently under pressure to a natural disaster using aviation assets.

While having fun in a meaningful place, participants take away the value of having a ready strategic plan, cooperation under crisis, and the differences between types of aircraft. The game emphasizes communication among players and the recognition that natural disasters do not wait for us to be ready for them. Shauna believes that while the game could technically be played potentially in other locations, the gravity of the space, the history behind the place and the vastness and “immediacy” of the historical space provide the context and the grounding for the game. Shauna stated, “It is important to be immersed in an environment or venue that promotes opportunity to suspend disbelief...and prompt the power of imagination.”

### **Spy Museum: Living your cover**

Anna Slafer, Director of Exhibitions and Programs at the International Spy Museum in Washington, D.C., is preparing for a complete museum move planned for early 2019. “We have people ‘living your cover,’” she said, “which is an experiential component built into their more traditional museum exhibits. The ‘living your cover’ aspect of the Spy Museum asks visitors to take on the role of a spy at the beginning of their museum visit. Anna said, “We are hoping to take the ‘living your cover’ to a more technologically-based experience that can be done throughout the museum.” Anna explained that visitors who experience “Operation Spy,” an immersive team-based spy-craft challenge that augments the museum’s traditional exhibits, consistently rate their visit to the Spy Museum significantly higher on standard visitor measurements such as TripAdvisor.

### **Reagan collaborates with Washington**

Here at the Reagan Library a year after launching the Situation Room Experience, a modern fictional crisis scenario in the re-installed Situation Room from the White House, [see “Inside the Situation Room,” InPark issue #67] we are embarking on a project in partnership with Mount Vernon. Jumping off the success of the initial Situation Room Experience scenario “Assassination Attempt” (based on the 1981 assassination attempt on President Reagan) we will be looking to the 18th century with a “Washington’s Cabinet” scenario. The plan is to create the look and feel of the 18th century using cutting-

edge technology to immerse participants in both the intellectual and emotional mindset of the earliest days of the American government. We expect to open at both the Reagan Library and Mount Vernon by early 2019.

### Technology serves human interaction

Museums and libraries are reaching out to technology innovators and content creators as to how best evolve a large-scale educational experience. One guiding principle we employed with the Situation Room Experience was to only use technology in service to human interaction. It's important that technology be viewed as a delivery device to give participants the information they need to have informed, engaging interactions. Interacting with the technology is not the goal, it is a means. We looked at ways that tech could provide content, but also allow participants to spend most of the experience "heads up" - engaging with others. Modern visitors are also quite savvy about true interactivity and need to be shown quickly with feedback that their decisions have a real impact on the narrative or game-state.

Most contemporary visitors will have no shortage of opportunities to engage with yet another screen in their lives. However, the engaging, face-to-face simulation situations available within museums like these is something far rarer and more precious. Across the country, museums continue to explore how to increase membership in an era of internet and virtual reality. Creating a shared social experience that transports visitors into a living space where they can viscerally experience a topic in an educational setting is something that is special to the museum world and is an enormous opportunity to bring a new generation of visitors to museums and change the national educational landscape. •



Mira Cohen is Director of Education at the Ronald Reagan Presidential Library & Museum and Project Manager of the Situation Room Experience.



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# Flying with Stantec

Designing a new aviation-themed park in China

by Daryl Leblanc, AIA - Stantec Design Principal, Architect

Greg Meyer, PLA - Stantec Design Principal - Landscape Architect

Stories have defined our world since the dawn of communication - in architecture, carefully-crafted stories based on themes and messages can help an independent brand engage guests and create a compelling and memorable experience. The intent of creating an entertaining venue begins with the opportunity to write well-defined storylines about what we want the visitor to know, feel and do. This process helps to establish the experience of place and how design has the capability to captivate an audience emotionally, retain their attention and create a compelling experience.

Storytelling played an essential role throughout the design of The World of Aviation – the unique, new, flight-inspired theme park in Xi'an, China. Our team at Stantec was contracted directly by the developer and took The World of Aviation through conceptual design, targeting the park to both locals and tourists while anticipating annual attendance of 3.5 million visitors per year.

Our team set out to develop branding, and an integrated network of surrounding opportunities to repeatedly draw guests to the park. The excitement, fun and loyalty associated with theme parks helps develop and capitalize upon this new market. It will capture the passion for flight and build on the experience and romance that travel offers by connecting guests to the aviation experience. The result is a series of carefully crafted stories that provide distinct experiences as the guest's journey progresses through themes of discovery, adventure, imagination and innovation. We collaborated with the client by facilitating workshops to exchange ideas about their vision, and to create a framework to establish their desired goals. Helping our clients create a strong brand for their businesses allows us to better align our design to make their project successful.

## Ready for takeoff

The 158-acre park is part of an integrated resort, including retail, dining, entertainment and a hotel. We were

Master plan for The World of Aviation in Xi'an, China. Renderings courtesy of Stantec.





The Aviator's Concourse at The World of Aviation

responsible for masterplanning, visioning, architecture and brand development for the park. Using a hub-and-spoke design model, we aimed to guide the guest through the splendor of aviation: romantic visions of days gone by, the majesty of winged creatures of all sizes, travels from around the world and the latest in advanced aeronautics technology.

The excitement begins upon arrival to the Aviator's Concourse as the guest prepares to take flight. The Concourse is the park's gateway where commerce and flight combine to create a unique retail, dining and entertainment complex that evokes the excitement and glamour of globe-trotting by jet.

The journey continues to a breathtaking vista amidst the clouds. We called this Big Sky, and it is the heart of the World of Aviation. It marks the guest's initial takeoff point – creating an immersive experience as they leave the ground to soar among the clouds. Customized vistas showcase each of the four realms of flight. Guests find themselves in a place that is exhilarating and yet relaxing.

### **Flight and Discovery**

Once guests reach the end of the Aviator's Concourse and become oriented with the park layout, the excitement and romance of the Golden Age of Flight awaits them in the Land of Discovery. Upon entering, the guest steps back into time amidst the hustle and bustle of a thriving city in South China where something extraordinary is happening among the alleys and side streets. Engines are humming as the new industry of commercial flight is on the precipice

of changing not only China, but the entire world. These are the pioneering days of aviation, when new air routes shrank the Middle Kingdom and tigers leapt in the air to defend her skies.

After guests have traveled through the Land of Discovery, they embark on a globetrotting adventure. Within Adventure Landing, they learn how flight has enabled mankind to further explore the uncharted corners of the world. With the ability to travel anywhere, exploration of new terrains and climates become possible for the intrepid explorers and adventurers who pioneered aviation. Leap to the present and this capability is now accessible to everyone who has ever dreamed of seeing the wonders of the world. This is a land of travel, where you set out on an adventure to exotic and unique locations throughout the world. Guests explore the remarkable beauty of natural wonders and the splendor of historic capitals. Adventure Landing enables guests to become world travelers and experience how flight has changed exploration and made the world more accessible than ever.

### **Inspiration and engagement**

After the thrilling experiences within Adventure Landing, guests are transported to a realm where Dreams of Flying like a bird come to life. Inspiration Village is a place touched by nature where people soar into the sky not with engines but with graceful wings. In the realm of Inspiration, nature is the focal point and guests are exposed to the natural world that inspired our desire to take flight.



The Test Pilot Experience and Roller Coaster in the Innovation Labs Realm

With the worlds of Discovery, Adventure and Inspiration fully engaging our guests in these past and present eras of flight, we pass through to The Future of Flight. The history of aviation has extended over more than 2,000 years, from the earliest forms of aviation, kites and attempts at tower jumping, to supersonic and hypersonic flight powered by the latest jet and rocket engines. Guests experience the accomplishments made possible by new ideas, innovations, success, and progress - all crucial in the advancement of aviation. Innovation Labs is a vision of the latest in aviation technology and a glimpse of the future of flight.

As designers, we continue to explore ways to improve the guest experience by combining interpretive education with entertainment. Focusing on stories helps us connect visitors who seek to explore and learn more about culture, history, and the natural environment with each destination. We use stories and interpretation to educate about the value of these resources and the significant importance of preserving these resources for future generations to experience and enjoy. By combining these elements in an authentic and entertaining experience, we can deliver on the brand promise established by the vision and mission of our clients. •

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# From hurricanes to Bigfoot

nWave Pictures continues its growth in education and entertainment cinema markets

by Joe Kleiman

They are given innocent names like Katrina, Sandy, Harvey, Irma, and Maria. They are typhoons and hurricanes - forces of destruction, but also part of nature's system of renewal. They're the "stars" of the new live-action, giant-screen documentary, "Hurricane 3D" distributed by nWave Pictures.

Both nWave and its new release enjoyed a high-profile industry introduction on the evening of Oct 10, 2017, at the California Science Center (CSC) in conjunction with the official reopening of the CSC IMAX® theater and its new jewel, the state-of-the-art IMAX® with Laser projection system. The 420-seat theater was filled to capacity; in the audience were museum sponsors, donors, and trustees, and members of the giant screen film production and exhibition community. Greg Foster, CEO of IMAX Entertainment; David Keighley, IMAX chief quality officer; Jeff Rudolf, CSC president and CEO; Joe DeAmicis, VP Marketing at CSC IMAX; and

Janine S. Baker, SVP nWave Pictures Distribution and Development, were among the introductory speakers.

Produced by Ouragan Films and distributed by nWave Pictures Distribution, "Hurricane 3D" follows the life of an Atlantic hurricane from the coast of Africa to the shores of Louisiana. It was shot in 12 countries and, with the cooperation of NASA, on the International Space Station. According to DeAmicis, "The film [Hurricane 3D] takes full advantage of our theater's 12.1 channel surround system. One man came up to me after the show and said he had lived through an actual hurricane and this was the closest he's ever experienced to it."

"Hurricane 3D" premiered at the Oct 10 CSC event and opened to the public the next day. To help hurricane victims, nWave partnered with CSC through the end of October 2017 to donate a portion of "Hurricane 3D" box office returns to One America Appeal.

The Oct 10 event came just a few weeks after the Giant Screen Cinema Association (GSCA) annual conference in Chicago. Baker reports that “Hurricane 3D” earned strong positive feedback from giant screen distributors, following the GSCA screening on the new IMAX® with Laser system now gracing Chicago’s Navy Pier.

Another special screening of “Hurricane 3D” at CSC, this time targeting the family audience, took place Oct 15 in an event co-sponsored by LA Parent. It drew a strong turnout that included family-oriented members of the press, including mom bloggers. Baker reported that even the youngest members of the audience - as young as three and four years old - sat captivated throughout the entire, 40-minute film.

According to Baker, nWave chose to add “Hurricane 3D” to its library for its unique, almost poetic quality, unlike anything else they had seen in the market. In one scene, the camera slowly pans through the wreckage of a home, curtains blowing in the breeze. Another scene shows a tree blown into the water, with fish eating the leaves for nutrients. Rather than tell the story through the eyes of a single person, it presents the hurricane as the central character. First responders, hurricane trackers, plants, and

animals, and human survivors are all supporting characters who share their stories.

Hurricanes are, of course, very much in the public consciousness today due to a series of recent, powerful storms. Jacqueline Farmer, one of the “Hurricane 3D” producer/directors, says, “The film was finished before the 2017 hurricane and typhoon season began. However, during the course of making the film we witnessed many storms, destructive in their own way - Sandy in New Jersey, Isaac in Louisiana; Irene, the terrible super typhoon Haiyan in the Philippines that killed thousands of people. In the time of global warming, with sea levels rising, hurricanes and typhoons are causing terrible problems for coastal populations with storm surge and flooding.”

### **New titles for ASTC and IAAPA, and market leadership**

As of this writing, nWave was preparing to introduce “Hurricane 3D” and several more new titles to education and entertainment markets at fall industry gatherings including the Association of Science-Technology Centers (ASTC) annual conference in San Jose in October, and the IAAPA Attractions Expo in Orlando in November.

Below: A scene from Son of Bigfoot.  
Opposite: nWave’s Hurricane takes viewers into the destructive storms.  
Images courtesy of nWave



### **The Need for Women Filmmakers**

Jacqueline Farmer, producer and director of “Hurricane 3D” shares her thoughts on women in documentary filmmaking:

“Women have a different way of seeing things, a different point of view, and different centers of interest. It is crucial that this way of seeing the world is represented in cinema and in fact all media and art. In many countries of the world, women represent more than 50 percent of the population. Our voices need to be heard more.

“Young women need to be supported and encouraged in the industry, particularly in the roles where they are very underrepresented - cinematography, direction, sound and important executive posts.

“I think women with young children need to be particularly encouraged, as this is often a difficult time with many demands being made on women’s time.”

With its films being distributed to zoos, museums, and theme parks, nWave's key markets all serve the family audience, where the primary decision-makers are moms. Perhaps it is no coincidence, in terms of the company's success in those markets, that many women are visible within the company, including Baker in Los Angeles, Goedele Gillis in Brussels (Sales Director for EMEA), and Jennifer Hackett in Florida (Director of Sales and Distribution, Americas) – in addition to company CEO and co-owner Caroline Van Iseghem.

In addition to the output from its own studio, nWave grows its library through partnerships with external producers. Among them are the filmmakers behind "Hurricane 3D," who are currently working on "Snow" (working title), which will examine the relationships it has with people and with the planet.

Following "Hurricane 3D," nWave will distribute "Planet Power" from N3D Land Films with award winning director Pascal Vuong. "Planet Power" tells the story of mankind and electricity, from primitive days, to Benjamin Franklin, to the clean-energy revolution. Using a combination of traditional and computer animation, live action and aerials, the film shows how clean energy can help combat climate change.

Each nWave giant screen production is accompanied by a student activity guide and educator's guide, devised in conjunction with educators and museum staff from around the world. The guides can be used for classroom or homeschool instruction to supplement the lessons taught by the film.

nWave is a leader in making the most of digital assets, and its giant screen titles are released in shortened versions for attractions. The company also creates unique 4D films exclusively for attraction theaters, such as the new "Return to Lost World 4D," being showcased at IAAPA Orlando, and a sequel to the popular "Lost World 3D" (2013). Produced for nWave by Red Star Studios, it continues the saga of Bob, an executive stranded in a boat at sea due to a helicopter accident. Bob's worst fears come true when he finds a dinosaur stowaway on board, and his only hope of rescue is to return to the dinosaur-filled Lost World with his prehistoric passenger.

nWave will also feature "Son of Bigfoot 4D" at IAAPA Orlando. This new attraction film follows Adam, a solitary teenager, as he sets out to trace back his long-lost father. Deep into the woods, Adam is faced with an unbelievable revelation: his father is Bigfoot. As the pair start making up for lost time, they're faced with the menace of two greedy hunters. "Son of Bigfoot 4D" takes a unique

approach for attraction films as it directly addresses issues of self-esteem and bullying, in a way that children and adults alike will enjoy and appreciate," says Baker.

### Industry leadership and the future

For nWave Pictures, not only do the distinguished premieres and events of 2017 roll out significant new additions to their library of giant screen and attraction films, they mark a new high point for a maverick company that has always been on the pioneering edge in terms of presentation, story and technology and the way it works with its clients.

nWave has always led by example, though its leadership has sometimes ruffled feathers in the course of some 23 years in business. nWave has always pushed the boundaries, creating films that are new, unique, and provocative - and with mass appeal. The company is dedicated to producing in 3D and upholding high production standards. Says Baker: "We keep up with technology and ahead of it; we listen, we visit, we understand that each site and each client is unique. Clients stay with us because we have the highest quality product for the family entertainment markets. And our 3D is pristine, the best in the market."

You'll have an opportunity to travel across continents with the Hurricane, meet the Son of Bigfoot, fight dinosaurs as you Return to the Lost World, and electrify your life with Planet Power by visiting the nWave booth (#1066) at the IAAPA Attractions Expo in Orlando. To arrange a meeting, contact: [sales@nwave.com](mailto:sales@nwave.com). •

### Meet Alexandre Milazzo

Alexandre Milazzo is the newly appointed Marketing and Communication Coordinator at nWave Pictures Distribution.



His deep interest for the science of communication led him to choose this field as a career path and in 2017, he graduated with honors from the Université Libre de Bruxelles, Belgium. His thesis on the impact of vintage aesthetics in TV commercials on multiple variables among consumers sparked interest among his peers. "He is a whiz kid with social media," states SVP Janine S. Baker.

He currently resides in Brussels, Belgium, where he enjoys looking for hidden architectural gems of the Belle Époque period. Alexandre can be contacted at [amilazzo@nwave.com](mailto:amilazzo@nwave.com).

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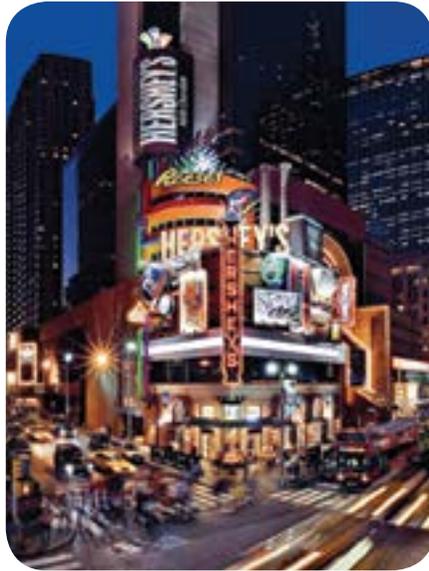
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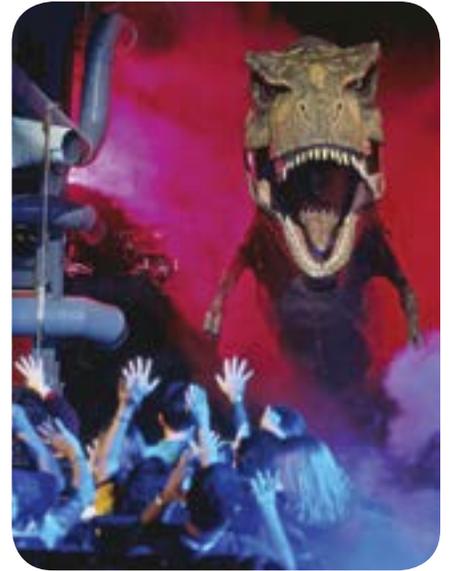




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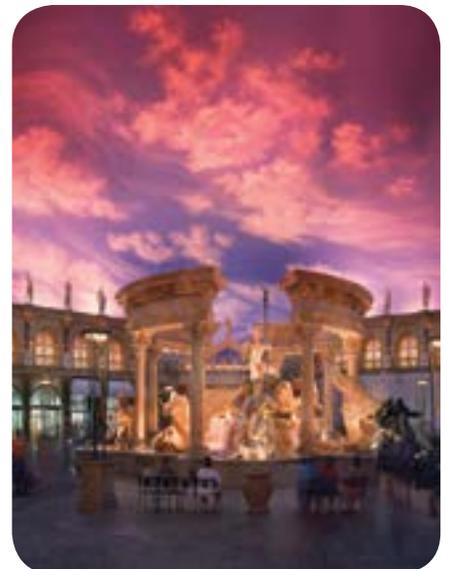
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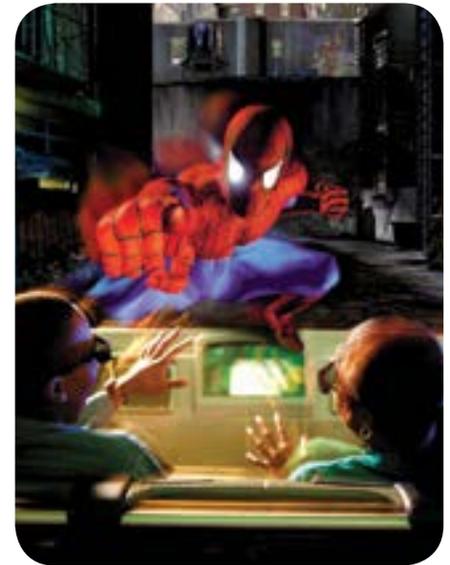
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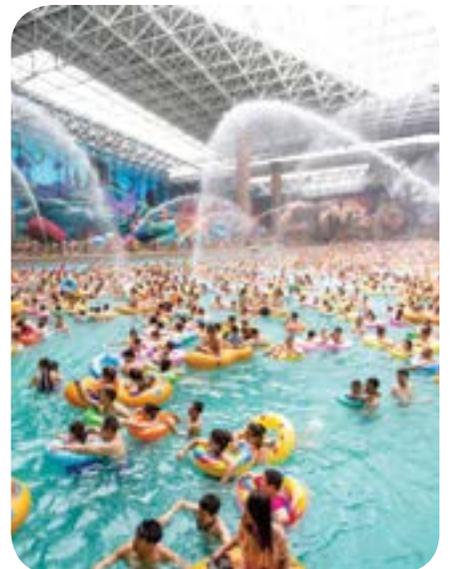
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Photo courtesy of Eclipse Screens

# Specialty projection screens

Eclipse Screens and Strong/MDI Systems partner to provide turnkey screen solutions for themed entertainment applications

*interview by Martin Palicki*

Custom screen configurations and projection surfaces are often essential to creating successful media-based attractions and immersive projection environments. Examples include dark rides, 4D experiences, motion simulators, flying theaters, museum exhibitions, brand experiences and haunts. Two leading experts in the field, Eclipse Screens and Strong/MDI Screen Systems, have joined forces to offer custom, turnkey solutions that integrate their complementary products and services, with multiple showcases and demonstrations during the 2017 IAAPA Attractions Expo.

“Turnkey solutions are in high demand, and sometimes a strategic partnership is the best way to accomplish that,” said Dustin Small, CEO of Eclipse Screens. “Eclipse’s patented compound curvilinear screen system is enhanced with Strong/MDI’s wide range of screen products and optical coatings designed for themed entertainment applications. Together, we offer everything from project design and product development, to onsite construction, installation and coating applications. We invite the industry community to see us in Orlando.”

## **Interview with Francois Barrette, General Manager, Strong/MDI Screen Systems:**

### **Tell us more about what you’re showcasing during IAAPA.**

We will showcase made-to-order projection screen solutions for immersive experiences. Our product lineup includes high-quality front and rear view screen surfaces, compound curvilinear screens, custom support structures and optical coatings. We have the technical expertise to guide our clients through all phases of project development and the facility to custom-fabricate nearly any screen product imaginable. We feel this event is a great opportunity for us to demonstrate what we have to offer to the industry.

In addition to our booth on the IAAPA exhibit floor, there will be a special product demo in collaboration with Dynamic Attractions at their Orlando facility to showcase our products during IAAPA. The demo will feature full ride content and several screens - it

will be an impressive showpiece not to be missed. Interested parties can contact us at 1-877-755-3795 or write to us at [info@strongmdi.com](mailto:info@strongmdi.com).

**Tell us a little more about optical coatings and curvilinear screens.**

Optical coatings are developed to improve the viewing characteristics of the screen surface. Low gain gray coatings for example, are used to offset the light output of powerful projector lamps and to counter the effect of reflections from other light sources that may cause an image to look washed out, whereas silver coatings are indispensable for 3D viewing. The choice largely depends on the application, projector and the viewing environment. We develop the coating best suited to the project, our technicians then apply the specially formulated coatings onsite to ensure optimal results.

Eclipse Screen systems offer superior advantages when compared to existing perforated metal screens. The screen systems are entirely "seamless" - allowing the guest to be in close proximity to the surface with no visible evidence of the typical perf panel checkerboard pattern caused by dust collection, butt joints and panel color variances. Since the surface is solid there is no light loss,

and in turn the projected media remains at high resolution at lower lumen output. The newly developed patented sound technology allows audio to penetrate through a solid screen surface to maintain the approximation of sound to the relative media. With no visible evidence of distortion to the projected media or sound, this is a game changer for the entire themed entertainment industry. Other key advantages include attraction design expertise, timely screen manufacturing, and no limit to size or shape. The screens are also cost effective, durable and maintenance friendly.

**Tell us more about the partnership and the advantages of the turnkey solution.**

This partnership brings together Dustin Small's 20 years of theme park design experience with Strong/MDI's 40+ years of cinema expertise. The one-stop screen solutions it enables us to provide to themed entertainment professionals are both practical and cost-effective. We make the process easy for our clients by taking a well-rounded approach to custom projection projects and by being involved in every step of the process.

If you have a project in mind, visit both companies at the Strong/MDI booth (#2150) during the 2017 IAAPA Attractions Expo. •

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# A league of their own

Sally Corporation celebrates 40 years of dark rides with the 7th install of JUSTICE LEAGUE for Six Flags

Celebrating its 40th anniversary this year, Sally Corporation has seen (and practically done) it all. They have helped usher in multiple innovations in dark rides. The company got its start during the regional theme park boom of the 1970s and '80s. The Sally dark ride catalogue includes interactive, family rides like Scooby-Doo's Ghost Blasters, lavish scenic attractions like Challenge of Tutankhamon, and unique experiences like Nights In White Satin: The Trip (a dark ride themed to the Moody Blues hit song). And with each evolution of the product line, Sally appealed to a new segment of park fans.

Sally's latest success story comes in the development of JUSTICE LEAGUE: Battle for Metropolis for Six Flags parks. The idea had been percolating for over a decade before the first two installations opened at Six Flags Over Texas and Six Flags St. Louis in 2015. In 2017, Sally helped open the seventh installation of the attraction at Six Flags Magic Mountain. It's an enhanced version of the original with the latest in technology, additional scenes and new characters...and it brings JUSTICE LEAGUE: Battle for Metropolis to Southern California, placing the attraction alongside other dark ride classics near the heart of the industry.

The ride builds on a trend that started in the late '90s when destination theme parks began adding high-end, projection-based media dark rides with motion base vehicles. JUSTICE LEAGUE: Battle for Metropolis takes that trend and makes it accessible to parks and populations outside of the major theme park resorts.

The attraction begins in the Hall of Justice where guests learn of their mission to save and release heroes of the JUSTICE LEAGUE who were captured by the Joker and Lex Luthor.

After donning 3D glasses, guests sit in a ride vehicle equipped with "stun blasters" (laser guns) and set out on a ride through Metropolis. Vehicles move through a series of fabricated sets and CG environments where players can shoot at targets both on the screens and in the real environment. The second half of the ride takes place in a series of immersive curved screens designed to cover players' field of sight. At the end, scores are calculated and displayed, along with a photo of each player taken earlier in the ride - with admiration and thanks from the freed superheroes.



The Joker waits to blast another vehicle of guests with laughing gas in JUSTICE LEAGUE: Battle for Metropolis

Sally played the lead role of design/build contractor, starting with the conceptualization of the ride package and writing the script, to project management through installation. Sally also assembled a team of experts: Oceaneering Entertainment Systems handled the ride system, Pure Imagination oversaw CGI production, Wyatt Design Group was show set designer, Lexington Design & Fabrication and Forte Specialty Contractors provided scenic construction, and the gaming system was created by Alterface Projects. The collaboration was successful and Sally's ability to turnkey the project resulted in a happy client and seven installs over a three year period.

– *Martin Palicki*

**Many in the industry have experienced the award-winning dark ride and the reviews are in:**

“What’s exciting for us with JUSTICE LEAGUE: Battle for Metropolis here in Southern California is how we broadened our target to compete with the big players here in the theme mecca of the world. We’re kicking it up a notch with a version of this ride that’s hands-down raising the bar.”

– *Bonnie Sherman Weber, Park President, Six Flags Magic Mountain*

“Sally has again innovated the dark ride industry. Who else could turnkey a destination quality dark ride such as JUSTICE LEAGUE on a reasonable, regional theme park budget. That’s pretty innovative.”

– *Larry Wyatt, Principal, Wyatt Design Group*

“How Six Flags did that was smart: going through R&D with Sally to get that first attraction up, then taking the lessons learned from market to market. What a great attraction for our industry. Sally should be very proud.”

– *John McReynolds, SVP External Affairs, Universal Parks & Resorts*

“Sally’s the frontrunner of innovation when it comes to dark rides. They’re one of the iconic, signature companies in our industry. They know how to invest a project budget to deliver the best experience for the guest.”

– *Cindy Emerick, VP Business Development, Dynamic Attractions*

“There are plenty of others who can do exactly what Sally does, but usually they’ve added a zero or two at the end of the price. It’s mathematically impossible to build an interactive dark ride this good at this price point. Yet Sally does it anyway, proving they’ll always be a great leader or competitor.”

– *Bob Rogers, Founder & Chairman, BRC Imagination Arts*



Nights in White Satin dark ride. Photos courtesy of Sally Corporation

“What Sally’s done well is stay consistent with their quality. As they upgrade technology, they don’t let it take over. Storytelling and characters are still the most important elements. That’s why we see generations of guests coming back, bringing their kids, who then bring their kids. That’s the longevity of a Sally ride.”

– *Rick Bastrup, President, R&R Creative Amusement Designs*

“Being able to produce an attraction from soup to nuts is unusual in our industry, and that’s what Sally’s done very well for years. The quality of product coming from them is exceptional. There are a lot of groups interested in working with Sally because of their turnkey approach and because they know Sally will take care of everything.”

– *Monty Lundt, President, Technifex*

“Six Flags has shown this is a dark ride that can be advertised as the main attraction, like a coaster. When you buy a Sally ride, you’ve got a marketable product. Parks all over the world are finding success with dark rides that are taken to Sally’s level of quality and innovation.”

– *Bob Masterson, Ripley Entertainment (retired)*

“Regional parks can now enjoy the gate draw, guest satisfaction and ROI that comes with the kind of high-quality dark ride experiences that used to be found only in the larger, destination parks. It’s been proven possible by Sally Corporation’s last four decades of work for regional parks around the world.”

– *Lauren Wood Weaver, Marketing Director, Sally Corp.*

For more information on Sally Corporation and their 40th anniversary, visit [sallycorp.com](http://sallycorp.com). •

# YEAR OF THE DOG



Peanuts characters in their Halloween costumes at Kings Island's Great Pumpkin Fest event. Photos courtesy of Cedar Fair Entertainment Company

Peanuts / Cedar Fair deal shows Snoopy is good for the brand, good for the park

by Judith Rubin

The Peanuts brand has been going strong for decades on multiple platforms, including location based entertainment and theme parks. Featuring Charlie Brown, Lucy, Linus and of course the beloved characters Snoopy and his friend Woodstock, Peanuts has become a true evergreen classic in the comics, on television with their holiday specials, and in 2015, in feature films with *The Peanuts Movie* that enjoyed great box office success.

Therefore it was no surprise that Cedar Fair and Peanuts recently renewed an agreement of 30 years standing, extending the licensing agreement for their popular Camp Snoopy and Planet Snoopy themed areas as well as for the characters to serve as overall park mascots to 2025 at all 11 Cedar Fair parks.

The relationship with Cedar Fair has been extremely important to Peanuts Worldwide and their desire for consumers young and old to experience the brand in location based entertainment (LBE). Peanuts Worldwide continues to explore and discuss new opportunities with licensees around the world, and in November 2017, representatives will once again attend the IAAPA Attractions Expo in Orlando to meet with creatives and potential partners.

In light of the current, global appetite for IP in theme parks and location based entertainment, four attributes emerge from a close look at the Peanuts/Cedar Fair agreement and the Peanuts IP. And they're all good news for the attractions industry:

- As a family-friendly IP, Peanuts offers just about everything an attraction operator could wish for. Roz Nowicki, EVP, Peanuts Worldwide, said, "Peanuts is a true, four-quadrant, family brand and that is exactly what makes it such a great property for the LBE space. Parents and grandparents want to share Charlie Brown, Snoopy, and the rest of the gang with the next generation in as many ways as they can, and being able to do that in such an immersive way, beyond the screens, is so important and special. Our partnership with Knott's Berry Farm goes back 30 years, so we now see people who grew up with this experience wanting to share it with their kids."
- The way Peanuts has been sustained on multiple entertainment platforms over the years – including theme parks and location based entertainment - perfectly illustrates the reigning business model: tied to a franchise with broad appeal, multi-platform, regular media releases, collaboration between IP holder and franchisee, unique and innovative retail products, and a feedback loop in which each iteration feeds the others.
- Peanuts takes the LBE market seriously and has dedicated people to identify opportunities that are well suited for the characters and then collaborate with licensees. In the LBE market, two of the main point persons are Craig Herman, Sr. Director, Category Management, Peanuts Worldwide; and consultant George Wade of Bay Laurel Advisors, who will both be taking meetings at IAAPA in Orlando. Said Roz Nowicki: "With the LBE sector, as with all

of our product categories, we are looking for partners who really respect and appreciate this brand. But we also want partners who are thoughtful and innovative – who are interested in continuing the tradition of Peanuts for families today."

- Longevity and curation – of the brand and of the relationships. Peanuts is a brand that over the course of 67 years has remained alive, strong and authentic.

### **Peanuts around the world**

Another long-term theme park/Peanuts relationship is with Universal Studios Japan, in Osaka. The brand has strong worldwide appeal. Roz Nowicki said, "Peanuts has a huge global following – in some countries and territories, such as Japan, Italy, Germany and Brazil, the property has been in the market for generations and it really feels local in those territories. When Charles Schulz created Peanuts, he was drawing on true, universal human experiences and emotions and those are what made the comic strip so translatable and what makes the brand live on around the world today."

In other words, Peanuts is an IP that's hard to beat in terms of evergreen, broad applicability and versatility, and pure family appeal. It's got international market penetration and enviable social media statistics and demographics. It's shown itself to be a great fit in the LBE market and there is capacity as well as desire to expand internationally.

"This is a brand that appeals to men, women, and children, and is not gender specific," said Herman. "It's never been controversial and yet remains universally meaningful, taking on all kinds of life issues. That's what makes it an evergreen brand that remains relevant to today's audiences as well."



New Peanuts-themed WinterFest merchandise

### Year of the dog

Peanuts is a multimedia success story. Said Roz Nowicki, “In terms of content and experiences, we are always looking for new ways to get in front of kids and their families. We did that with The Peanuts Movie, from Twentieth Century Fox and Blue Sky Studios in 2015, as well as with The Peanuts by Schulz animated shorts that are currently on air on Boomerang and Cartoon Network and on networks around the world.”



**Roz Nowicki**

The Peanuts Movie did well over \$100M in box office domestically, and was ranked 5th in box office for animated movies. The ABC network has rights to air the classic Peanuts television specials; last year was the 50th anniversary of It’s the Great Pumpkin, Charlie Brown, which continues to draw devoted viewership year after year.

“We also have a robust social media presence,” said Nowicki, “where we have some of the most highly

engaged fans of any entertainment brand. In addition, we are partnering with the premiere lantern festival developer, DDM, headquartered in Canada, to present festivals around the globe. The first festivals are planned for China in 2018, celebrating Snoopy and the Chinese New Year - 2018 is ‘Year of the Dog.’”



**Craig Herman**

“The cornerstone of this brand is publishing,” said Herman. “Peanuts began as a syndicated strip, then moved into books, then television specials and movies. For 30 years, Cedar Fair has helped transform that 2D comic strip into a 3D experience in its parks.”

### Good for the brand, good for the park

A beloved brand and characters (with 67 years of wonderful stories and memories) has reached across multiple generations, from young children to grandparents to become a core part of Cedar Fair’s offering.



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## Cedar Fair and Peanuts – a win-win for both brands

Interview with Kelley Semmelroth, executive vice president and chief marketing officer, Cedar Fair



### What are some of the ways this extended partnership will manifest in merchandising at the parks?

We currently offer our guests a range of exclusive Peanuts items that tie the characters to the parks; for example, you'll find apparel or plush featuring Snoopy with an iconic, blue ice cream cone at Kings Island or a boysenberry pie at Knott's Berry Farm. We look forward to offering a wonderful assortment of unique Peanuts merchandise for our upcoming WinterFest holiday events; these will offer our guests something original, seasonal and truly special. Further, we plan to expand into more diverse items that can only be found at Cedar Fair parks. It's a win-win for both brands.

### This relationship goes back 30 years, making Cedar Fair a pioneer in IP usage at theme parks. How has your approach evolved over time?

This is especially relevant as we expand our park offerings to attract more young families. Cedar Fair parks and the Peanuts enjoy a unique position in amusement park IP primarily because of the timelessness of these beloved characters. It's as relevant today as it was decades ago, and our park guests – from toddlers to teens, moms and grandparents – adore these characters. We're confident in the long term relevance of this IP; in fact, our Planet Snoopy area at Kings Island has been recognized as "Best Kids' Area in the World" for the 17th year by Amusement Today.

We're always looking for new ways to maximize the IP. This year a number of Cedar Fair parks held "Race for Your Life, Charlie Brown" events as part of our "Run and Ride" series, to celebrate the 40th anniversary of the popular movie. Guests would participate in a road race through the park, then enjoy a screening of the movie as well as the rides and attractions park-wide. We found this was a great way to maximize brand synergies for both Cedar Fair and Peanuts.

### How do discussions happen at Cedar Fair around the implementation of Peanuts within the parks?

We have an integrated brand planning process. By this, we make decisions that not only build up each brand, but also are focused on shared business goals; some examples include increased merchandise sales, greater

penetration of incremental target audiences, and delivering relevant and engaging experiences to promote guest satisfaction and brand health. We're getting ready to launch our immersive holiday experience, WinterFest, at three additional parks this year and have worked with Peanuts to create some new original themed entertainment that our guests will love, both out on the midways and in our theaters.

### What were some of the primary reasons for renewing this agreement?

We have great brand synergies, and these extend through our special park events like The Great Pumpkin Fest and WinterFest, which feature the Peanuts characters prominently. For Cedar Fair, having the relationship with Peanuts is a great benefit as we expand our park offerings to attract more young families; for example, we're offering a free season pass – the Pre-K Pass – for children ages three to five. We found that the youngest child in the family could be a barrier to a park visit; our parks are well-known for roller coasters and thrills, and parents would often wait to visit until a child was tall enough to ride a lot of rides. So we need to not only remind families that we have these wonderful Planet Snoopy and Camp Snoopy areas in our parks, but also give them a way to make visits affordable. The Pre-K Pass will introduce these families to the fact that we truly have something for everyone in our parks.

Having the primary IP for all of our parks in place for years to come makes it easy for us to do long term planning from a concept, design and capital standpoint. We've made significant Peanuts-related capital investments in the past five years, and recently announced a major expansion and renovation of our Camp Snoopy themed area at Carowinds near Charlotte, N.C. When we make a significant capital investment in a park, it needs to stand the test of time for decades; we know that Peanuts will do that. In addition, having IP with appeal that spans such a wide range of ages helps us attract and retain guests to our parks and their retail and dining establishments.

We want our parks to be the place to be for fun, and this partnership is just another way we deliver on that promise.

The details of the Cedar Fair announcement in September 2017 were that Cedar Fair, L.P. and Peanuts Worldwide, a subsidiary controlled by DHX Media, Ltd., and the family of Charles M. Schulz had renewed the license agreement to showcase the iconic Peanuts characters, created by Charles Schulz, throughout Cedar Fair's 11 amusement park locations. The agreement covers Cedar Fair's North American exclusive use of Peanuts in the company's attractions, entertainment and sports, food and beverage, lodging and retail operations. The new agreement extends the relationship to 2025. Cedar Fair announced the debut of an expanded Peanuts themed children's area at Carowinds, its popular park in Charlotte, NC. The Camp Snoopy area will feature five new rides, an 8,000-square-foot, climb-and-play area called 'Beagle Scout Acres,' and enhanced dining and relaxation facilities.

The Peanuts characters were first featured at Knott's Berry Farm, acquired by Cedar Fair in 1997; in 2014, the Southern California park unveiled a newly expanded and revitalized Camp Snoopy children's area in celebration of the 30-year relationship.

"One interesting thing about the relationship between Peanuts and Cedar Fair is that in addition to permanent attractions, Cedar Fair has always made use of Peanuts to extend the operating season, with seasonal events for Halloween, Christmas and other occasions," said Herman. "Over time, their brand has grown as well as ours, and the continued partnership is important to our brand strategy and a perfect fit."

Herman followed up saying, "Few brands have this kind of depth of range in the LBE space. Peanuts is popular with a wide variety of consumers; young children, their parents, millennials (especially in international markets) and of course grandparents who have fond memories of the characters and the original Charles Schulz comic strips. At the end of the day, the Cedar Fair/Peanuts partnership is a wonderful opportunity to bring together great characters and stories with great theme parks, creating great family memories." •



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Pictured L to R: The Hettema Group team members Gwen Ballantyne, Scott Sinclair, Anthony Pruet, Laura Garrett

## Secret Sauce

by Judith Rubin



Joe Lanzisaro

The Hettema Group (THG) was founded in 2002 by Phil Hettema and is celebrating 15 years in business. This is an exciting landmark for the design and production firm, which has stood the test of time in a “roller coaster” industry that has had numerous booms and busts during those 15 years.

The driver of this company’s work is “aiming for awe” – creating projects that give guests goosebumps; borne out by some of their best-known work, such as One World Observatory, High Roller and “Beyond All Boundaries,” each of which has become an icon in its own way.

A hallmark of THG is a holistic approach to the company structure and culture, that supports a holistic approach to its projects. THG has architecture, technology, media and creative design teams all in-house. “This enables us to integrate the attraction into the setting to create a total/complete experience that you can’t get at home,” said Phil Hettema.

The company founder and leader is a themed entertainment industry legend with decades of experience, and among the staff are many Hettema peers of comparable status and background. But nobody rests on their laurels. In this company culture, they make a point of mixing things up to stay current and fresh and

inclusive, because creativity and collaboration are key. The age span of the THG team, from recent grads to seasoned industry professionals, reflects a company that values experience as well as new perspectives – what they call “wisdom meets wonder.”

One of the phrases Phil likes to use about the special mix of creativity THG brings to its guest experiences is “secret sauce.” We set out to try and define some of the ingredients of that “secret sauce” of this company based in Pasadena, CA and creating iconic attractions all over the world.

In 15 years, THG projects have taken THG teams to such diverse destinations as Korea, China, Malaysia, and Jordan and from coast to coast in the US. Along the way, Phil and his team have had their own magical, once-in-a-lifetime experiences while creating compelling educational and entertaining experiences for audiences around the globe. Among these, Phil mentions “standing on the observatory level of One World Trade Center before the windows were on, flying in a B-17, and petting a penguin.”

Ask a client, colleague or collaborator about Phil Hettema and The Hettema Group, and some of the recurring themes are:

- Ability to quickly grasp the concept and communicate the vision
- Holding true to the vision from the beginning to the end
- Understanding what’s possible, even if it hasn’t been done before, and challenging the team to accomplish it
- A great communicator and collaborator
- Someone who listens carefully to the client and then knocks their socks off
- Surrounded by a great team
- A creative genius
- Honesty and integrity
- A friend

**Vision, creativity and collaboration: Hettema colleagues, clients and projects**

The Hettema Group’s projects frequently achieve iconic status, and they inspire long-standing relationships with colleagues and clients. Collaboration and vision are some of the words that come up in the course of conversation about Phil and his team – and “Phil’s team” is a key phrase. It seems that the collaborative nature of the Hettema process is key to the often iconic result.

THG got its start when Jeffrey Katzenberg, a longtime collaborator and client, recommended Phil for a project in

Jordan. Katzenberg, whose current company is WndrCo, said, “I’ve known Phil for more than 30 years, having worked with him collaborating all the way back to the days at Disney. I worked with him during his time at Universal when DreamWorks had a theme park deal with Universal, and then with him directly at DreamWorks Animation.

“Phil is one of the most innovative and creative and dynamic storytellers in the world of live experiences,” said Katzenberg. “He’s done so many amazing projects over the years - everything from Seuss Landing at Universal, to One World Observatory in New York. He’s just incredibly diverse and skilled at all the many elements of three-dimensional storytelling. He is pretty unique.”

**Game changer for Las Vegas: The High Roller**

Creating the High Roller observation wheel in Las Vegas for Caesars Entertainment Inc. brought together three veterans of Universal Studios - David Codiga, Greg Miller and Phil Hettema - to augment the Vegas skyline and bring a new kind of guest experience to the city. At the heart of this successful and distinctive project, which opened in 2014, is the re-imagining of the observation wheel. The High Roller has been likened to a charm bracelet, with its elegant, single-tube design, spherical glass cars and unique lighting scheme.

**Phil Hettema career chronology and select projects**

- Disneyland/Disney World Costume Department
- Sid & Marty Krofft (running the puppet shop)
- Designer and PM for Bob Jani (on many big events and shows)
- 1984 Los Angeles Olympic Games (opening and closing ceremonies, production supervisor)
- 1986 Statue of Liberty Centennial “Liberty Weekend” (production supervisor)
- Universal Creative – (SVP attraction development): Miami Vice, Back to the Future – The Ride, Jurassic Park, Universal Studios Japan, Universal Islands of Adventure
- THG – Saraya Aqaba, Beyond All Boundaries, High Roller, One World Observatory, USA Pavilion at Yeosu 2012 Expo, Dragons Wild Shooting (Lotte World), Hello Kitty Park (Anji, China)



The High Roller packages unparalleled views of the Vegas strip in an architectural icon. Photos courtesy of The Hetteema Group.

Codiga and Hetteema met in 1987, the year they both started at Universal, respectively as project coordinator and producer/project manager. In 1998, when Codiga departed, he was president of Universal Creative; Phil, who remained until 2001, was senior VP of attraction development. They next worked together when Codiga became owner's rep for The LINQ and Caesars Entertainment, where Miller was executive VP. Miller had brought in THG to design and art-direct on the High Roller, and consult on The LINQ. Miller, an operations and development specialist, had joined Caesars after eight years as president of Universal Studios PortAventura in Spain and is currently chief development officer with Great Wolf Resorts.

The High Roller and LINQ were part of a major development initiative by Caesars Entertainment. Miller said, "It was clear to me Phil would be best equipped to do the work - innovative and thoughtful, able to understand the Las Vegas customer and develop something compelling for them. His approach is not formulaic. He really thinks through creative challenges and is able to clearly communicate his vision of the product."

"Phil knows how to hold the vision through to the end," said Codiga. "He sees not only design aspects but guest experience and entertainment value. He instantly recognized that the High Roller had to be beautiful, streamlined, and aesthetically pleasing - not just a 30-minute ride over the skyline, but different from anything else you can do in Las Vegas. The challenge

became how to create a completely spherical cabin; how to make the wheel itself a single tube. He pushed Arup (the engineering firm on the project) to see it."

Today, reported Miller, the High Roller – which, at 550 feet high, earned a place in the Guinness Book of World Records for tallest observation wheel - is doing what it was intended to do in terms of earning a profit, high guest satisfaction and repeatability, and iconic status.

"It was game changing for Vegas," said Miller.

### **Game changer for New Orleans: Beyond All Boundaries**

"One of the things I didn't anticipate when I transitioned from the university to the museum world was the pleasure of working with creatives like Phil Hetteema," said Nick Mueller, co-founder (with the late Stephen Ambrose) of The National World War II Museum, which opened in 2000 in New Orleans.

THG was still a young company when Patrick Gallagher [of Gallagher and Associates, designer of the museum] introduced Mueller to Hetteema in 2002. "But I knew Phil's reputation and work, and I wasn't afraid of taking an experiential approach," said Mueller. In the planning charrette for what would become the 4D multimedia experience, "Beyond All Boundaries," which THG would collaborate with the museum to develop, design and produce, Mueller shared his idea of "a theatrical cinematic experience that would be beyond all boundaries... my own

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In *Beyond All Boundaries*, Japan is burning, and the audience feels the “heat” with foggers, lighting and layers of projection. Courtesy of Electrosonic

sense was that nobody had done a cinematic experience that was epic in quality to match the story we were telling – though I had no clue how to do what I had in my mind. It had to be authentic and true to story. You cannot do World War II in 20 minutes. Phil said, ‘It will be whatever it has to be.’”

As Mueller reported, “Phil could explain to a layman who doesn’t understand the technology how he could do it. And he had a personal stake: his dad was a World War II veteran. ‘I can’t get this wrong.’ He had a deep affection for his father’s story.”

Tom Hanks joined as executive producer. Hetteema put together a creative team to deliver a project that integrated media, set pieces, lighting, sound and effects. “*Beyond All Boundaries*” stands today as one of the great examples of how themed entertainment tools and process can deliver a compelling, authentic educational experience.

“Phil is one of the most creative minds that I’ve encountered in the museum world or the attraction world; he immediately gets the core of the story,” said Mueller. “He is a wonderful storyteller and knows how to use technology to enhance the story in a powerful way. He listens to the client very carefully, and amazes you with what he comes back with. He’s a genius, an amazingly gifted individual.”

There was a lot riding on the success of “*Beyond All Boundaries*” when it opened in 2009, four years after

Hurricane Katrina had devastated the city. “We were taking a big risk on one signature attraction, and it had to be equal to some of things I’d seen at Universal and Disney World,” said Mueller.

Today, the show continues to run in its 240-seat, custom theater, seven days a week, 6-7 times a day to rave reviews. “*Beyond All Boundaries*” has been seen by some 4 million people to date and is a success on all fronts. “People come to New Orleans just to see it,” said Mueller. The show has been honored by TEA with a Thea Award for Outstanding Achievement, and by AAM with a Gold MUSE Award.

The Hetteema Group has been re-engaged to create a central experience for the museum’s new Liberation Pavilion, a permanent exhibit space addressing the legacy and consequences of the war, targeted to open in 2019-2020.

### **An icon for New York City: One World Observatory**

“One World Observatory is the kind of project we love to do,” said Phil – “one in which the audience brings an emotional connection or expectation, and we either satisfy that and/or take them to a new place. It’s the kind of project that makes me look around, pinch myself to make sure I’m not dreaming, and be deeply grateful and amazed.”

There were special challenges with story, concept and positioning in a project so connected to the destruction

of the World Trade Center. “Here’s this world event of incalculable importance and gravity,” said Hetteema. “Everyone who walks into this place is going to have 9/11 firmly in their minds. But from the beginning, the brief was that this was not a project about 9/11 per se. The 9/11 Memorial Museum is next door. The One World Observatory experience was to be about looking forward, about the notion of rising up again and thriving in the face of what had happened. We had to find a way to deal with that subtext without overtly stating it.

“We created a story around what was basically a view experience – an elevator ride and a great view,” said Phil. “I like to think that we were pretty successful, and that One World Observatory is a pioneering project.

“The key phrase is See Forever – to give a notion of what the future is or can be about – a context for thinking

one’s own thoughts. We worked hard to put the World Trade Center into a longer context, from the elevator to the ‘reveal’ moment at the top. All those things combine to form the guest experience, and it’s been great to see visitors – New Yorkers and tourists alike – connect with it on a profound level and respond to the emotional message.”

One World Observatory opened at One World Trade Center on May 29, 2015. It has been honored with a TEA Thea Award for Outstanding Achievement.

### **Behind the walls of THG: The company consortium culture**

One of the secrets of the “secret sauce” is that it is not secret. Hetteema is a great team leader, and that means collaboration, and sharing the wisdom and the knowledge.

## **In Phil's own words**

### **Storytelling and technology**

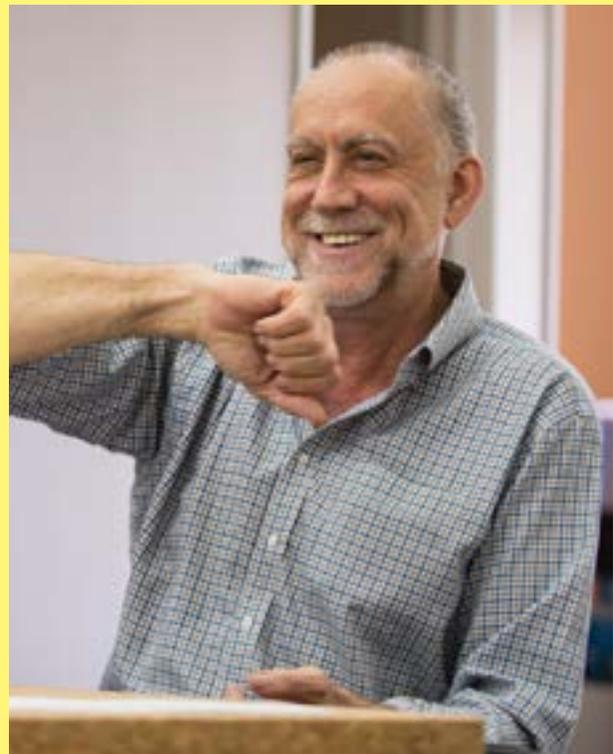
“To be good at what we do, we have to become the simplest storytellers we can; it can be powerful but must be told simply and directly. A new technology or toy is nothing more than another brush in the paintbox. If you are designing an experience based on the technology alone it is almost guaranteed to be obsolete by the time it is built, and in five years, totally lame.

“The real question to ask is, ‘How do we create this experience in a way that really connects?’ In this age of media noise, people are so hungry to have experiences that reach in a little bit deeper. That shared experience will always be the secret sauce of what we do. The power of group activity comes from how we relate to each other while we’re doing it.”

### **The global industry**

“The international aspect of our business is really fascinating, and far from simple. There’s a whole cultural exchange component to it. In our careers, we are fortunate to have traveled so much and to have lived in other countries. Working on an entertainment project overseas is a very meaningful and compelling exchange, very challenging from a business viewpoint and even a process viewpoint.

“While humor and drama and tradition and other cultural factors vary from country to country, there is still a common element: that very deep longing to connect to



one another. Sometimes you have to take someone out of where they are at – and that might even include traditions too – to break through, and enable people to discover something new – and to discover one another in new ways. We all want to be seen by the people around us and to connect with them. It’s almost as fundamental as eating.”



One World Observatory combines a fast elevator ride with panoramic views over Manhattan, all augmented by technology.

Many members of Phil's team have decades of experience in theme parks and ties to theater as he does. Each brings individual expertise and vision. But they also all carry the flag of the project culture he has created.

The power of the team is part of the secret sauce. This is validated in how colleagues and clients speak about their project experiences, in how Phil's team members talk about him and the company, and in how the company has grown over 15 years and achieved so many iconic projects considered game changers of the industry.

THG is steered by Hettema with Debbie Saale (general manager) and Anthony Pruett (senior vice president) and its staff includes some very distinguished names indeed, some who might be considered legendary figures of themed entertainment. The company makes a point of bringing in younger talent as well and cultivating an atmosphere of mutual respect where perspectives and experience are shared across disciplines as well as age groups.

The company staffs up and down as required by its projects, maintaining a core of about 50 people. Last year, the count was up to as many as 115 people. Over the years, the THG footprint has expanded within Pasadena, from the original office at 67 Valley into adjoining and nearby buildings.

As key components of the "secret sauce" are being multidisciplinary and collaborative, having the various disciplines represented under one roof facilitates communication, understanding and speedy results.

Said Joe Lanzisero (senior creative director), "These days, as media and architecture and experience all blur, it's hard to draw lines. You can't think of them separately as box

and experience. We've got to be an integrated team from the word 'go' - we can't figure stuff out 'later.' I've been in this industry a long time, and honestly I have never worked with a more collaborative group."

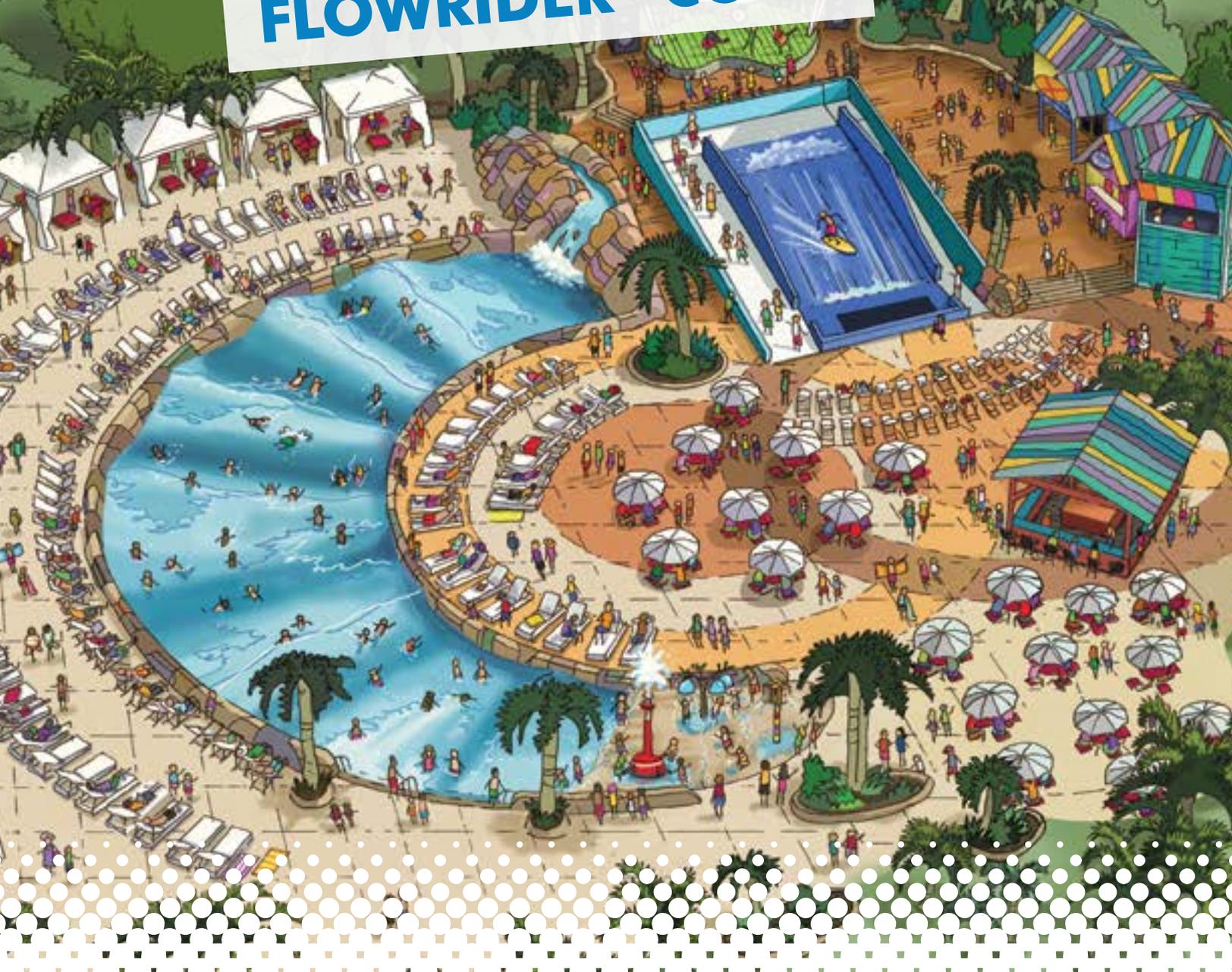
Lanzisero explained how THG's in-house facility design group, headed up by Jodi Roberdes (director of facility design services) and Sunnie Burke (executive architect) allows the creative group to immediately sit with the people who can make a 'crazy idea' a reality. Roberdes said, "The multidisciplinary approach feeds the workflow throughout the team. We truly collaborate across those disciplines throughout a project. It's a seamless, real-time process. I have been here going on nine years and in my mind, what this approach does for THG, besides understanding codes and facility, is to support the creative department however we can."

"Phil has built something bigger than himself," said Lanzisero. "He has infused this place with philosophies of design, empowerment of people, allowing them to be the best they can be, providing the most focused critique and insights into what you're doing, based on years of building things and working with people. Deep in his heart, Phil is a showman first, understanding how to entertain people and put that sense of entertainment in whatever we do, engaging guests into the experience."

Scott Sinclair (senior creative director) said, "It starts with management - with Anthony and Debbie and Phil, and trickles on down. We all embrace it because it works so well. We all feel like we matter because we do, all the way across the board. It's a pretty fundamental part of our culture. Phil is just a good guy: It's that simple. He has a reputation for being a good guy who does the right thing. We see it on a day-to-day basis and we all try to emulate that. It's a win-win for everybody." •

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# Are you being served?

The video servers that feed media-based attractions

by Dawn Allcot

Video servers are a crucial component in today's media-based attractions. Whether guests are watching a 4D show on a giant screen or a seasonal exhibit such as SeaWorld's Sea of Trees, video servers feed carefully choreographed, perfectly timed video images and/or lighting cues to display devices.

"Today's video servers have transitioned from simple playback devices, as the need emerged to accomplish more with them," says theme park design consultant Roger Bates, based near West Palm Beach, Florida. "Previously, a control system would send a signal to a video player, and that player would play the specified video file. Then, servers emerged with the ability to not only receive commands but send out control commands. In some instances, these new servers can act as the only control device and eliminate other pieces of equipment."

In the attractions industry, it pays to know a bit about how these boxes operate, what they can accomplish, and how to choose the best video server for any given attraction. Whether you're designing the technology systems for the attraction, making or approving the purchasing decision, or managing the attraction, understanding the video server will offer insight into a critical technological element of any application.

The video server plays a big role in an attraction's usability and upgradability, versatility and, of course, can affect the theme park visitor's ultimate experience at the attraction.

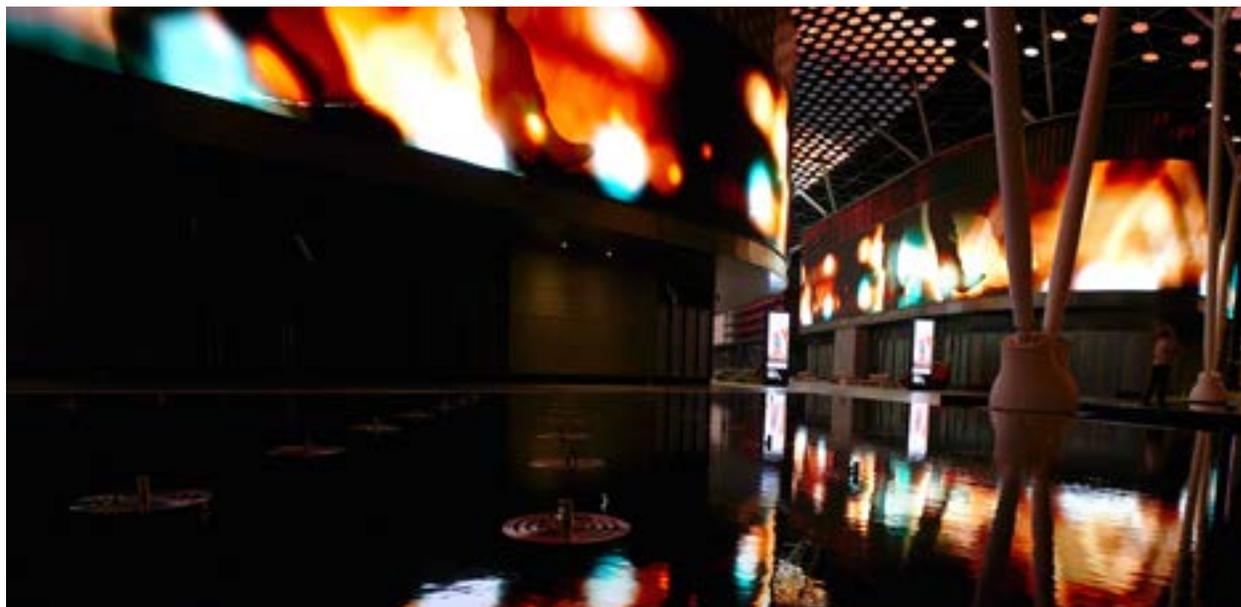
## Server or Processor: What's The Difference?

"It's important to understand the evolution of video servers," says Scott Arnold of TechFulcrum, a theme park technology designer and consultant based in Palm Beach Gardens, Florida. "Servers have come a long way in the past 10 or 12 years, from a box that basically just played back video on demand."

Today's servers add processing capabilities, eliminating the need for two separate components on many projects. A server, essentially, combines storage and processing in one unit, to provide cost-savings and eliminate common installation hassles that occur when two pieces of equipment between two different manufacturers aren't compatible.

Fewer boxes means fewer components to break down, reduced cooling requirements, less rack space required, and, in most cases, an overall lower price of installation. "If there's playback and processing involved, a lot of times you can do it in one server box and reduce your costs," says Arnold.

Christie Pandoras Box Managers keep over 100,000,000 pixels of content in-sync at City Walk Dubai. Photo courtesy of Float4



## A sampling of video server options

**7th Sense Design** produces the Delta Media Server range for theme parks, live events, museum and visitor attractions. From video walls to digital domes, to 3D projection mapping onto buildings and other surfaces, these servers are said to provide video display resolution up to 16K in any aspect ratio. Described as providing versatility and flexibility, with real-time editing and a host of built-in effects, users can drive up to 16 display outputs with the Infinity media server model – the range's flagship solution. Multiple Delta servers can be synchronized for large format, or complex displays. Ultra-fast hard drives facilitate streaming of uncompressed 4:4:4 media. The product is said to support ultra-high frame rates and high bit-depth onto even the largest of displays.

**AdTec Digital** manufactures the Soloist-HD Pro, billed as a broadcast quality, high definition MPEG2 and AVC decoder. With a 160 GB hard drive, the unit is said to be ideal for small theme park attractions, museums, and digital signage applications. The unit supports a variety of video outputs, and includes a single stereo channel of Dolby Digital, Dolby 5.1, MPEG 1 Layer 2 and AAC-LC audio. AdTec also produces the signEdge digital media player, which automatically scales content to match the output target up to 1080i60 for HD playback. Users can deploy and synchronize multiple players on the same network.

**Alcorn McBride** is the source of the venerable A/V Binloop Uncompressed, a purpose-built product designed to provide high-quality uncompressed video playback without sacrificing reliability. The player boasts solid-state design, pixel-accurate video synchronization and a vast array of flexible playback features. A single unit provides up to 8 sources of 2K60, 2 sources of 4K60, or a single source of 4K120. With its genlock capability, multiple units can be easily combined to achieve higher resolutions and higher channel counts. The included SDI outputs allow for easy signal distribution directly to projectors and displays without the need for extenders. For the best experience, this product integrates seamlessly with Alcorn McBride show controllers, such as the V16Pro, to precisely synchronize video with show elements like lighting, ride control, animatronics, etc.

**BRAINSALT** bills its B6 line of audio/video servers as providing real-world, live control or programming using the Conductor interface with the company's ProCommander show controllers and Pro I/O modules. With features such as automatic projection calibration for multi-projector displays, image warping, blending and remote monitoring, BRAINSALT's media servers are said to provide a robust solution for any project. The servers support uncompressed 10 Bit 4:4:4 video playback with up to 120 FPS in RGB mode, with up to 4K resolution per output in 2D or 3D. The server can process content up to 32K x 32K resolution.

**Christie** offers Pandoras Box, the award-winning real-time video processing and show control system, and part of the expanded line of media tools from the renowned projector manufacturer. The Pandoras Box Server, the flagship of the line, is described

as supporting uncompressed video up to 4K resolution and playback at 60 frames per second. And the top-of-the line OCTO Server provides up to eight outputs from a single server at full-bandwidth without compromising performance. Features such as 3D compositing space that allows for projection onto any shape and any surface, as well as unlimited video layering, allow designers to unleash their creativity in complex applications. All Pandoras Box Servers can be configured to order so customers can meet the specific needs of almost any application.

**d3** video server lines are characterized as having seamless collaboration, always-on visualization and precise control. The manufacturer provides three distinct levels of server: the top-of-the-line gx 1 and gx 2 models; the pro line, which includes the flagship 4x4pro and the new 2x4pro; and the entry-level plus line, designed for smaller venues and applications. Key differences include storage capacity, speed and processing power, resolution capabilities, and effects. While the 4x4pro is positioned as a top choice for many large venues, the gx line is built to help designers create a fully immersive and interactive audiovisual experience.

**Dataton** manufactures a line of video servers from the small WATCHPAX to the larger WATCHMAX. These servers run WATCHOUT multi-display software, which can also run on any properly configured computer. The WATCHOUT software is designed to provide capabilities such as 3D mapping, visualization, real-time effects, and external inputs and triggers for interactive shows and events. WATCHPAX2, 4, and 20 are portable, plug-and-play units with two WQXGA outputs, four 4K outputs, or two 4K outputs, respectively. Units can be networked for larger projects. License dongles are built into WATCHPAX units, but can be purchased separately for use on third-party computers.

**Green Hippo** Hippotizer Media Servers provide a robust feature set including real-time playback, 3D projection mapping and PixelMapper, a popular component that aligns thousands of light points, quickly and easily with onboard media management. All Hippotizer Media Servers run on ZooKeeper software. This proprietary software includes a built in 3D visualizer with the ability to simulate an entire multi setup system on a single machine. Servers include the top of the line Montane+, supporting media formats greater than 8K and the most processing power for real-time generative content. Other Media Servers in the range include Taiga, Boreal, Karst and Amba with ranging outputting options.

**VVV** manufactures three distinct media servers marketed as appropriate for any application, with competitive capabilities. The all-in-one Photon media server is said to offer real-time 3D scene rendering, and real-time, uncompressed editing and compositing. The Photon is described as advanced in its capabilities yet with an intuitive, user-friendly interface, hailed for flexibility and efficiency. The Xenon provides many of the same capabilities as the Photon, including the power of architectural mapping, while the Tachyon is a compact media server designed for smaller projects.

While some servers offer only basic capabilities, taking cues from a control system to play video, others go well beyond. “There are some things today’s servers can do that a processor just can’t accomplish,” says Arnold.

For instance, the Lake of Dreams show, at the Wynn in Las Vegas, which opened in 2005, used what was considered groundbreaking technology at the time. PixelMAD software drove low resolution video and converted it into 24 universes of DMX to drive LED lighting fixtures arrayed across the bottom of the lake. “Now, features like this are available from a variety of manufacturers,” says Arnold.

### **Top features on today’s servers**

Many of today’s video servers offer auto-alignment and auto-correction, which can reduce installation time when using multiple projectors on an uneven surface. The integrator can arrange the projectors so the images line up “close enough.” Then one or more cameras connected either to the server or a secondary computer capture images and provide data so the server can automatically adjust image alignment.

Because the projection equipment and projection surface, as well as the building itself, may move over time due to vibrations and settling, this feature also reduces maintenance by eliminating the need for manual recalibration.

Bates mentions pre-visualization as another time-saving feature. “In previous years, a production company would create animations of the production. Now, you can bring in a 3D model of the space and create the show using the video server. For very large projects, it can reduce overall costs because you’re not doing the work twice,” he says. The 3D model playback translates to the real world, even as far as mimicking the lighting at particular times of the day at a specific time of year.

Other common features include edge-blending, or the ability to merge the images from multiple projectors onto a single, large canvas; screen-warping to project on multiple or uneven surfaces; or color correction.

Theme park designers may also want to consider overlays and washouts, which are impressive visual effects accomplished through a video server.

# RELIABLE KEY TECHNOLOGIES FOR MEDIA BASED ATTRACTIONS

UNCOMPRESSED MEDIA SERVERS - CAMERA BASED CALIBRATION - REALTIME SHOW CONTROL





The 5D Castle Theater at Chimelong Ocean Kingdom uses BRAINSALT's playback servers and camera based auto alignment for this system. BRAINSALT's realtime show control software "Conductor" was used to program the entire show. Photo courtesy of Kraftwerk Living Technologies

A few years ago, Arnold and his team designed the Outdoor Adventure Center Museum in Detroit, using video layers to display a diorama of a Michigan wetlands. [See "Up North, Right Downtown," InPark issue #60.] Guests can touch images of birds on a reader board to trigger audio and video of specific native birds. "We accomplished this immersive experience using a video server communication back to a master control system and layers of video, so that no matter how many birds people are touching, the appropriate bird will fade in, and many birds can be displayed at once," says Arnold.

### Choosing the right video server for the job

Having a good idea of project requirements before you start shopping can help you save money on your server.

"Sometimes it may be better to alter the overall design approach than it is to force your way into a certain server that costs more," says Arnold. Many times, you can change a few parameters of a project while still executing a certain vision. Arnold recalls one circumstance when reducing the size of a giant LED screen by merely half a meter reduced the number of video channels required and lowered the overall cost of the project substantially. "That extra half meter sent us over a certain threshold. By making the screen just a little smaller, we showed the client a significant monetary savings," he says.

It's also important to consider the resolution requirements. "If you're showing an image on a 1080p screen, you don't need 4K playback. But if you have a 4K screen, you don't want to play 1080 content on it because you're wasting

money," says Arnold. "You need to match the resolution of the server to the screen."

Also think about your output requirements. "If you only have one display, buying a server with four outputs may not be worth the money," adds Arnold.

Many servers provide both audio and video outputs, which can reduce overall costs and rack space for a project, but more complex shows may require separate audio processing and playback.

### Storage space: Finding the sweet spot

Because storage can be expensive, the length and complexity of the show may also drive your server choice. "Balance the amount of storage space you're buying with the amount of content you expect to play back," advises Arnold. "Allow yourself a little bit of headroom, but don't overspend on storage you don't need. If you have a 20-minute attraction, you don't need six hours of storage. You might want one hour."

However, Bates notes that it's also worthwhile to consider future-proofing your system in order to easily incorporate new ideas and shows. "We always assume the client thinks they will use the server one way, but as they learn the software and begin to understand its capabilities, they use that to their advantage to do more."

One way to balance needs and budgets is to look at removable storage. "We may want to be able to swap out a hard drive or use a Network Attached Storage device or



Alcorn McBride's A/V Binloop Uncompressed. Photo courtesy of Alcorn McBride

Storage Area Network, which provides an extremely high data exchange rate,” says Bates.

### Backups, Programming, and Total Cost of Ownership Considerations

If you're storing data, you're going to need backups to keep your attraction running and your visitors happy. Every project should be evaluated based on maximum acceptable downtime.

“Some projects have built-in failovers,” says Arnold. “For other projects, it may be enough to have a cold spare in the equipment closet. Other projects, it might be acceptable to wait for a shipment of a new drive. The options range from fully redundant to data stored on a thumb drive or portable hard drive.”

Arnold recommends following backup best practices, which means having both onsite and offsite backups. But more complicated servers, with hours of programming invested in the system, may want more reliable backup, such as in a private cloud.

The programming, back-up systems, and the cost of parts such as power supplies that may need to be replaced all factor into the total cost of ownership when selecting a server.

Manufacturer, integrator, or consultant: Who do you need? If you need help determining where to cut costs and where to spend to your budget for a video server, a design consultant may be able to help.

Arnold describes the differences between a manufacturer, an integrator, and a design consultant this way: “The manufacturer builds things and, therefore, wants to sell those things. There's nothing wrong with that. But if you

go to a manufacturer and ask for a solution, the tool they will provide for your nail is going to be their hammer.”

Similarly, an integrator's job is to sell products and services. Integration firms may specify products based on the lines they sell and the products they are confident they can install.

A design consultant, on the other hand, has no profit motives to recommend brand A over brand B - although their personal experience and biases may factor into the decision. “Consultants have no outside motivation but to serve the client and make sure they have the best experience possible.”

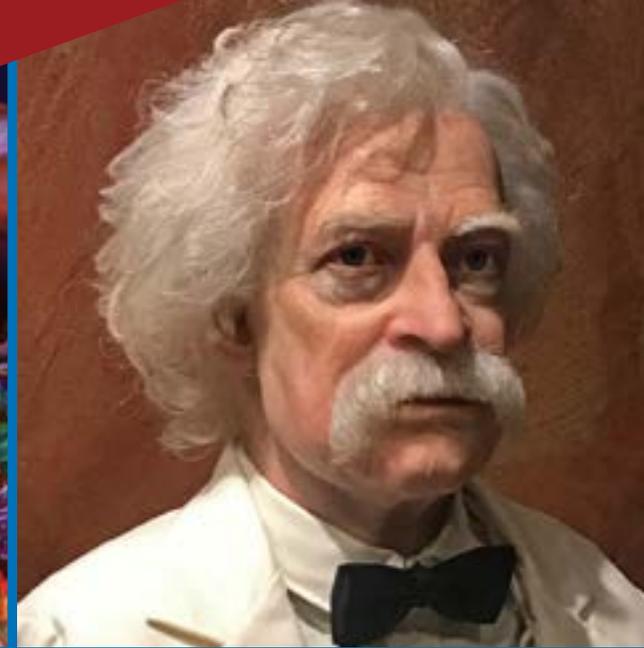
Understanding the different perspectives of integrators, manufacturers and design consultants helps you assess the information each gives you as you research your server options. “There are very few circumstances where there is only a single solution. Most times, there are multiple ways to accomplish the technological challenge,” says Arnold.

Video server technology has advanced exponentially in recent years, making it easier to design shows and maintain venues. Whether you are programming a show that changes daily, or running content that remains the same for years, the right processor should give you the speed, storage, and capabilities to “wow” the crowd every time. •



Dawn Allcot (dawnallcot@gmail.com) has been a freelance writer in the audiovisual industry for more than 20 years. An avid theme park enthusiast and roller coaster fanatic, Dawn loves sharing the stories of the technology that makes her favorite rides and attractions possible.

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Geoff Thatcher working with producers from The Brand Experience at StudioEIS, a sculpture studio in Brooklyn in May 2017. Geoff launched his own company, Creative Principals, in July 2017. Photo Credit: Elliot Schwartz

# Former amusement park cleanup boy makes good

Meet Geoff Thatcher of Creative Principals

by Judith Rubin

Who knew? The folks at Lagoon Amusement Park knew. “Geoff always had it in him, even when he was 14. We all knew, ‘this kid’s gonna do something great.’”

That’s what Lori Capener says when she talks about Geoff Thatcher today.

Many in the attractions industry first learned the ropes in various facets of park operations in their student years, and from age 14, until his graduation from Brigham Young University with a degree in journalism, young Geoff worked at Lagoon Amusement Park in Farmington, Utah.

He embarked on a newspaper career, but missed the world of the park. “I was used to a place where people were happy and wanted to make others smile,” said Geoff.

It had gotten into his blood. Geoff has a knack for creating long lasting relationships, and in the years since leaving Lagoon, has remained in close touch with Capener, who recently retired as art director of the park, and was

Geoff’s former supervisor. She and others from the park administration have followed Geoff’s career with interest. They weren’t all that surprised to see him move out of journalism and take his skills back into the industry that had won him over.

Capener described teen Geoff as a “go-to guy, a great kid who worked really hard and did a lot of things for the park. Other than the food I don’t think there’s anything he didn’t touch. He drove our train, served as lifeguard and deck hand to our old, million-gallon pool before we had a waterpark, worked with the animals at the small zoo. He got ready in spring, cleaned up in fall, worked in water areas and merchandise. He could be counted on to do just about anything; he was creative and helpful, and always there when you needed him. He was always ready and willing to do whatever new thing came down the chute, and he was good at motivating others. He was rarin’ to go.”

At least some of these qualities - along with his affection for the industry - showed through when, for a Cincinnati paper in 1994, Geoff interviewed Keith James of Jack Rouse Associates (JRA) for a story (James is now president and CEO of the company). That meeting led to a job offer. Geoff stayed seven years with JRA, and his last title at the company was senior writer and producer.

At Lagoon, Geoff had absorbed everything he could about the operations side of amusement parks; at JRA, he would be exposed to the creative side of the business at one of the top design firms in the industry.

### **The Experience Model**

It was a time when “story first” became the rallying cry of themed entertainment; when storytelling was recognized as the primary driver for the creation of visitor attractions.

“Jack Rouse inspired us all to put story first,” said Shawn McCoy, a colleague who started at JRA close to the same time as Geoff, and is now vice president of the firm. “It was a big deal in the 1990s, and it’s a big deal now. Our job is to be audience advocates. Geoff gets that.”

In 2002, Geoff transitioned into the related and growing field of brand experiences and enriched that sector with the storytelling approach that informs successful themed entertainment projects. His new clients appreciated his positive, enthusiastic attitude and laser-focused dedication, just as his former clients had. “Geoff is passionate, hard-working and high-energy,” said McCoy. “He understands about protecting a brand and a character and an IP. But the thing that makes Geoff one of the best at what he does is that he can get to the heart of a story – the emotional takeaway.”

Geoff achieved success with his branding clients - such as Honeywell, Lockheed Martin, Kaiser Permanente, IBM, and University of Phoenix - by applying what he calls The Experience Model. By now, this model may be so embedded in the themed entertainment community that it’s almost taken for granted, but Geoff Thatcher doesn’t. “The Experience Model and the deeper psychology behind it is something really special,” he said. “It’s genius. Give me any experience that doesn’t work right; I can apply this model and find what’s missing”

The Experience Model has five parts: Icon = Attract, Queue = Trust, Pre-show = Inform, Main Attraction = Internalize, Exit Experience = Act. In the corporate branding world, the formula materializes somewhat differently from an entertainment attraction - it’s story, sequence and flow that matter. “We forget sometimes that a queue isn’t just about a line; it’s about creating an experience where you can build anticipation in the mind of the visitor, and - most importantly – trust,” said Geoff. “And where retail often represents the exit experience in a theme park attraction, in a brand experience it could well be a briefing room where a deal is closed.”

### **Back to attractions**

By 2008 - and after a brief stint working on the opening ceremonies of the 2007 Rio Pan American Games as a video producer - Geoff was executive creative director of The Brand Experience. He stayed there until June 2017.

Over the years, brands and IP have assumed a new prominence in entertainment attractions, taking three-dimensional form as part of multifaceted, multiplatform licensing and sponsorship schemes. This evolution has led Geoff back to the heart of the attractions industry

## **Creative leadership and the pitch**

One of Geoff’s key strengths is the pitch. “The pitch and the presentation are something I excel at and love to do,” he said. “I love to go up against the best in the industry – I love the experience whether I win or lose (but of course I most love winning). I find it joyful, and on a personal and professional level, it’s just very rewarding to do this work. My strength is in creative leadership. I’m a big fan of words and meaning – I am a writer, storyteller, creative director, and art director who works with designers. The reason my company is named Creative ‘Principals’ is that a principal is a leader – someone who excels at what they do. If you have a project that needs creative leadership, that’s where I want you to call me. I can put the team together and bring the pitch. My career is about taking projects from concept to reality.

“Whether I work as a hired creative gun for a larger agency, or directly with a client, the bottom line is these experiences still need to be designed. My clients include design firms, production companies, ad agencies, fabricators and the end client - any group that might be putting together an RFP. I’m obviously very well suited to work on a brand project, but museums and theme parks are also primary markets.”

**For more information, visit [creativeprincipals.com](http://creativeprincipals.com). Geoff will be attending the 2017 IAAPA Attractions Expo in Orlando this November; you can connect with him on Instagram, Twitter and LinkedIn or email at [gthatcher@creativeprincipals.com](mailto:gthatcher@creativeprincipals.com)**



Geoff, as a 22-year-old stage manager in the Entertainment Department at Lagoon Park in Utah. Photo courtesy of Lagoon Park

and to renew some former working relationships. “I’ve been fortunate to work with JRA, Granaroli Design & Entertainment, Balich Worldwide and The Producers Group on a number of amazing projects since June,” he said. “It’s felt very natural to return - it’s been fantastic! I love brainstorming, conceptualizing, sharing ideas,

working within great teams, and meeting the objectives no matter how fast the pace or intense the deadlines. We’ve won some pitches and delivered on some very successful projects.”

Now, as founder and Chief Creative Officer of his own company, Creative Principals, Geoff is poised to continue on this path.

“Geoff took the storytelling approach into the brand space, and now he’s back helping apply it for branded and IP experiences in the themed entertainment space,” said McCoy. “It goes both ways. Brands and IP are now actively on board for storytelling experiences in a new way; that helped take Geoff full circle, back to the entertainment world, delivering the power of story to the brand and vice versa.”

Adult Geoff Thatcher today brings the same enthusiasm to his work that teenage Geoff Thatcher brought initially, years ago, to Lagoon Amusement Park - whether it was cleanup, feeding the animals or writing titles for training slideshows. “The thing about a park is that you work long hours, and do whatever comes your way,” said Capener. “Not every teenager wants to do that; that’s why Geoff was such a find. Today, he is doing exactly what he should be doing.” •

### Kaiser Permanente: Total Health

Kaiser Permanente is one of many clients for whom Geoff put The Experience Model into practice, during his tenure with The Brand Experience. The Kaiser Permanente Center for Total Health endeavors to educate industry leaders, employers and health care consumers about “total health,” a perspective that includes how someone interacts with their environment, their community and other socio-economic factors in addition to clinical care.

“Geoff has a great mind; he can really help translate what the bigger vision is by a CEO or CFO, and bring it down to a conversation that anyone can understand and convey what the major areas of focus are for an organization,” said Keith A. Montgomery, Executive Director at Kaiser Permanente Center for Total Health.

The Center had been open about four years when they brought in Geoff and Brand Experience. “It was not really telling our story,” said Montgomery. “Geoff helped us think about what kind of story we wanted to tell and convey what we meant about total health. He conducted interviews with executives across Kaiser Permanente. He led discussions and design charrettes and helped us refine key messages and think about how to deliver them.”

The Center reopened in 2015 with an event for the Surgeon General. “We are more than competitive now,” says Montgomery. “It helps us share what we’ve learned and engage in bigger conversations not only around healthcare delivery but the big picture of health. We are reaching the next generation of healthcare leaders, and more than 95% of visitors rate us highly.” The 15,000-square-foot facility is receiving more than 5,000 visitors and hosting more than 200 meetings a year.

“Story first” clearly worked for this client. “Get your message down, get your story straight and then figure out the right way to engage people,” said Montgomery.



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# Truly, virtually, Birdly

Birdly VR soars into Orlando for the IAAPA Attractions Expo

interview by Joe Kleiman

In the attractions industry, there are coasters and flat rides and simulations where guests are maneuvered into position and taken through the air, given the sensation of flying. One thing these rides can't offer guests is control over where they go. In a new virtual reality simulator called Birdly®, riders lie prone on a platform, arms extended, as if they're flying through the air. This is augmented through a combination of motion control, virtual reality, 3D sound, and environmental effects to create an experience in which the user is free to "fly" through a virtual landscape, in whatever direction is desired.



Birdly VR users soar...virtually. Photo courtesy of D3D Cinema

Developed at the Zurich University of the Arts, and distributed in most global territories by D3D Cinema, Birdly has been well received in the museum and zoo markets and has been installed in a number of leading institutions, including the Tech Museum of Innovation (San Jose, CA) and Houston Museum of Natural Science. Birdly has also made appearances at the Sundance Film Festival and SXSW, where it proved to be a popular attraction. This year, Birdly makes its IAAPA Attractions Expo premiere in Orlando, marking its introduction into the wider attractions market.

We spoke to Tom Rooney, Birdly VR Director of Sales and Marketing for D3D Cinema, about this singular, new virtual reality platform. – J.K.

## What differentiates Birdly from other VR simulators?

Most other VR relies solely on a headset to generate images and sounds, while Birdly is a full body experience. The visual, aural and haptic wind sensations combine with a motion table to create a motor-sensory coupling that is extremely realistic. What's more, Birdly is almost as much fun to watch as it is to fly, creating a rare 'social VR experience.'

## You're introducing Birdly to the attractions market at the IAAPA Attractions Expo. What advantages would this product deliver to an attraction or park?

Like much of the VR industry, Birdly has proven to be a very popular – and financially lucrative – attraction

wherever it's installed, drawing long lines and generating considerable social media buzz. The museum, zoo and aquarium market has generated incredibly strong response and so we're scaling into various commercial and attractions segments over the course of the next year. We can create custom experiences for the platform – from cities to dinosaur environments to branded IP content. It's truly an exhilarating and memorable way to explore any virtual world.

## Giant Screen Films and its sister company, D3D Cinema, have to date been primarily focused on immersive cinema production and distribution, along with theater systems. How does Birdly fit into the company's business plan, and what other types of products is D3D looking at for the future?

For over 20 years, Giant Screen Films' mission has been to create immersive content that inspires, challenges, and enriches the imaginations of audiences. D3D pioneers cutting-edge, immersive technological solutions to tell these stories, so Birdly is a natural next step in the mission of both companies.

Birdly will be demonstrated at the D3D Cinema booth (#684) at the 2017 IAAPA Attractions Expo. More information: [www.d3dcinema.com/birdly](http://www.d3dcinema.com/birdly), [birdly@d3dcinema.com](mailto:birdly@d3dcinema.com). •

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Rando Productions designed and built a dramatic splitting staircase for "Dancing with the Stars." Photo courtesy Rando Productions

# From floats to starships

Rando Productions and the action behind show action

by Joe Kleiman

**I**t's a brisk evening at Disneyland the day after Thanksgiving 2016. I'm watching the Paint the Night Parade and chatting with the family next to me. We fall silent when the next float begins to round the corner. It's colossal: a giant semi-truck from the Disney-Pixar film "Cars," with a full-sized trailer hauling a load of magical, pulsating light. The youngest child in the family looks in bewildered amazement as it passes us by, saying, "Whoa! How'd they do that?" His father, a mechanical engineer, responds with a grin, "I wish I knew. I'm going to try to find out."

In the 1980s, that same type of determined curiosity spurred a young Joe Rando, a decorator on Rose Parade floats working toward a degree in electronics, to look beneath the decorations and discover a whole new world to explore - one where design and mechanism combined

to execute maneuvers, animation, and movement - what is known in the themed entertainment industry as show action equipment.

Founding Rando Productions in 1995, he launched into a wide range of projects - including more parade floats for more clients, including Disney. In fact, his company is on an official credits list for the Paint the Night parade. Paint the Night was honored by the Themed Entertainment Association in 2016 with a Thea Award for Outstanding Achievement.

In 2017, Rando's name appeared on another official credits list - this time for having worked on the recently opened - and Thea Award honored - Pirates of the Caribbean: Battle for the Sunken Treasure at Shanghai Disneyland.

### Dancing with the stairs

Rando's list of theme park clients also includes Universal Studios, Six Flags and others. Chances are, even if you have never heard of Joe Rando or Rando Productions, you have seen their work in theme parks, museums, trade shows, concerts, or television – in locations around the world. They are masters of the moving set, engaging pneumatic, hydraulic, or electromechanical mechanisms as needed.

Before blue screen and digital projection became commonplace, Rando was creating hydraulic turntables for car ads on TV. As he told *The Fabricator* magazine in 2014, “Back then it wasn't a digital world. It was all done in camera, and we were still building a lot of the large-scale effects.”

“The staircase that they designed for ‘Dancing with the Stars’ was amazing,” says industry veteran Rosalie Kessing, an expert in fabrication and special effects who ran marketing and business development at Rando Productions for many years. “It's a big staircase at one end of the set that then splits into two. It was all done with hydraulics and was very complex.”

The company's experience with automation also made Rando Productions a go-to supplier for such television shows as “American Idol” and “X-Factor,” and stood the company in good stead in other areas of specialized production such as museum exhibits and show action equipment.

### Lending a hand, supplying a door

When Hero Ventures produced and operated the first iteration of The Marvel Experience (a new edition of the project was recently announced) Rando and its facility were part of the elite production team that made it happen. This self-contained traveling exhibit, housed under a series of domes, allowed guests the experience of being an agent of Marvel Comics' elite S.H.I.E.L.D. law enforcement team. Set pieces for the attraction were done in-house by former fabrication house Lexington. The sets were then shipped to Rando Productions' shop in North Hollywood, California for extensive media integration by Electrosonic.

Rando's sizable facilities encompass a 30,000-square-foot main shop, a 65,000-square-foot secondary facility, and a 60,000-square-foot outdoor area for mockups. Floors are kept clear of hoses and wires used in assembly, all of which can be accessed from the ceiling via truss.

“Joe Rando is one of the pillars of our industry, and I've had the pleasure of working with him on many projects,” said George Wiktor, a well-known figure in themed entertainment design and production who produced Marvel Experience. “During the Marvel Experience setup, I was able to meet some of his crew and experience the capabilities of his shop. I found them to be as exemplary as Joe.”

Rando created a key suspense-and-rescue effect for the Marvel Experience. At one point during the journey, there

The Marvel Experience combined various media based attractions and effects in a series of domes. Image courtesy The Marvel Experience



is a simulated door malfunction. The door opens and closes sporadically, prohibiting guests from progressing on their tour. The Marvel character, The Hulk is seen on a monitor where he approaches the door via animation, finally appearing before the assembled guests. His hand appears around the door – Rando’s prop - and he dramatically pulls it open.

### Exhibitions and screens

Marvel Experience was not the first Rando Productions project to involve IP, and it’s far from the last, as the company is currently involved in more than one major theme park project based on a blockbuster film. Unfortunately, at this writing, contractual requirements prohibit disclosing more about them – but rest assured, you will likely be experiencing one or more of these projects soon.

Show action equipment is often a key component within multimedia environments designed to make a filmmaker’s creations appear to move in three-dimensional space. One prominent example Rando contributed to is Star Trek: The Tour, a 40,000-square-foot, traveling exhibition marking Star Trek’s 40th anniversary in 2007. In the Tour’s Encounter Theater, with mechanical and atmospheric

effects designed and built by Rando Productions, guests stood in a theater in the round, with projection screens surrounding them. They watched as a flat panel rose from the floor, “projecting” a hologram (actually, a hanging and rotating model) of a starship. Upon an attack from the Klingons, the flat panel reconfigured into a rotating tetrahedron, with screens on each of its eight sides in perfect sync with the exterior screens.

Another example is the show “Ghosts of the Library” at the Abraham Lincoln Presidential Library and Museum in Springfield, IL (this institution was honored with a Thea Award in 2005) a librarian meets the ghost of Abraham Lincoln and the two discuss artifacts in the museum’s collection, as those items come magically to life. The show uses a proprietary technology from producer BRC Imagination Arts called Holavision, a modern variant of the Pepper’s Ghost technique of projecting into 3D space. In order to create a sense of depth within the large stage area, BRC employed Rando Productions to devise and construct a series of large automated screens that could move in conjunction with the ghostly action on stage.

In addition to mechanical effects, Rando Productions also creates atmospheric effects that have featured in a number of leading attractions and exhibits, including “Harry Potter: The Exhibition” (created by GES), “Beyond All Boundaries,” a multimedia show produced for the National WWII Museum in New Orleans by The Hettema Group and executive-directed by Tom Hanks (and a 2011 Thea Award recipient) as well as flame effects on a lagoon for PortAventura, near Barcelona.

### Making the impossible appear real

To the team at Rando Productions, anything’s possible and they relish goals that are a challenge. According to Rosalie Kessing, “When the California Science Center in Los Angeles was awarded the Endeavor space shuttle, Joe and his team created prototypes for interactive exhibits about aerospace for the new pavilion. The goal was to make the exhibits appear as if they defied physics.”

As Kessing says, “Joe cares about his employees and he cares a lot about the industry, and it shows - because they love that their clients are always pleased with the final product, completed in a timely and professional manner.” It all goes back to those days of working on the Rose Parade floats and the curiosity of finding out how things work. It’s a curiosity that still exists with Joe Rando and his team at Rando Productions. And it’s why they attempt to create things never seen before and then strive to make them even better. •





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# Super 78

Two decades in business: Eight secrets of success  
by Robert Coker, Super 78

## Happy anniversary, Super 78!

Since 1997, Super 78 has grown into a leading experience creator, recognized for contributions in design, technology, animation and media production, with many awards to its credit and projects on five continents. Super 78 has partnered with iconic studios and their globally famous characters - including Universal, Nickelodeon, DreamWorks, Cartoon Network and Warner Bros.

Super 78 senior show writer Robert Coker spoke to company founders Dina Benadon (CEO and Executive Producer) and Brent Young (President and Creative Director), plus several of their distinguished colleagues and collaborators, to learn how a 20-year-old company keeps things fresh and on the bleeding edge.

.....  
It's a fall afternoon at Super 78's Silver Lake, CA offices. Several people sit in the bullpen wearing VR headsets. They're gazing in all directions, high and low, each extending and waving an arm into empty space. A couple of the headsets have googly eyes glued to the front plate. At a glance, it looks like avant-garde theater. Until you listen:

"The new coral shapes are awesome. Love the caustics on that fan piece."

"Victoria is looking a little chuggy." ("Victoria" is the nickname of a blue whale.)

"Can we add some more 'success' sparkle around the zapped trash?"

This is a daily test session for the company's newest attraction: "Reef Rescue," an innovative, high-capacity virtual reality (HCVR) experience. Set to open at Audubon Aquarium of the Americas in New Orleans in November 2017, Reef Rescue will take up to 16 guests at a time on a virtual dive to rehabilitate a stressed, coral reef environment. Guests will work together, using handheld "ranger" gear, to clean up garbage, plant coral, and feed fish.

## Lesson #1: Leave your comfort zone

("Besides being strapped in a helicopter flying 10 feet off the ground, which is already out of most people's comfort zone," mentioned Brent.)

"Every year, we do something we've never done before, building on what we've learned," said Dina Benadon.

Super 78 is an early adopter of technology and immediately embraced the Oculus Rift in 2012. After purchasing the first Oculus developer kit, they began developing custom applications, one of which became

MushroomVR, the company's proprietary pre-visualization system, which was an integral tool in the production of the "Lost Temple" Immersion Tunnel at Movie Park Germany, located in Bottrop. Brent Young collaborated with Riva Creative on the development of The Lost Temple, which opened in 2014. Since then, Mushroom VR has been a primary concept development tool for all Super 78 attractions.

Reef Rescue presents several new challenges. "We're jumping into the deep-end of the VR pool," quipped Brent. "Lessons learned in developing Mushroom have inspired what we're doing with 'Reef Rescue' – such as adding more users, more interactivity, more game design and more live animation rendering. We're throwing every one of our skillsets into this attraction."

"We've been collaborating with Super 78 since 2002, when we developed 'Awards Night' for the Insectarium together. We share similar values and that's why partnering on 'Reef Rescue' was a no-brainer for us."

—Jason White, Director of Media and Exhibit Projects  
Audubon Nature Institute

### Lesson #2: Reinvent yourself - again, and again...

The company has come a long way from its roots as a boutique media production house. "We call that Super 78 1.0," said Dina. "Our early motto, 'How hard can it be?' stemmed from our careers launching in the early days of computer animation and visual effects in the mid '90s. Being at the forefront of technology is where we feel most comfortable."

Super 78 had the opportunity to contribute to the effects and animation of "The Franklin Spirit" show created by BRC Imagination Arts for the US Pavilion at the 2005 Aichi World Expo in Nagoya, Japan. For this nine-screen, front- and rear-projected experience, the Super 78 team provided an onsite video mix. Mixing in the venue where the show will play has the benefit of allowing the creative team to enhance and fine-tune the media during onsite installation and get the experience exactly right.

In 2010, Super 78 expanded its creative aptitude to include attraction design. They produced "Donkey Live!" – a live, interactive character experience for Universal Studios Singapore - powered by Super 78's first version of Geppetto ACS, a proprietary digital puppetry system.

### Lesson #3: Keep getting the band back together.

In 2007, Super 78 began collaborating with SimEx-Iwerks and Nickelodeon. They developed three media- and IP-based projects together: two ridefilms, the 2010 release "Dora and Diego: Catch That Robot Butterfly!"

and the 2013 release, "SpongeBob SquarePants 4D: The Great Jelly Rescue," followed by the 2015 attraction, "SpongeBob SubPants Adventure," for Moody Gardens (Galveston TX). In 2016, TEA Thea Awards honored the latter attraction as well as the Geppetto technology on which it is based.

"The biggest challenge with relationships is time. We're all so busy these days. But repeatability and technology allow for more time to do the fun, creative work, especially on a short schedule," said Dina.

"And it allows you to add new 'band members' more quickly and smoothly on each subsequent project," added Brent.

### Lesson #4: Merge art and technology.

"Our background in IP-based attractions taught us a lot about maintaining a character's personality and brand integrity, especially for live interactive performances," said Brent. "That insight helped build Geppetto."

Since 2010, the company has continued to innovate Geppetto, adding such features as show control and branching storytelling game architecture. It was 'Geppetto 3.0' that was used to create and power the SpongeBob SubPants Adventure for Moody Gardens.

## Super 78 Recent Projects

**Reef Rescue** - Designer, Producer and Licensor  
High-Capacity Virtual Reality Experience  
Audubon Aquarium of the Americas, New Orleans, Louisiana  
Opening November 2017

**Alpha Flight** - Designer, Producer and Licensor  
Flying Theater  
Wonderla Theme Parks, India, 2017

**The Smurfs Village Playhouse** - Geppetto/Media Production  
Geppetto-powered Interactive Character Experience  
Motiongate Theme Park, Dubai, 2017

**Wings Over Washington** - Designer and Producer  
Flying Theater  
Miner's Landing at Pier 57, Seattle, Washington, 2016

**SpongeBob SubPants Adventure** - Designer and Producer  
Geppetto-powered Interactive Character Experience (Thea Award recipient)  
Moody Gardens, Galveston, TX, 2015

**The Forbidden Caves** - Designer, Producer and Licensor  
Immersion Tunnel  
Bobbejaanland Theme Park, Belgium, 2015

For Super 78, building and refining such tools as the Geppetto Animation Control System and Mushroom VR are simply a part of the process. “In this industry, art and technology are so intertwined, and we really have no choice but to get under the hood,” said Brent. “Fortunately, we’re good at it and we love doing it.”

“Collaborating with Super 78 on ‘Wings Over Washington’ was a great partnership experience. This company brings an enormous creative appetite to the table.”

— *Kyle Griffith, Co-Owner, Miner’s Landing at Pier 57*

“We’ve worked with Super 78 on several projects over the years, going back to ‘Madagascar: A Crate Adventure’ at Universal Studios Singapore. And I started my company because of a visit to Disneyland. So to honor Walt and assist the restoration efforts, we created and donated a spot-on replica of the front door of The Walt Disney Birthplace.”

— *Garner Holt, Founder and President, Garner Holt Productions, Inc.*

like ‘Pokemon,’ ‘Ben 10’ and ‘Family Guy,’ said Brent. “We had a staff of over 30 people, and a whole IT department. As we evolved into more of a creative studio - Super 78, version 2.0 - we realized that we didn’t want to do it all, and transitioned to a more efficient operation.”

Dina elaborated: “The casting for each project and team is essential; this is a valuable talent that Super 78 has honed over the years.”



Pier 57’s “Wings Over Washington,” an immersive, flying theater attraction that opened in summer 2016 in Seattle [see ‘Flying High,’ InPark issue #62]. Super 78 joined forces with a “dream team” of creative and technical partners: Dynamic Attractions; Garner Holt Productions; Great Northern Way Scene Shop; GP Color; Electrosonic; Yessian Music, composer Antonio Di Iorio, and the Sacred Water Canoe Family.

“We’ve had the pleasure of working with Super 78 for nearly 10 years now. They are some of the most creative, collaborative and passionate people in our industry. Super 78 just plain gets it.”

— *Brian Yessian, Partner/COO, Yessian Music*

**Lesson #5: Learn to conduct the orchestra, not just play a bunch of instruments.**

“At the peak of our media production phase, we were also doing a lot of broadcast work, for things

**Lesson #6: Think like an owner/operator.**

“Alpha Flight,” the newest flying theater project for Super 78, is set to debut at Wonderla theme park in India this winter. As Dina explains, “Alpha Flight’ will take guests on a wild ride through the universe, and is our company’s first all-CG flying theater attraction.” Passengers on “Alpha Flight” are civilian test pilots for a new faster-than-light spacecraft. Spoiler alert: the mission doesn’t go quite as planned...

“Beyond the normal creative scope, we also offered suggestions to improve flow through the queue, developed additional graphic elements for marketing and merchandising, and sourced budget-friendly equipment to create the preshow special effects,” said Brent.

“We look at every project from an entrepreneurial perspective, as well as a creative one. We try to do it in a way that makes for a better show and makes our partners’ lives easier, especially after our job is done,” said Dina.

“We enjoy collaborating with Super 78 on projects like ‘Wings Over Washington.’ Their 20 years in the industry comes through as polished, detailed attractions that clients and guests love and that we’re all proud of. Let’s do more!”

— *Cindy Emerick, Business Development, Dynamic Attractions*

**Lesson #7: Give something back.**

A passion project that has received a lot of attention in the press is the restoration of Walt and Roy Disney’s birthplace home

The highly themed theater at Wings Over Washington. Previous: Reef Rescue at The Audubon Aquarium of the Americas. Photos courtesy of Super 78.

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**Dina Benadon & Brent Young**

in Chicago. This modest, 1,200 square-foot, two-story cottage was designed and hand-built by Walt's parents Elias and Flora Disney in 1893. By 2013, the home was facing destruction. That year, Dina and Brent stepped in to restore it, and since then have stewarded its careful and historically accurate rehabilitation. Today, thanks to thousands of individual donations and a major grant from The Walt Disney Company, the home's exterior and interior are restored to their original states.

In 2015, The Center for Early Childhood Creativity and Innovation (CECCI) at The Walt Disney Birthplace was granted 501(c)(3) non-profit status and is the official corporate entity overseeing the restoration project. "CECCI's mission is to develop an outreach program that nurtures underprivileged children with the creativity and innovation that is inspired by the work we do in themed entertainment," explained Dina. "It's a great way to give back to the community and also honor the creative spirits of Walt and Roy."

**Lesson #8: Go a little overboard with entrepreneurship.**

We had one more question for Dina and Brent: "What do you do with all your free time?" Once the laughter died down, here's what they had to say.

"There are at least 10 new projects we would love to kick off," said Dina. "We've been developing an animated feature with the writers of Newsies and Tarzan that's really fun. Oh, and we're thinking about our next O-Zell soda flavors, perhaps some seasonal items and carbonated water," referring to The O-Zell Soda Company they started as part of the Walt Disney Birthplace project. ([www.O-Zell.com](http://www.O-Zell.com))

"We're continuing to expand what we can do with Geppetto by mixing it up with AR and holographic tech," added Brent. "We hope we'll have an exciting announcement about that soon."

Also in the works, they are developing a highly interactive escape room attraction incorporating Geppetto-controlled characters.

"It's really been an amazing 20-year ride and one that we share with so many incredible creative and production partners from over the years. We are so grateful to them, and we're forever excited about the future," said Dina.

"Sounds like a good excuse for a party," Brent added. Stay tuned! For more information, visit [www.super78.com](http://www.super78.com) or call 323.663.7878 •



Robert Coker just celebrated his fourth anniversary as the Senior Show Writer | Creative Development at Super 78. His latest projects include writing the attraction and guest experience scripts for "Reef Rescue," "Alpha Flight," and "Wings Over Washington."

**Did You Know?**

- Brent Young's impersonation of legendary Hollywood producer Robert Evans is so good that Evans himself approved Brent as his official V.O. stand-in (martini first).
- Super 78 executive-produced the first televised video game award show in 2002 with the AIAS and host Patton Oswalt.
- Brent Young was nominated for an Emmy for Character Design on "Ben 10."
- Super 78 has received 10 VES nominations for Best Visual Effects.
- Super 78's first Thea-awarded project was in 2001, for the animatic pre-visualization for "Revenge of the Mummy."
- Brent played lead guitar in a band called "Plastic Slap."
- Super 78 produces a soda line called O-Zell Soda.
- Super 78 produced the pilot episode of "Drawn Together" for Cartoon Network.
- Brent Young is a co-host of The Season Pass Podcast.
- Super 78 produced animation for over a dozen Pokemon commercials.

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# It's a dimensional thing

Expressive animatronics are making faces at the future

by Bill Butler, Creative Design Director, Garner Holt Productions, Inc.

Animatronics are expressive, caricatured collections of plastic and metal. Since their theme park beginnings at Disneyland in the mid-1960s, animatronics (in the modern sense, quite a ways from old-school automata) have sought to deliver performances of expressive immediacy, whether from songbirds or pirates or bearded presidents. Walt Disney, in his role of philosophical and fundraising father of animatronics, recognized that the new technology was merely the extension of the animated shorts and full-length films he pioneered and perfected decades before. "Our whole past has been in the world of making things move," Disney said. "From a drawing through all kinds of little props and things. Now we're making these human figures, dimensional human figures move, making animals move, making anything move through the use of electronics. It's a dimensional thing. It's a new door."

Mirroring the growing sophistication of animated films, animatronics have likewise always been an exercise in devising realism. Now, as part of the 40th anniversary celebration of our company, Garner Holt Productions, Inc., (GHP - considered the world's largest animatronics builder) has introduced what we believe is the most expressive and realistic animatronic face in history. The new creation is part of GHP's "Living Faces of History" series of animatronic characters.

The GHP "Living Faces" are exceptionally lifelike figures representing politicians, national and social heroes, celebrities and more using groundbreaking animatronics technologies. The first in the series is an animatronic bust of Abraham Lincoln. It's company founder Garner L. Holt's way of honoring the pioneering Lincoln animatronic first unveiled at Disneyland in 1965. "The Lincoln show at Disneyland was such a huge influence on me as a child and in founding my company," said Holt. "I thought having our first highly-expressive animated head in his persona was a neat way to pay tribute to that." The figure was shown in a preview form at the 2017 Comic-Con in San Diego, and officially unveiled at GHP's 40th anniversary open house in July 2017. It drew attention from leading online tech sites such as Gizmodo and appeared twice on "The Conan O'Brien Show."



Lifelike heads and hands await their animatronic bodies at the Garner Holt studios. Photos courtesy Garner Holt Productions

Among the figure's audience at the open house was Disney Legend and renowned former Disney Imagineer Bob Gurr (who designed the mechanical body frame for the original Lincoln figure for Disney's Illinois State pavilion show at the 1964 New York World's Fair). Gurr spoke enthusiastically about GHP's new Lincoln, saying: "I'm still flabbergasted with what I saw the Lincoln face do. Now you're in a position to do the finest possible face when a client really wants the absolute best. Having watched the facial animation progression from Wathel [Roger]'s first efforts in 1955, through Jack Gladish's work, then the 1964 Lincoln [through today], I'm probably the sole witness to all of it. Flabbergasted indeed!"

The new figure that so enthralled Gurr contains 45 individual functions in the face alone. GHP first implemented this sort of work in its projects for the US Marine Corps in the Infantry Immersion Trainer at Camp Pendleton near Oceanside, CA. There, a series of animatronic townspeople populate the immersive training environment, some friendly shopkeepers, others hostile combatants. "An effective way to illustrate an animatronic character's scripted intentions or whether they are friendly or hostile is through changing the figure's facial expression," said Holt. "In this case, our figures could scowl or raise their eyebrows and smile or frown, all accomplished mechanically beneath the

animatronics' silicone face masks. It's a subtle yet effective way to forewarn Marines that the 'townspeople' they are encountering may be getting ready to attack."

The animatronic Lincoln bust and GHP's figures for the military trace their origins to a larger, long-term project also currently in development. The "Project Yeti" initiative focuses on the creation of a seven-foot-tall animatronic yeti capable of more than 130 individual motions, more than thirty of which are in the figure's face. "The Yeti's hands are so articulated that they can be programmed to communicate with the hearing impaired using American Sign Language," Holt said. The figure also employs a GHP-created visual/mechanical interface that allows the figure to track individuals in an audience, lock onto faces, follow specific faces, colors, or images (such as logos or other insignia), and cross-reference what it sees with an index of faces and other images so that the character can "recognize" individuals or specific insignia. Together, the figure not only looks and moves in an exceptionally lifelike way, but can also behave - using this form of artificial intelligence (AI)—in unique and non-linear ways.

In the same way, the GHP Expressive Head Project takes the things learned over the past decade or so with the Yeti to the next level. The Yeti's head is over 24 inches tall, and most of its motions are accomplished with traditional linear pneumatic actuators. According to Holt, "At the time it was developed, miniature aircraft or industrial-quality servo-motors were not available at a level and price that made sense for this type of application." Now, GHP's designers can fit more functions (almost twice as many) than there were in the Yeti's face into the considerably smaller footprint of the Lincoln character. These servo-motors are quite different from the traditional hobby servos used in movie animatronics or by the many expressive "robotic" heads being developed by universities and hobbyists.

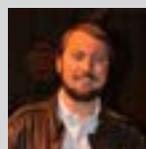
The GHP Expressive Head's proprietary silicone skin mask is an innovation, too: it attaches to the mechanical parts of the figure with dozens of unique flexible magnetic grippers that allow a balance of robust strength and compliant motion. In fact, the entire skin can be removed and replaced in less than two minutes and requires no tools. The skin is so malleable it can replicate wrinkling around the eyes, crinkling the nose, and a variety of strikingly lifelike creases that appear and disappear as the face moves from expression to expression. Crucially, it's been thoroughly tested to prove it's highly durable for theme park use.

The very first Lincoln figure at the 1964 New York World's Fair had a few facial expression-related functions:



Benjamin Franklin is one of the historical characters in Garner Holt Productions' Expressive Head Project. You can see one in action by viewing this article at [InParkMagazine.com](http://InParkMagazine.com)

it could raise its eyebrows, move its mouth and pinch its lips to make various speech motions, and even move its teeth to facilitate an "eff" sound. GHP is banking on the extension of this heritage, and the goal that animatronics pioneers and innovators share: to blur the line between what's mechanical—metal, plastic, and motors—and what is real and alive. "I love research and development and the creative process behind bringing this sort of mechanized magic to life," said Holt. "By pushing the state of animatronics further and further, we're on the verge of something amazing. It's got the potential to be bigger than animatronics. It's the face of the future." •



Bill Butler is Creative Design Director of Garner Holt Productions, Inc.

# Honoring the past, anticipating the future

JRA celebrates 30 years

by Clara Rice, Director of Communications, JRA

*“Every minute of every day, somewhere in the world, we are creating a smile, engaging a mind, or touching a heart.”*  
– Jack Rouse

In 1987, friends Jack Rouse and the late Amy Merrell founded Jack Rouse Associates, primarily targeting the corporate trade show market. Thirty years later, under the leadership of CEO Keith James, the Cincinnati, Ohio-based company (now referred to as JRA) provides attraction master planning, design, and project management services for entertainment, brand, cultural, and sports clients around the world.

Over the last 30 years, JRA has seen design styles evolve, technologies advance, and hairlines recede (or disappear altogether). But what hasn't changed is the company's commitment to creating story-based experiences that resonate with visitors. “It's no coincidence that a lot of the staff here have theater backgrounds, because the same rules of engagement apply,” said COO Dan Schultz. “Our reputation for developing experiences from the audience's perspective is part of what has kept us around for so long. That, and the fact that we happen to love what we do.”

As impressive as its past achievements may be, the studio is most excited about what lies ahead. The next 12 months promise to be busy ones for JRA, with projects dotting the globe across a wide range of markets. Upcoming openings include:

- Children's Enlightenment Space – Beijing, China (November 2017)
- Appleton Estate Rum Experience – Siloah, Jamaica (January 2018)
- American Airlines' C.R. Smith Museum – Dallas, Texas (June 2018)
- Kodak Experience Center – Rochester, New York (October 2018)
- National Comedy Center – Jamestown, New York (Coming soon)

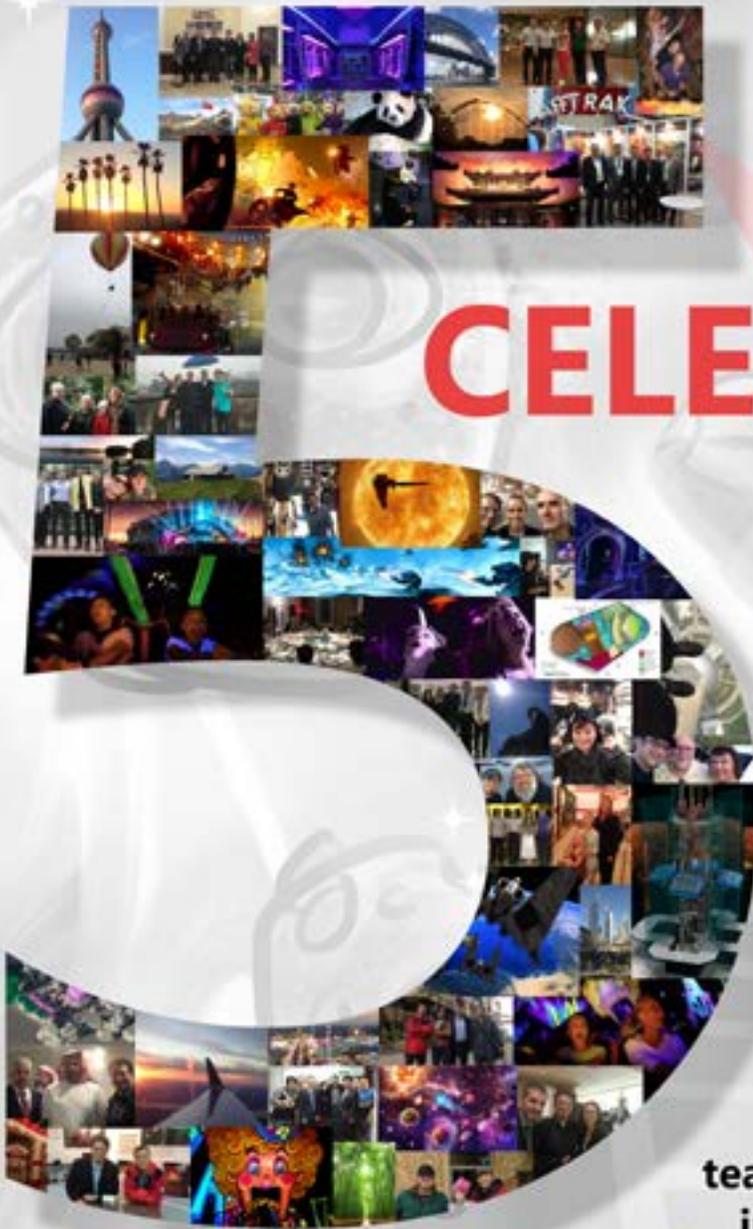
JRA has also recently been attached to two highly-anticipated theme park projects: Lionsgate Movie World in Jeju, South Korea, and a major movie studio theme park in China.



Top: The JRA team celebrates 30 years.  
Bottom: The JRA-designed Kodak Experience Center  
Images courtesy of JRA

While JRA sees the diversity of the studio's portfolio as one of the secrets to its success, James and Schultz know that it would not be what it is today without the dozens of team members who have touched its projects, and the millions of visitors who have been touched by them. “This industry, and this company, would not exist without the people who support it tirelessly day in and day out,” said Keith James. “I personally, and the company as a whole, have had the good fortune to work with some of the best in the business, creating not just attractions, but lifelong friendships and memories.”

With a bright future on the horizon, James can look back with pride on what the JRA team has accomplished. “Pardon the pun, but this is a roller coaster of a business. And we're sure enjoying the ride.” •



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