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School daze

Martin Palicki,
IPM publisher



At one of my first IAAPA Expos, I distinctly remember being invited by the creative powerhouse that is Bob Rogers to sit with him in his company's booth for a good 30 minutes and talk about myself, InPark and what I thought about the industry. Later, at an IAAPA party, I met Barry Upson as he shared stories from his Universal days and inquired, like Bob, about me and InPark.

I was star-struck to be sure, but I appreciated how these two pillars of the industry actually took the time to get to know me and share some of their advice and ideas.

Now, I enjoy attending events where I get to meet the new batch of aspiring themed entertainment designers, engineers, artists and entrepreneurs. I get a kick out of hearing their plans for breaking into the industry, or switching up their current position, and seeing their eyes light up when they talk about their encounters with industry legends and helpful leaders.

One advantage these students have over the more tenured industry folks is that they enjoy schools and curricula designed for them to learn about themed entertainment, and how to excel at creating it. It's a subject we've covered for the past several years within InPark and it's a segment that is expanding. If you think about it, arts schools are particularly well suited to help mix together the elements of design, engineering, storytelling and technology and pour this potent mixture into the open minds of their students.

The University of North Carolina School of the Arts is a perfect example of how one such program developed. Furthermore, the school has developed a strong industry partner with Wärtsilä (largely through alum Sean Reish). It creates an ideal pipeline of talent into the industry and helps provide real-world experience for tomorrow's graduates.

These connections we make, either during industry events or between academic and private institutions, are so vital to the future growth of the industry as well as to our individual development.

More than a red carpet

Judith Rubin,
IPM editor



There's a good chance you picked up this issue of InPark in print form, at the 2019 TEA Summit during TEA's annual, big weekend at Disneyland Resort in Anaheim that starts with the Two-day Summit conference/Thea Case Studies presented by The Hettema Group and culminates in the TEA Thea Awards Gala presented by Chimelong (April 11-13 this year).

TEA starts building anticipation for the big weekend in November of the prior year, when the new slate of Thea Awards recipients is announced from TEA's booth at IAAPA Orlando. Perhaps you've been at that announcement, or seen pictures of it. The TEA booth at this event is fairly spacious, being geared to networking, and it's jammed full of people – a cross-section of the global attractions industry and members of the press - eagerly awaiting the 2pm announcement by the TEA president, which is met with applause, excitement and congratulations. Several months later, the international industry comes together again around the Theas.

We have highlighted a number of the projects and people in this issue, and we hope that you were able to participate in person at this amazing weekend, all three days of it, because it brings together all facets of the community to learn, discover, discuss, network and celebrate. It's a grand, global handshake that reflects the industry's best as well as its current status, and continues a cycle set up by TEA to help our industry continue to grow and improve.



Joe Kleiman is News Editor for the InPark website. He has 25+ years management experience: in tourism, museums and attractions, in the giant screen industries and as a zookeeper.

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COVER: A production at the University of North Carolina School of the Arts helps students learn about entertainment and engineering. The school's partnership with Wärtsilä provides real-world experience in the artistry of themed entertainment. **Insets, top to bottom:** Sean Reish, Michael Kelley, and a Wärtsilä AV project from a cruise ship theater
Cover photo: Andy Tennille

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Lisa Passamonte Green

Founder of a top industry lighting design firm;
current Chair of the TEA Thea Awards Committee

Interview by Martin Palicki

In addition to her “day job” as CEO and co-owner of successful lighting design company Visual Terrain, Lisa Passamonte Green serves as chairperson for the Themed Entertainment Association (TEA) Thea Awards Nominating Committee. The Committee annually reviews and adjudicates submissions for the Thea Awards.

How did you get involved with the Thea Awards Nominating Committee?

I've been a TEA member for a long time, really since it was only a few years old [TEA was founded in 1991 and the Thea Awards in 1994]. After being active at a number of events, I ran for a position on the International Board; over the years, I've learned the personal pleasure that volunteer service and involvement in the TEA brought me. It is rewarding to be involved and help the organization and the industry continue to grow and improve.

When that previous experience on the International Board was long over, I was excited to receive an invitation from the Thea Committee to participate. It is an honor and a privilege to be in the room with the amazing, esteemed industry leaders in this group, reviewing nominations and seeking out innovative projects that could be recognized for excellence.

Plus, the annual Thea Awards Gala itself is always such an exciting, industry-leading event. After I had been on the Committee for five years, the Committee elected Adam Bezark as Chair with me as Vice Chair. Typically, the Vice Chair is elected to the Chair position the following year, so this past year, I was elected to Chair and Susan Bonds was elected as Vice Chair.

Tell us more about your role and experiences as Thea Committee Chair.

The chairperson is responsible for keeping the Awards Nominating Committee on track throughout the process of reviewing all of the projects submitted as potential nominees. Each year, this becomes more and more challenging as the number of submissions continues to grow by leaps and bounds: There can be hundreds of submissions from all over the world.

The Chair, upon receiving the current year's submissions, develops a plan for the judging cycle so that each submission



can be thoroughly reviewed and vetted. Our job is to seek out excellence and find those projects that should be recognized. This process takes roughly 12 weeks over the summer and into the early fall.

The Committee is comprised of many of the most distinguished TEA members you can imagine - Lifetime Achievement honorees, former TEA presidents, veteran industry leaders, and the members at large - who all take their roles in the process very seriously. The makeup of this group also reflects a relevant and diverse mix of expertise and experience for the overall review process.

The Chair is responsible for maintaining order during the meetings, for ensuring that the rules for selection are followed, and for making sure that every voice is heard. The discussions about whether a submission is worthy of becoming a nominee can sometimes get quite passionate, and it is the Chair's job to make sure that no one in the room feels that their viewpoint and/or thoughts were not considered and discussed.

Additionally, as Chair it is my responsibility, along with the Vice Chair, to present the Committee's final slate of nominees to the TEA International Board for final review and approval. And during the course of the judging, the Chair is also responsible for conducting a review of the rules that govern our process and for helping to identify potential future members at large to discuss with the Committee as a whole.

It's a serious responsibility, and it takes considerable time. That holds true for the Chair as well as all other participating members of the Committee.

How would you characterize the 2019 slate of Thea awardees?

This year's recipient list continues in the trend of the past several years of recognizing amazing projects of great variety, from all over the world. This includes small attractions that put a lot of

creativity, ingenuity, and out-of-box thinking into developing some really engaging, touching, and effective experiences; as well as the larger, blockbuster projects that we kind of expect to knock our socks off. I have really loved the mix of the last few years, blending industry upstarts with well-known leaders, small budget and big budget, and I hope that pattern continues in the future.

What inspires/inspired you to take on this leadership role for the Theas?

I love what I do, and I love the TEA. It's that simple. I started my career at Walt Disney Imagineering, but before that, I studied Theater at San Diego State University. One thing I learned in both roles, that is central to our approach at Visual Terrain as well, is that "It's all about the Story." The TEA represents "creators of compelling places and experiences worldwide," but what makes those places and experiences compelling is story.

It's not technology, or location, or IP - although those all can have a part in telling the story (and the Thea Awards recognize breakthrough technologies). It's the quality of the story you have to tell and how that story is transformed into an amazing guest experience: That is what the Thea Awards are best at recognizing. Even when the Theas give a technical award, it's all about how well that technology can be applied toward the telling of the story that needs to be told.

To be a part of the Committee and see so many submissions from so many different experiences that have been developed worldwide - in addition to those I see in person traveling for my own business each year - is always inspiring. Story, amazing guest experiences, and projects that evoke an emotional connection, are my mission and my passion. This role gives me the opportunity to express these ideas through the Thea Committee and it truly is like a dream job.

What do you wish everyone submitting projects for a Thea would know in advance?

The first thing everyone should know is that ANYONE can nominate any project they think might be worthy. You didn't have to work on it. You just had to experience it and know it was amazing and therefore should be submitted and then submit it for our consideration. It is really that simple.

When submitting a project the submission should be focused on THE GUEST EXPERIENCE. Period. All of the previous nominees who went on to be recognized were able to paint a picture from the guest perspective: What did they see, hear, feel, and how did the project resonate with them and make a lasting connection? The Committee already knows that every great project is born from amazing amounts of passion, effort, skill and creativity, so just touch on those points a little and try to paint a picture that celebrates the potential nominee and makes it easy for the committee to see what was done and how it was experienced.

The Committee members try to see as many projects throughout the year as they can, but a well-written submission can help drive WHY a project should be nominated and then recognized and celebrated with a Thea Award.

The submission doesn't have to be a big-budget, fancy, video presentation. It just has to convey what the project is and the relevance of the guest experience. Don't forget, you are addressing a room filled with hundreds of years of themed entertainment experience: Express what makes your project special, what makes it innovative, what makes it exciting. What makes it better than the 30 other projects we've seen that day? Just being "new" is not enough. Just spending a ton of money is not enough. We want to see creativity, passion, innovation, and most of all, understand the story of the guest experience and how this particular project engaged them. In a day where people are producing award-winning videos on their smart phones, there should be no barrier for any person to submit a project for consideration and to submit a compelling entry to the Thea Awards Nominating Committee.

Red carpet question: Who will you be wearing to the 25th Annual Thea Awards Gala presented by Chimelong at Disneyland Resort in Anaheim on April 13, 2019?

I will be wearing the beautiful lighting created by Steven Young, one of Visual Terrain's Principal Lighting Designers, as he is lighting the show again this year [Visual Terrain has provided lighting design to the Thea Awards Gala on many occasions]. After taking last year off, we are back and I know we will make the entire evening shine beautifully and brightly! •••



Lisa at the 2018 Thea Awards with John Carroll, from the Jameson Distillery Bow St., a 2018 recipient of a Thea Award for Outstanding Achievement.



Monster hunting in Poland

Bazyliszek interactive dark ride helps write a new chapter for Legendia park and receives multiple awards

By Anja D'Hondt

The interactive dark ride Bazyliszek (Basilisk in English) opened in April 2018 as part of the recently rebranded Legendia theme park, which now includes five themed zones. Formerly known as Śląskie Wesołe Miasteczko, it is the oldest family amusement park in Poland, located in Chorzow, Upper Silesia. Bazyliszek offers a unique experience featuring state-of-the-art dark ride technology, and raises the bar for visitor attractions at the regional level and in this particular market. In April 2019, one year after opening, Bazyliszek will be honored with a Thea Award for Outstanding Achievement, presented by the Themed Entertainment Association at the 25th Annual TEA Thea Awards Gala.

“Our objective was to build a quality interactive dark ride at an affordable budget,” comments Pawel Cebula, Managing Director of Legendia. “We are a regional family park and do not have the budgets of some famous European parks. We knew we had to look for alternative solutions, however the limited budget could not be an excuse for lower quality.”

Legendia is a regional family theme park with a 60-year history. Unique, new attractions such as the Lech Coaster and Bazyliszek are part of the park’s extensive refurbishment in the two years since its rebranding, following a new master plan that includes moving from seasonal to year-round operations. Cebula explains how Bazyliszek fits into the plan. “Our aim is to attract visitors all year long,” he says. “Therefore, a strong indoor attraction which could stand alone was imperative. Our park offer would not be

complete without an interactive dark ride, even if this is relatively new in Poland’s young amusement park industry. An important requirement was that the attraction needed to appeal to families, from young children and teenagers to their parents and grandparents. I am very proud to say we have largely achieved this as the attraction has surpassed all our expectations!”

The new, 2,000-square-meter, purpose-built, Bazyliszek Cave has in fact extended the park’s season, running successfully during the harsh Polish winter. In addition to the interactive dark ride, it houses a cafeteria, playground, arcade and shop. Located close to the park border, it has a separate entry and dedicated parking lot.

“Interactive dark rides are becoming more popular,” says Cebula. “Poland is catching up on theme park entertainment, and we are

very proud to offer such a high-tech ride specifically designed for Legendia. Technology advancement can be found on three levels: interaction by projection on multimedia screens, shooting at physical targets, and shooting at objects created by means of video mapping. With a relatively low investment we managed to offer guests a world-class entertainment in their region.”

Fruitful collaboration

Alterface Projects oversaw the total ride experience as main contractor for the attraction, applying their latest interactive technology including video mapping, gameplay, show control and shooting devices. Alterface stepped right into the action after the contract was signed, detailing the scenario and sharing expertise and ideas from years of relevant experience. Other primary team members were design firm Jora Vision and ride vehicle manufacturer ETF. Jora Vision devised the décor and theming, and had previously developed the new master plan for the park. ETF crafted the trackless Multi mover vehicles, customized to fit the theme. “The collaboration with Alterface and their partners Jora Vision and ETF was wonderful,” explains Cebula. “They spent so much time to understand our sometimes vague demands. Every detail was discussed, and we were often positively surprised with the solutions they proposed, as well as the level of realization. It was a great pleasure to work together! Thanks to the dedication of all involved, we managed to create a unique attraction in Legendia. We have all truly enjoyed building this attraction!”

Bringing the legend alive

“We have built Legendia around Polish legends and fairy tales, bringing them back alive,” says Cebula. “Some of them have been forgotten or seem old-fashioned but they hold great symbolic value and storytelling potential. The story of the Bazylyszek attraction is based on such an authentic Polish folklore, but shared in a way that speaks to modern audiences.”

In Poland there are many variations of Bazylyszek. It’s basically a monster combined of a saurian (reptile), snake and rooster with the ability to turn people into stone with its gaze. Legendia’s Bazylyszek attraction is situated in the Magical Forest zone, taking us back to ancient times of legendary myths. The main hero is a boy who lives in the Polish countryside and wants to defeat the monster not with violence but intelligence.

Guests get a specific task in the queue and pre-show and then board a vehicle to make an exciting journey through the magical forests of Poland. Trees and plants come to life and take all kind of forms and shapes, aligning the scenery with the story. The helpers needed to look like wild creatures from a dark forest, similar to living plants, berries and worms. “It took quite some time to get the image of the Bazylyszek monster the way we wanted it, not too scary and not too infantile either,” says Cebula.

Jora Vision’s specialized work is immediately evident in the immersive atmosphere of the waiting zones. When guests enter



Intricate theming combines with technology to create the interactive and fun dark ride Basilisk, as seen in these photos. *Courtesy of Alterface*



Impressive dark ride experience

Benoit Cornet, CEO & Founder of Alterface, comments on the experience and success of bringing this epic story to life. “We created a diverse mix of the newest media techniques, including video mapping and projections in black lights, combined with compelling scenery and story. This top-notch dark ride has put Legendia firmly on the map in Poland and Europe. It demonstrates their innovative view, applying technology to drive engaging attractions. We are very proud of the result and hope many visitors will enjoy this ride in coming years!”

“Our goal was to build a high-level dark ride around a well-known Polish legend, and at an affordable budget,” concludes Cebula. “The result exceeds all expectations and is the result of a great collaboration between all parties. What makes it so unique? The great attention to detail and quality in digital and physical elements combined with a strong story. The fusion of video mapping, show control and shooting devices resulted in a truly immersive visitor experience. With the new interactive ride, our regional park is able to offer guests – both locals and tourists - a high-level and mixed-media attraction that appeals to young and old.” •••

the headquarters of the Monster Hunters Guild, they hear the story and learn about the challenge ahead. In the peaceful village of Kurkowo, citizens are enlisted to fight monsters, the most dangerous one being the Basilisk. The Monster Hunter vehicles (the work of ETF) take visitors through ancient villages, dark caves, forests and ruins. During the fierce battle guests use their Monster Hunter Guns – Alterface-designed laser weapons with light and mirror technology for special effects - to finally defeat the ferocious Basilisk and end its reign of terror. Players compete for the highest score, resulting in Best Monster Hunter in the Guild’s golden book (and of course providing an incentive for repeat visits to improve one’s Monster Hunting skills).



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Awards for Bazyliszek

Themed Entertainment Association (TEA) Thea Award for Outstanding Achievement (Attraction: Limited Budget): The Thea Awards were created to bring recognition to achievement, talent and personal excellence within the themed entertainment industry. The award was announced in November 2018 and will be officially presented at the 25th Annual TEA Thea Awards Gala on April 13, 2019 in Anaheim. There will also be a presentation about the project during Thea Case Studies Day, April 12 as part of the annual TEA Summit. Info: www.teaconnect.org.

Statement from the TEA Thea Awards Committee: “This unique attraction introduces interactive, dark-ride storytelling to an emerging theme park market (Poland) and builds on a unique and local cultural context. Bazyliszek is an outstanding model of an attraction that speaks to its regional audience. It is well-executed, elegant, engaging, colorful, fun and fresh.”

The Bazyliszek ride was also honored with four additional awards in September 2018, during the IAAPA Euro Attractions Show in Amsterdam: Parkscout Award for Europe’s Best New Rides 2018; European Star Award for Best New Ride 2018; and two Park World Excellence Awards, in the categories Family Ride of the Year and Best Use of Technology (for the trackless ETF vehicles).

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Great Wolf Lodge's great lobby spectacle

Entertainment engineering firm LA ProPoint works with advanced PC Control technology to save several weeks of system design and installation time

By Shane Novacek

Immersive entertainment experiences are now appearing in spaces that were previously not considered in venue design. Take, for example, the lobby at multiple locations of Great Wolf Lodge resorts. To add yet another focal point of fun for guests, many Great Wolf Lodge lobby areas now include high-tech theaters with automated on-screen components and animatronic character elements choreographed together with animated cartoon programming. This is the latest example of how Great Wolf Lodge makes extra efforts to extend entertaining activities into every corner of the company's facilities. The nationally known chain of indoor waterparks offers countless kid-friendly activities, including the main event water slides and attractions.

To successfully implement the new lobby theaters, a substantial amount of automation and networking technology needed to be installed within a limited footprint. The entertainment engineering experts at LA ProPoint handled design and installation of the project. Based in Sun Valley, Calif., LA ProPoint specializes in a wide range of products and services for entertainment and AV installations across North America. The company tackles all kinds of projects from automated stage machinery to stage rigging, R&D and prototyping services for clients. High-profile LA ProPoint clients include theme park

and theatrical powerhouses, from Disney and Cirque du Soleil, to major sporting venues such as AT&T Stadium (home of the Dallas Cowboys), and even museums such as California Science Center.

The convergence of AV and entertainment technologies

LA ProPoint utilized PC-based control technology to balance AV and animatronic functions in the Great Wolf Lodge lobby installations in a cost-effective manner. To start, Great Wolf Lodge commissioned four installations in 2017 with the option to add more in 2018. Because the technical demands for the Great Wolf Lodge animatronic show were complex, LA ProPoint had to leverage expertise developed from a wide range of applications to meet the performance specifications.

The new animatronic show is based on the Great Wolf Lodge characters, a merry crew of singing and dancing woodland creatures. The Northwoods Friends lobby show is divided up into multiple sequences with two main acts and an intermission segment, which acts as a screen saver of sorts.

"Productions like the animatronic Northwoods Friends show are so exciting because they demonstrate how AV and entertainment technology continue to overlap," said Richard Adams, Automation Engineer at LA ProPoint. "This goes far beyond a projection screen for a cartoon now. Today we project video over moving scenery so facilities such as Great Wolf Lodge can expand traditional lobbies into engaging entertainment environments that enhance the overall experience."

To be successful in the competitive entertainment industry, it's important to be highly responsive and flexible. Each client has unique needs, so a wide breadth of application knowledge helps the company's engineers tackle problems from many different angles, and keep the work in-house. "LA ProPoint specializes in 'mission impossible' and to maintain our flexibility to take on any entertainment project, LA ProPoint provides all services and support in-house, rather than outsource," said Adams. "This covers everything from rigging teams to our automation



A Beckhoff CP6706 Panel PC with 1.46 GHz Intel® Atom™ processor running TwinCAT 3 software automates the Northwoods Friends theater. All photos courtesy Beckhoff



The Great Wolf Lodge resort in Bloomington, MN, near the Mall of America features the new animatronic Northwoods Friends theater as designed and commissioned by LA ProPoint

department that provides software and electrical engineering services to our clients.”

Showtime for industrial automation

The Northwoods Friends animatronic theater implemented by LA ProPoint is fully automated by a Beckhoff PC-based control platform. One CP6706 Panel PC with 1.46 GHz Intel® Atom™ processor running TwinCAT 3 software automates the Northwoods Friends theater. TwinCAT handles the control for all aspects of the theater, including the stepper motor-driven animatronic elements and all the AV equipment. A variety of TwinCAT 3 software packages are used in the lobby installations at Great Wolf Lodge, including the PLC/NC and PTP libraries for control, PLC HMI for visualization and the TCP/IP communication library. All TwinCAT 3 programming was written using Structured Text (ST). Using Ethernet TCP/IP, the Beckhoff control system connects to three different projectors from two different manufacturers, a Blu-ray player, a high-end sound mixer and three BrightSign media players. “The most important aspect backing our decision to use TwinCAT is the ability to program everything in one universal software platform,” Adams said.

To establish communication specific to AV and entertainment applications, TwinCAT SMPTE timecode interface can extract timing information sent by a SMPTE master in order to provide

an absolute time reference for media metadata in the application. “The Society of Motion Picture and Television Engineers defined the SMPTE timecode interface for audio and video synchronization, so it says a great deal about the suitability of TwinCAT in entertainment applications. This is significant from a controls engineering perspective because traditional PLC platforms just don’t go there,” Adams added.

The Beckhoff system connects to the reception desk at Great Wolf Lodge via the CP-Link 4 one cable connection technology to a compact CP2907 Control Panel with 7-inch display. “Using CP-Link 4, we only had to run a single Cat 6 cable to provide power and data from the control room to the front desk,” Adams explained. The intuitive HMI developed in TwinCAT by LA ProPoint offers easy operation for all resort staff – from front desk personnel to AV and maintenance staff.

LA ProPoint implemented EtherCAT industrial Ethernet for communication with the peripheral devices behind the scenes of the Great Wolf Lodge theater. For example, LA ProPoint uses a Beckhoff EL3702 EtherCAT oversampling terminal that “listens” to the analog signals broadcast from an SMPTE master to slave devices. Additional EtherCAT I/O terminals handle digital and analog data acquisition, and directly connect with stepper motors for compact motion control. “Another key deciding element to use EtherCAT Terminals was how simple the I/O interface is for motor control and drive technology,” Adams

said. “The EL7041 stepper terminal was very easy to connect with the stepper motors for control. Instead of programming, mounting and wiring eight different motor controllers, everything is programmed centrally in TwinCAT and motors are cleanly wired back to DIN rail-mounted I/O.” The pulse-wide modulation (PWM) output stages in the EL7041 cover a wide range of voltages and currents. The terminal can be adjusted to the motor and application by changing just a few parameters, and 64-fold micro-stepping ensures quiet and precise motor operation in the application.

Savings to howl about

Overall, LA ProPoint viewed its first-ever PC-based control application as a success and plans to move forward with more installations based on the architecture in a variety of future applications. “Programming the stepper control centrally in TwinCAT saved about a week in programming and troubleshooting time when compared with alternative approaches,” Adams reported. “Many applications in our industry require high investments in terms of motor control engineering hours, so the one-stop programming in TwinCAT and easy integration of the stepper I/O terminals with incremental encoder interface made our job much easier.”

With the EtherCAT I/O system overall, LA ProPoint reduced system footprint, which was highly important for the space-

limited control room behind the theater. LA ProPoint also credits the EL3702 and EL7041 EtherCAT Terminals in particular for reducing wiring while improving system communication and control of media equipment and stepper motors. “In addition to our software development savings, PC-based control from Beckhoff also saved significant time in panel design and installation. We are certain it saved several weeks of design and development time in this regard.”

By promoting engineering and design efficiency in all areas, LA ProPoint has made new attractions like the Northwoods Friends theater more affordable than ever for venues of all kinds. Moreover, when resorts like Great Wolf Lodge embrace advanced automation technology in groundbreaking new areas, guests and audiences will continue to find high-quality entertainment in entirely new spaces. •••



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Part of the animatronic theater frame lowers, and a moving screen component showing a ladder rises as a Northwoods Friends action sequence plays out.



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Dolly Parton opened her dream park known as Dollywood in 1986. All photos courtesy Dollywood

Heart of the Smokies

Dollywood earns a Thea Classic award

By Freddy Martin

On April 13, 2019 the Themed Entertainment Association (TEA) will honor Dollywood with the Thea Classic Award at the 25th annual Thea Awards Gala in Anaheim, California.

The Thea Classic Award recognizes and celebrates an attraction that embodies excellence and has stood the test of time. Dollywood, a 150-acre, regional theme park located in the heart of the Smoky Mountains in Pigeon Forge, TN, is jointly owned by country music superstar Dolly Parton and Herschend Family Entertainment. It has a storied heritage that includes its remarkable rise to become Tennessee's top paid attraction.

A statement by Lisa Passamonte Green, TEA Thea Awards Committee Chair and CEO of lighting design firm Visual Terrain, points out some of the qualities that earned Dollywood this prestigious honor: "Guided with care by Dolly Parton and the Herschend team, Dollywood truly lives up to its motto

of 'Creating Memories Worth Repeating®' with a blend of thrilling rides, spectacular shows, master craftsmen and heartfelt sincerity in the best traditions of the Great Smoky Mountains. Most important, at every point of the visitor experience, guests encounter employees with a genuine interest in the guest's experience, delivering what is arguably the highest level of authentic human care and heart of any park in the world."

Andrew Wexler, Chief Executive Officer of Herschend Family Entertainment, said, "We are excited that the Dollywood team is receiving this honor. Our vision as a company is to bring families closer together by creating memories worth repeating. Great attractions and experiences are the cornerstone to achieving this vision. This honor acknowledges the tremendous effort put into developing unique, themed environments that allow our guests to create memories that last a lifetime."



Steam engine "Klondike Katie" welcomed her first guests to Rebel Railroad in 1961.

It starts with a train

The regional park boasts a unique blend of down-home country charm, top-tier entertainment, family attractions, and unstoppable thrills. Dollywood has welcomed visitors since it opened in 1986. However, the rich history of this park actually begins a quarter-century earlier, at the start of the 1960s. And like many classic theme parks, the story begins with a train.

Banking on the success of their first tourist attraction, Tweetsie Railroad in North Carolina, entrepreneur brothers Grover and Harry Robbins built a train ride and roadside attraction for tourists visiting the Smoky Mountains. The 3-foot, narrow gauge railroad travels a 2 ½ mile route from the foothills to the top of a mountain and back again. Their locomotive, named Klondike Katie, was one of the famed White Pass steam engines that had once carried supplies between towns in Alaska and the Yukon Territory. The Robbins brothers named their new attraction Rebel Railroad, themed after a Civil War era Confederate village with a general store, blacksmith, and saloon.

Rebel Railroad later caught the eye of Art Modell, owner of the Cleveland Browns at the time. Modell purchased the park and reopened it as Goldrush Junction in 1970. With existing Old West theming as a stepping off point, new attractions and buildings expanded the park's train focus to include logging and gold mining themes. At this time, park additions included children's rides, entertainment venues, and panning for gold. With the acquisition of the Log Flume from the 1964-65 New York World's Fair, the park rolled out its first big thrill experience.

In 1976, the park simplified its name to Goldrush, but the change was brief. The property had been purchased by Jack and Pete Herschend with plans to expand their successful theme park and entertainment brand into the state of Tennessee. Renamed Silver Dollar City, Tennessee, the park opened in 1977 as the sister park to Silver Dollar City, Branson.

The Herschends then invested in park improvements that further developed its lush presentation of the Appalachian way of life.

Tapping into the talents of the local artisans and craftspeople, the park environment invoked a simpler time, when butter was churned at the local dairy farm and soap was made by hand. Visitors to "Craftsman's Valley" could see many of their souvenirs being crafted in front of their eyes. Several new rides, shops, and shows were added, filling out the park's offerings for a widening audience of visitors who came from across the region to celebrate and embrace the local flavor.

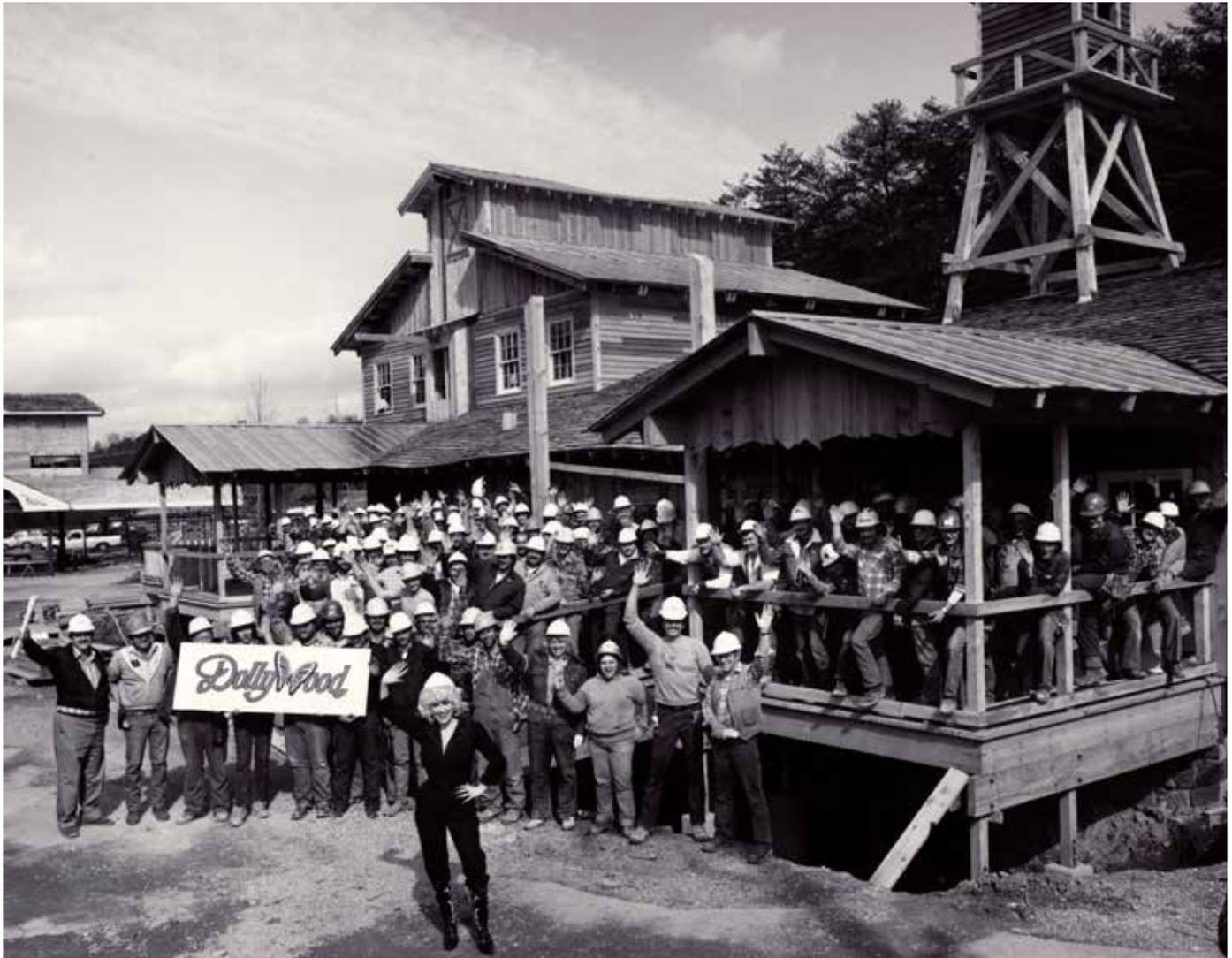
Enter Ms. Parton

While Silver Dollar City, Tennessee grew, another local entrepreneur was pursuing dreams of her own to draw tourism to the Smokies. In the early 1980s, entertainer Dolly Parton began publicly expressing her desire to build a theme park enterprise in her own hometown that would create opportunity for the people living in the Smoky Mountains. (Dolly's hometown is Sevierville, TN, seven miles from Pigeon Forge.) By that time, Dolly had achieved superstar status as a singer, songwriter, and actor. Her popularity boosted her chances of success in the new venture.

The Herschend brothers recognized the potential competitive impact of another park in the region, especially headed by Sevier County's most successful and beloved hometown hero. Through a mutual friend, they approached Dolly with a simple question: "Why don't we do this together?"



Dolly helps open the park's first wooden coaster, Thunderhead, in 2004.



Dolly Parton stands in front with just some of the thousands of workers who helped to build and operate Dollywood in this 1986 photograph.

“Dolly could see right away that we share a similar belief system,” said Pete Herschend, Co-Founder of Herschend Family Entertainment. “We both believe that hospitality for the guests and serving the folks who work for us as though they’re family is top priority. Dolly’s desire to create experiences that exceed guests’ expectations while investing in the people of Tennessee matched our own desire so well, we knew it would be a perfect fit.”

Sharing similar values and goals for creating quality entertainment while boosting the local economy, Dolly and the Herschends joined forces. On May 3, 1986, Silver Dollar City reopened as Dollywood with national fanfare worthy of the superstar’s fame.

“Dollywood is a dream I’ve had since I was young,” said Dolly. “I thought that if I was ever successful, I’d create a place that would bring people from all over the country to experience the beauty and hospitality I grew up with here in the Smokies.”

Entertainment and expansion

Under her leadership, entertainment became the new defining factor for the park. Dollywood attracted a broad variety of musical acts from country and bluegrass, to classic rock and Southern gospel. Dollywood guests encountered live entertainment everywhere they turned, including roving musicians, cavalcades, and full-scale theater productions. The focus on quality entertainment led to the creation of Dollywood’s Smoky Mountain Christmas, the park’s wildly popular holiday festival that expanded the seasonal park’s operating calendar through the end of the year and greatly impacted the local economy.

“The winter festival was a game changer for the entire area,” said Pete Owens, Dollywood’s VP of Marketing and Public Relations. “It allowed folks who typically shuttered their businesses at the end of October to continue to operate and employ people. Many

people in the area who had seasonal jobs originally now had the opportunities for nearly year-round employment.”

In the ensuing decades, Dollywood has steadily expanded to offer new themed areas with some of the world’s highest rated thrill rides, as well as Dollywood’s Splash Country® Water Park, and Dollywood’s DreamMore Resort and Spa®. Dollywood also operates seven dinner theater attractions across the country, extending the park’s physical presence well beyond the park boundaries. Coaster enthusiasts worldwide consider Dollywood a must-visit for many of its record breaking thrills. Thunderhead, a twister designed by Mike Boodley of Great Coasters International, was the park’s first wooden coaster. Its success set the park on track to add more coasters over the years, including rides designed by Gerstlauer and Bolliger & Mabillard. In 2016, Rocky Mountain Construction built Lightning Rod, said to be the world’s first launching wooden roller coaster and currently ranked the fastest wooden coaster in the world.

Today, as Dollywood enters its 34th season, its largest expansion ever is being unveiled in a brand-new, themed area titled Wildwood Grove. Guests will soon be able to explore and adventure in its 6.5 acre, woodland area surrounding a six-story-tall, internally lit tree that changes throughout the day to tell daily and seasonal stories. Phase one of the \$37 million expansion includes 11 themed attractions and introduces Dollywood’s first ever character-driven IP.

“At Dollywood, we don’t simply rest on our laurels,” said Owens. “It would be so easy to sit back and look at what we’ve



Wildwood Grove, Dollywood’s largest expansion to date, opens the summer of 2019.

started and just let the recipe cook. Instead, we say, ‘Let’s build Wildwood Grove!’ It’ll add additional capacity for families to have a better guest experience, and it’ll add eleven new attractions in an environment that helps us tell a story that’s worth repeating” •••



Freddy Martin (freddy@themedattraction.com) is a writer, storyteller, and independent consultant. He began his theme park voyage as a skipper on the Jungle Cruise at Disneyland. Freddy co-hosts the Themed Attraction Podcast with Mel McGowan of Storyland Studios, and is a regular contributor to InPark as well as ThemedAttraction.com. He also blogs at FreddyMartin.net.

Dollywood timeline, 1961-2019

- 2019 Largest expansion in Dollywood history, Wildwood Grove, to open in spring
- 2016 Lightning Rod opens, billed as world’s fastest wooden coaster and first launching wooden coaster
- 2015 Dollywood’s DreamMore Resort and Spa opens
- 2012 Wild Eagle opens, said to be first wing coaster in U.S.
- 2009 Cirque-style show “Sha-Kon-A-Hey! Land of Blue Smoke” debuts, telling regional legends
- 2007 Highly-themed Mystery Mine coaster opens
- 2004 Thunderhead opens, Dollywood’s first wooden roller coaster
- 2001 Dollywood’s Splash Country Water Park opens
- 1990 Debut of Smoky Mountain Christmas festival expands operating season by two months
- 1988 Celebrity Theatre opens with 1,700+ seats for performances by country music stars
- 1986 Park reopens as Dollywood on May 3, 1986
- 1977 Park reopens as Silver Dollar City Tennessee with \$1 million in new improvements including Craftsman’s Valley
- 1976 Herschend purchases park and renames it Goldrush for one season
- 1970 Art Modell purchases park renaming it Goldrush Junction
- 1961 Park opens as Rebel Railroad featuring White Pass locomotive Klondike Katie

Teamwork



Wärtsilä and the University of North Carolina School of the Arts partner to train the next generation of themed entertainment professional

By Joe Kleiman

We live in a digital age, where advances in technology are constantly expanding and changing the themed entertainment design industry. At the School of Design & Production at the University of North Carolina School of the Arts (UNCSA), an education in working in the digital age begins with a pencil.

Michael Kelley, Dean of the School of Design & Production, elaborates: “We still start every student on drafting by hand before we take them to software like CAD and SketchUp. Fundamentals have to be taught. Everything after that is tool.”

Kelley looks at the international nature of the industry and why such a fundamental education is important. “If you’re working internationally and, say, you’re in China and you want to communicate, the easiest, most direct way to convey an idea is with pencil and paper.”

Wärtsilä and the School of Design & Production – a longtime connection

One company that has latched onto this concept of fundamental education is Wärtsilä Corporation, a 185-years-young, international specialist in marine engineering and energy systems based out of Finland. Primarily due to its work on entertainment venues aboard cruise ships, the company has found a niche providing AV and show integration within the land-based theme park and attractions market as well. High-profile projects include Chimelong Ocean Kingdom, Dubai Parks and Resorts, and a number of Disney and Universal attractions worldwide.

Sean Reish, Vice President of Sales for Wärtsilä Entertainment Systems, frequently recruits from UNCSA’s School of Design & Production. “Wärtsilä is a high-profile commercial environment. Our employees need to be very creative, but they also need to deliver on time. There’s no time for mistakes. The School of Design & Production program prepares students for this environment.”

Reish's statement is based on experience, as he is a graduate (1995) of the school's MFA program himself. So is Dean Kelley (BFA, 1987), whose career over the ensuing decades gained him an intimate knowledge of the themed entertainment industry. His credits include the Jurassic Park Institute Tour, projects at Dubailand and Everland, and as a Producer on Shanghai Disney Resort, honored last year with a TEA Thea Award. Other Thea-honored projects in Kelley's portfolio include CSI-The Experience and Tokyo DisneySea's entertainment program.

Kelley's wide ranging portfolio also features work on Broadway and award-winning television such as "Sesame Street" and "Deadwood." "I've developed a basic understanding of the industry's needs from a theatrical and an international global entertainment point of view." He brings that understanding to his work as an educator. "This has allowed UNCSCA to develop a deeper, more robust curriculum."

Juilliard of the South

The school has its roots in traditional performance arts. University of North Carolina School of the Arts opened in Winston-Salem in 1965 as the country's first public arts conservatory (known as North Carolina School of the Arts prior to 2008). Famed composer Vittorio Giannini, a Juilliard alumnus and faculty member, became its first Chancellor, envisioning UNCSCA as the "Juilliard of the South." Upon his death in 1966, another Juilliard alumnus and faculty member, composer Robert Ward, replaced him as Chancellor. Ward removed technical arts from the School of Drama and installed them in the newly

inaugurated School of Design & Production, which would now offer degrees in areas such as costuming, production design, and lighting. Under UNCSCA's third Chancellor, Robert Suderberg, an MFA in Theatre Design & Production was established in 1982.

The roots of themed entertainment design

Performing arts are intrinsic to themed entertainment design. The first Disney Imagineers were studio artists – animators such as Bill Contrell and John Hensch, illustrators, show writers, machinists, and scenic carpenters. Facades and interiors on Disneyland were designed as if guests were walking through a three-dimensional film set. Among the opening attractions was the Golden Horseshoe Review, a fully staged theatrical presentation.

Theater and film/music technology have, of course, likewise extended beyond the traditional live theater environment. A lighting design background, for instance, can go a long way in themed entertainment. As just one example, lighting designers Norm Schwab and John Featherstone came out of college lighting concerts and plays, eventually forming Lightswitch, a leading lighting design firm specializing in, among other things, attractions and museum exhibits. The firm has received numerous accolades for its work, including seven Thea Award honored projects.

After graduating from Penn State University with a BFA in Stage Management in 2006, Kevin Cartier found his way to Wärtsilä Entertainment Systems, where he eventually served as the

BELOW: Fellow alumni of the School of Design & Production at the University of North Carolina School of the Arts, Michael Kelley, (left) who is now dean of the school, and Sean Reish (right), VP of sales for Wärtsilä Entertainment Systems, have partnered to help students gain real-world experience in themed entertainment.

OPPOSITE: Teamwork and collaboration are built into the curriculum at UNCSCA's School of Design & Production, which supports more than 60 productions per year. *Photo courtesy David Hillegas*





UNCSEA's annual "Photona" production allows senior lighting designers to flex their creative muscles, working with state-of-the-art equipment on loan from industry partners. *Photo courtesy Andy Tennille*

company's Project Manager on Motiongate and Bollywood Parks Dubai theme parks and the connecting Riverland themed retail and dining complex. In this position, he oversaw installation and implementation of a number of systems, including attraction-specific audio, video, and control systems for 54 rides and attractions and park-wide audio and paging systems for all three areas. The scope and scale of this themed development was a first for the region, with the DreamWorks zone in Motiongate receiving a TEA Thea Award for Outstanding Achievement in 2018.

Hands-on training on a university level

Wärtsilä's Reish recalls his education at the School of Design & Production as being "very much like a vocational school. We did a lot of actual work rather than just learning about how to do the work. My course of study was automation and control, and it was a very intensive program. From 8:00 a.m. until noon, we were in class, then from 2:00 p.m. until 6:00 p.m. we were in shop, doing the craft and working the shows. It's a very intense environment that prepares students for the real world. By the third year, you've found a way to excel and manage your time, and you have thick skin."

Reish realized that the kind of student coming out of the School of Design & Production was ideal for Wärtsilä and began working with the School of Design & Production on implementing a recruitment process.

"We became a good steward to the school's students in a way that we could positively influence their learning. We're a very AV-centric company. We work with audio, DSP, projection, visual displays and amplifiers. In the integration world, students only have access to live entertainment. That's why we helped develop a training lab at the school, for which we donated equipment in kind. We also helped influence a class track for students where they spend a semester focusing on the tools used at Wärtsilä. Ben Steiner, a Wärtsilä engineer recently recruited from the school, joins me for a three-day DSP session on campus when requested by the instructors."

The alumni network

The alumni network from UNCSEA is a strong one. Reish recalls one of his first jobs after graduating, as Technical Manager at the Universal Orlando Resort. "There were 11 of us UNCSEA alumni working together at the park that year." Reish remains close to the alumni network, attending get-togethers during IAAPA and TEA events.

He also participates in an annual career fair held at the school. "The career fair is held just for students of the School of Design & Production," says Dean Kelley. "During the last fair, we had 70 individuals representing 50 companies – both suppliers and users. I would say 50% of the participants are alumni, recruiting for their companies."

He continues: “The alumni self-perpetuate the network that’s been developed. Sean knows our students will make great employees, because he was one and has continued to work with them throughout his career.”

Trait #1: Team player

Within the themed entertainment industry, teamwork is essential. This is an important factor not only internally within a company, but - as design, fabrication, and installation processes are all collaborative - teamwork with clients and vendors is essential to the successful completion of a project.

This is why, according to Reish, the most important element in that process is an employee who is a team player. “Wärtsilä is a culture of many, where we succeed by working in a close-knit team environment. We’re looking for people who can bridge the gap between creativity and science. Our technology supports the story, but ultimately technology is just one tool to tell a story.”

Kelley elaborates on the teambuilding experience at the school. “We have to build collaborative teams – since we’re looking at 60-plus productions per year. It’s necessary to have a tight team to get these done. We set up our teams on day one, and our students know that if they fail, the next guy’s going to have to run with it.”

Kelley points out that UNCSEA is not about developing “perfect” artists. “While we strive for excellence and quality in our student work, that’s secondary to producing well-rounded citizen artists who will enrich our culture.”

Teaching themed entertainment

In contrast to schools that incorporate design and production within their drama programs, UNCSEA’s School of Design & Production is unique in being an independent, standalone conservatory with a Dean trained and experienced in production design at its helm. Kelley determined it would be in the school’s best interests to “mimic the industry and what it’s looking for. The next generation is now stepping in and they’ll take things to the next level.”

Not long ago, degree programs directly addressing careers in the attraction industry simply did not exist, but a number of leading arts and engineering schools now offer tracts specializing in themed entertainment design. Here are some in the US and Canada:

Among the first was Carnegie Mellon University in Pittsburgh, whose Entertainment Technology Center (ETC) maintains a partnership with Walt Disney Imagineering. Savannah College of Art and Design (SCAD) in Georgia and California Institute of the Arts (CalArts) near Los Angeles have also developed themed entertainment curriculum. All three schools – Carnegie Mellon, SCAD, and CalArts, have played host to the TEA SATE conference (Story + Architecture + Technology = Entertainment).

These colleges tap into the pool of seasoned industry professionals. Beyond the alumni connections that bind

Cruise ship projects, like the Royal Caribbean Allure of the Seas outdoor amphitheater, showcase Wärtsilä’s skills in both the nautical world and in themed entertainment. *Photo courtesy of Wärtsilä*



companies with universities, another network has developed as some of the industry's best and brightest enter academia to help shape the new programs. Mk Haley, who played an instrumental role in bridging themed entertainment with media technology and interactivity while a faculty member at the ETC, has been a creative visionary at Walt Disney Imagineering for a quarter century. At SCAD, former Disney Imagineer George Head developed the college's Themed Entertainment Design degree. A fellow former Disney Imagineer and Head's faculty associate at SCAD, Peter Weishar, developed a new themed entertainment design program when he left to become Dean of the College of Fine Arts at Florida State University and, later, at the University of Central Florida. And, of course, UNCOSA's Dean Kelley is a leading example.

These relationships enrich the curriculum, help the schools stay current with the field, and provide an important direct conduit to future talent for businesses like Wäertsilä.

Competitions also create opportunities for students to seek out both mentors and internships while demonstrating their talents and are an established way for companies to scout potential employees. Ryerson University's Professor Kathryn Woodcock, whose THRILL Lab studies the application of human factors engineering on amusement rides and attractions, is co-director of an intercollegiate thrill design competition, co-sponsored by Universal Creative. The competition takes place every year at the Universal Orlando resort during the week of the annual IAAPA Expo. A recent Cornell University competition featured mentors from Disney, Universal, and Dynamic Attractions, along with judges from such stalwart firms as Alcorn McBride, Raven Sun Creative, and WhiteWater.

Academia and the TEA

UNCOSA's School of Design & Production, along with Carnegie Mellon, SCAD, FSU, CFU, CalArts, and Ryerson University are inaugural members of the TEA's new Academic Network. Many schools now also host a TEA@University club on campus – including schools that don't have specific curriculum, but do have relevant programs in such areas as engineering and design. "This has given students another outlet for a career choice we haven't had before and they were probably not aware of," says Kelley. "We're able to give them different viewpoints and introduce them to industry leaders. This past year, 16 students and eight faculty attended the IAAPA Attractions Expo in Orlando. The further we go, the deeper we'll get."

Kelley looks at students as embodying the vanguard of emerging trends. "Up to now, the industry has been based around devised entertainment," he says. "The next breath in the industry is participatory storytelling, which attracts younger audience members. We need to position our students as storytellers in this arena immediately."

Says Reish: "Wäertsilä is a very large international company and we do university outreach all over the world. The students that come out of UNCOSA are very well rounded." The University is within the top 10 in the country for producing talent.

For potential future students wanting to pursue a career in themed entertainment design, Kelley recommends, "Develop yourself as a person. Read books, watch movies, visit museums, go to the theater. We want the complete person that can think outside the box. While you're in high school, have fun, study the craft, and most importantly, develop you." •••

Ra.One: Unleashed at Bollywood Park is one of many attractions inside Dubai Parks & Resorts where Wäertsilä's AV integration abilities were needed for the large multi-park resort environment. *Photo courtesy of Wäertsilä*





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Universal appeal



The magical career of Mark Woodbury

by Mark Eades

During his more than 30-year career with Universal Parks & Resorts, Mark Woodbury helped create attractions involving wizards, an oversized gorilla, and transforming robots. He led a team at Universal Creative as they designed such parks as Universal's Islands of Adventure and created innovative rides and attractions while working with leading creative talents like Steven Spielberg and J.K. Rowling.

Thanks to this and more, Mark Woodbury is being honored as this year's recipient of the Buzz Price Thea Award – Recognizing a Lifetime of Distinguished Achievements from the Themed Entertainment Association.

"I'm very fortunate to be working with an extraordinary team at Universal as we continue to challenge ourselves going forward," Woodbury said, crediting his team of professionals at Universal Creative, and the tremendous support they get from executives across Universal Parks & Resorts, NBCUniversal and Comcast Corporation for the honor.

Mark's first theme park experience was at Adventurer's Inn Amusement Park on Long Island where he was born and grew up with his two brothers and three sisters, a creative mother and an engineer father. The next theme park he visited was Marriott's Great America (later sold to Six Flags) in Gurnee, Illinois, near where the family moved after he turned 13 years old.

After getting his Bachelor's degree from the University of New Mexico, he received a Master's degree in Architecture from the University of Wisconsin. As an architect in private practice in Illinois and Florida, he worked on everything from converting barns into homes, to multi-family housing, hotels, retail and restaurants and other real estate developments. Mark credits this early experience with giving him a perspective that helped shape his subsequent theme park career, teaching him how to use design to tell stories.

Mark joined Universal when it was headed by Barry Upson and Bob Ward. One of his first tasks was helping with the master plan for Universal Studios Florida. When that first park in Florida premiered, it had some jittery moments. But during the first year of operation the Universal team persevered and made things right.

"We knew we had a great product, so it was a case of getting the bugs worked out, learning from that and moving on," he said.

And move on he and Universal did. Woodbury was made a key member of its leadership team, serving as Vice President, Design & Planning, then Senior Vice President/Chief Creative Officer. As he and his team planned for the future, he made sure they applied what they learned from that experience. "I'm always asking: How do we make that better? It's an ethos at Universal we hold to this day," he said.

Soon after that, Universal Creative started development of Universal's Islands of Adventure theme park, which, when it opened in 1999, along with Universal CityWalk and three themed hotels, transformed Universal Studios Florida into the Universal Orlando Resort. "We wanted to build on our success with the first park and continue to build on great intellectual properties; but build it as the most technically advanced theme park ever imagined," he said.

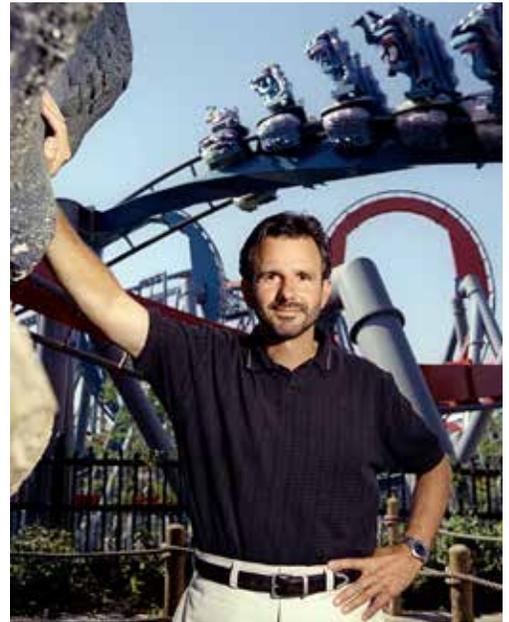
At the same time, development started on Universal Studios Japan – giving Mark and his team a new challenge. "We know our properties are universal in appeal. We were confident they would translate to Japan. But, you have to be sensitive to the country's culture and nuances; you need to respect the local culture and the cultural differences wherever you go."

After that park opened in 2001, Mark was asked to lead Universal Creative (the design arm of Universal), and became its President in 2006. Shortly after that, they embarked on a highly anticipated property, that of J.K. Rowling's Harry Potter.

"We looked for a great place to take people they otherwise could not go, and the worlds of Harry Potter were the perfect place," he said adding, "Previous attractions like *The Amazing Adventures of Spider-Man*, *Back to the Future - The Ride* and *Terminator 2: 3D* were part of the evolution of our thinking as we moved forward with Harry Potter. It allowed us to take things to an even deeper level of immersive experiences."

Three years after the 2007 announcement that Universal had secured the theme park rights to Harry Potter, *The Wizarding World of Harry Potter* premiered at Universal's Islands of Adventure in 2010.

Fans of the books and the movies were not disappointed in the result. The first-of-its-kind, incredibly immersive land and its star attraction, *Harry Potter and the Forbidden Journey*, drew crowds



LEFT: Mark Woodbury visiting the Universal Beijing Resort with members of the project team. **RIGHT:** Mark Woodbury in front of Dueling Dragons in Universal's Islands of Adventure in 1999.



LEFT: Bill Davis (Universal Orlando Resort), Ron Meyer (NBCUniversal), Steven Spielberg, Mark Woodbury, Tom Williams (Universal Parks & Resorts) at the TRANSFORMERS: The Ride-3D grand opening in 2013. **RIGHT:** Mark Woodbury and Thierry Coup preview *The Wizarding World of Harry Potter – Hogsmeade* to cast members from the Harry Potter film series.



LEFT: Jimmy Fallon and Mark Woodbury at the premiere of *Race Through New York Starring Jimmy Fallon*. **RIGHT:** Mark Woodbury in front of the iconic Mel's Drive-In in Universal Studios Florida. All photos courtesy Universal Parks & Resorts

from around the world; along with praises from the media, and theme park fans. “There is a bit of something for everyone, from the diehard fan to the casual theme park lover,” said one theme park fan site. “It definitely takes you on an exciting adventure that very much mirrors Harry Potter’s own,” said another.

Flush with that success, Universal would put The Wizarding World of Harry Potter into its California park a few years later, and Japan after that. The incredible success also meant the Universal Creative team, led by Woodbury, had to come up with a way to capture even more Harry Potter magic.

“We felt that Diagon Alley was that world. Because the two parks in Florida are in proximity to each other, we looked for a way to connect the two parks, and the two worlds. The idea of riding on the Hogwarts Express came up and was very quickly embraced by everyone. When we took it to Tom (Williams – Chairman and CEO of Universal Parks & Resorts) and the executive team at NBCUniversal and Comcast, they embraced it too and we put it into action quickly.”

While Woodbury keeps moving Universal forward, he also enjoys visiting other parks and learning from their successes. He notes the new version of Pirates of the Caribbean at Shanghai Disneyland as a favorite, saying, “It is a big, rich attraction...and it really moved a classic forward.”

When not working or traveling to Universal parks around the world, including the now under construction park in China, the father of two daughters spends time with his family and stays in shape as an avid cyclist.

Named Vice Chairman of Universal Parks & Resorts in 2017, Mark looks forward to the new challenges ahead. “It’s really special to bring families from around the world to a place where they have experiences that form memories that last a lifetime.”

Mark Woodbury is a licensed Architect and member of both the American Institute of Architects (AIA) and the Urban Land Institute (ULI) and serves on the board for Give Kids the World.

• • •



Mark Eades (markaeades@aol.com) is a freelance writer residing in Southern California. He was a journalist for the Orange County Register for 14 years. Prior to that, he worked at the Orange County Newschannel, a 24-hour cable news channel. Before journalism, he worked as a writer and producer in the theme park design business working on projects for Universal, Warner Bros and Walt Disney Imagineering.

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Planet playology

Infinite Kingdoms' Denise Chapman Weston invites the Earth (and you) to play

Interview by Martin Palicki

During IAAPA 2018 in Orlando, we covered the debut of creative collective Infinite Kingdoms and their array of inventions and concepts. We recently connected with founder Denise Chapman Weston for an update and more details on some of their announcements.

What is Infinite Kingdoms and how did it originate?

Infinite Kingdoms is an attraction and product invention, design and development collective of brilliant creators from across the industry including me, Rick Briggs (father of water play), Brian Morrow, Janelle Picard, and our patent guru Michael O'Shaughnessy. We also have invited the next generation of talent such as Jesse Manby into the creative pool.

Our goal is to lean into our previous experience of building companies focused on:

- new intellectual property in interactivity
- immersive story and game
- connected retail that integrates some of the newest inventive tools for accelerated fun and personalization (such as A.I., image tracking, 360 immersion, and theatrics) that teases the guest into wondering who and what is real - and what is not!

Given the influence of our Earth-friendly backgrounds, our desire to do something proactive about sustainability and renewable energy options is also leading our effort to bring new

thinking and experiences to our industry and beyond. As we like to say: "Isn't it about time we invite the Earth to play?"

Most important - aside from the technology and invention - we have always looked through "Playology" eyes and responded to what our multi-generational guests are looking for in being educated and/or entertained. We strive to create amazing and fun ways to be together that are more personalized and purposeful... all with a touch of magic.

You also have a collaborative partnership with Weber Group. Tell us about that.

Infinite Kingdoms is the invention and production company while Weber Group is a design/build organization – so the two companies have complementary disciplines. One of Infinite Kingdom's inventions is Impact Attractions: a renewable energy play system that uses solar, hydro, wind and play to create an immersive experience with net zero impact on the world.

Members of our team have been colleagues and collaborators with Weber Group for nearly 25 years. We have a great deal of

mutual respect and our timing was good for Infinite and Weber to come together in a partnership to bring Impact Attractions to market. We are so proud to jump into the energy pool together - with similarities in how we want to truly make a difference in the world through our manufacturing processes and attraction solutions.

One of your inventions is a Magic Campfire, which recently previewed at Evermore Park (Pleasant Grove, UT). What is a Magic Campfire?

Our initial goal was to create a 360-degree experience without headgear. Simply put, we wanted to create an environment where stories can be told “in the round.” Moving forward this can be something available as an app or device that interacts with a home assistant such as Alexa. But we also can create a highly detailed version with many special effects, as we did at Evermore.

If you think about it, the very first theme park was a campfire. It’s where we entertained and danced and celebrated and told stories together.

At Evermore, Magic Campfire uses the fantastic story world of Evermore to introduce what’s coming to the park next summer, while showcasing some of our great new interactive technology. The Magic Campfire’s best feature is integrating DigiMe tracking

technology. Guests bring individual carved logs and lay them in front of the fire. DigiMi is able to recognize each log, which is encoded with information about that guest, so that the experience can be tailored to each guest.

Creating a personalized social event that allows guests to add their own stories to it is what we are trying to do right now in this industry. Operationally, though, it’s tough. We have been trying to figure out all the components, and we think Magic Campfire could be a solution model for the industry.

We tested groups of 15-20 people for 15-minute shows and felt confident it could be scaled up even larger without losing intimacy or personalization. A live actor helps guide the experience, but the real magic was when the fire was able to communicate with the guests and directly respond to them.

Can you share more about DigiMe?

DigiMe creates an avatar that plays alongside you on all your adventures in a park, resort, location based entertainment or museum.

It embraces our know-how and MagiQuest inventive roots but utilizes much more immersive tracking techniques than in the past. We wanted to advance our relationship with the guest by

BELOW: A sketch for Magic Campfire shows how it can be a powerful and vivid storytelling tool. **PREVIOUS PAGE:** A rendering for an Impact Attractions play system. *All photos courtesy Infinite Kingdoms*





Denise Chapman Weston

giving them new, immersive options that bring out the new gaming styles of Fortnite as well as tell better stories that transcend between real and virtual worlds.

Where did the content for Impact Attractions come from?

It was inspired by my interaction with and experiences in New Zealand,

since they are such a conservation-focused country. This included my involvement with Weta Workshop and as an Edmund Hillary Fellow. Other fellows in the program have really inspired and challenged me to think differently about how to create meaningful, global change. Naturally, I started to wonder how we could apply that to our own attractions industry. Interestingly, the renewable industry hasn't really considered approaching the attractions market either.

So we at Infinite Kingdoms set about to create play areas that are functionally conservation-oriented but also beautiful and fun.

Another of our offerings is a small splash-pad called DNA, and then there are both wet and dry models that can expand exponentially. Our smallest unit is only \$50,000, so it's within reach of a lot of spaces.

What kinds of spaces are you thinking of?

We have aimed our inventive arrow at waterparks, theme parks, municipalities, museums, resorts, etc. Interestingly we have discovered that we are not only ahead in our industry in terms of creating renewable energy attractions that are fun and interactive, but we have also worked our way into fountain and sculptural icons for city centers, campuses, and corporate plazas.

When the question is raised about solutions for sustainability, what typically might come to mind would be placing things on our roofs and in our parking lots, or putting turbines on poles in fields. But at Infinite Kingdoms, we are focused on becoming an inventor and manufacturer for renewable energy structures that are created in esthetically wonderful and playful ways.

This isn't a marketing gimmick....we are truly committed to improve our footprint as manufacturers as well as finding solutions for facilities and parks to be sustainable in educating, interactive and engaging ways. •••



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Screens to fill, markets to disrupt

Christie rolls out new RGB laser products for entertainment and a universe of color

By Judith Rubin

Christie has made a substantial investment of time and resources in RGB laser projection and recently introduced two, new DLP projector models designed specifically to meet the needs of the LBE sector: the Mirage SST and D4K40-RGB. They've been showing these projectors at LDI, the IAAPA Expos, ISE, and other forums over the last 12 months or so. Christie anticipates high demand for the new projectors, and reports that displays and demonstrations in the field are met with enthusiasm.

Market sectors seen as a particularly good fit for RGB laser projection include giant screen cinema, projection mapping, branded experiences, digital domes and immersive attractions – both temporary and fixed installations.

Why RGB laser specifically, and why now? The technology at Christie has progressed to that stage where the latest iterations have become more affordable, compact, robust and energy efficient, and thereby within reach of a wider market segment and with the stability and longevity that solid-state construction confers. In terms of what it can put on the screen, a most important attribute is that RGB laser technology facilitates a leap forward in the color space a projector can produce, and that is making creatives dream. The ability of Christie RGB laser projectors to support the expansive Rec. 2020 color palette is something to delight audiences with visual richness and range (think art and nature) - while also able to fulfill business needs with its precision (think branding and IP).

Meet the RGB laser projectors

The Christie D4K40-RGB is an all-in-one unit that began shipping in December 2018. Christie Senior Product Manager Mike Garrido describes it as “a small form factor, all in one, no external chillers, like a standard lamp projector.” It weighs 285 lbs and measures 37 x 28 x 21.8 inches. The Mirage SST, set to begin shipping in early spring 2019, features an ultra-compact, lightweight, remote projection head that connects to the laser light source via a fiber connection, providing installation flexibility. (Projector head is 26.8 x 23.5 x 12 and 110 lbs; laser unit is 30.6 x 31.7 x 25.7 and 330 lbs. Laser unit weight does not include optional chiller.)



The Christie D4K40-RGB laser projector

Reportedly, both projectors deliver greater than 90 percent of Rec. 2020 color space and native 4K resolution. The new projectors are also compatible with Christie 4K lenses and its suite of software tools. Beyond that, RGB laser projection is part of a whole-product gestalt with supporting, compatible hardware and software from production to exhibition. This is Christie's second-generation rollout of RGB laser units, and reflects considerable market research as well as R&D.

For big screens, the time is now

The technology holds special promise for giant flat screens and domes that predominate in science centers, natural history museums and planetariums. The giant screen cinema market has struggled to find digital projection solutions that deliver image quality as good or better than the aging, 15/70mm film delivery systems upon which the industry was founded in the 1970s. Planetariums have been facing similar challenges in seeking to replace or augment legacy optomechanical “starball” projectors to fill their theater domes. Excepting the smallest venues, the digital systems that replace these legacy systems require multiple projectors for optimal image quality.

The company has done its homework. In a white paper for Christie, industry consultant Gord Harris states that “RGB laser systems have the potential to significantly improve Giant Screen image quality while substantially lowering operating costs,” and that “multi-projector systems coupled with proven auto-calibration systems for warping and blending can now

far outperform single 4K projector solutions.” Harris, a giant screen industry veteran, goes on to relate RGB laser projection capabilities to the DIGSS 2.0 spec (Digital Immersive Giant Screen Specifications), and show how the technology can help giant screen exhibitors preserve (or recapture) their industry’s key differentiators of image quality and aspect ratio.

“There’s reason to believe that there’s a market for this,” says Bryan Boehme, Executive Director of Global Sales & Business Development, Entertainment at Christie. Boehme, who sits on the Technical Committee of the Giant Screen Cinema Association (GSCA), says, “Giant screen cinema was built on differentiation, on providing something scalably different. For years, that was 15/70 film. Film to digital conversion in giant screen has taken some time, and some of those were early adoption. This will be a next step for them. In mainstream theaters, it will be years before we see RGB laser widely embraced, but it’s an option for specialty cinema now.”

Like Harris, Boehme makes the case that Christie’s RGB laser projectors can restore differentiation and distinction to these theaters - even the legendary venues with eight-story-high screens - treating audiences to everything RGB laser projection has to offer, including its expanded color range. Boehme indicates that RGB laser projection capability is matched by content production tools, that both RED and Sony, among others, have high-end digital cameras on the market now that support the Rec.2020 color palette, and that most existing theaters already have the standard matte screens for best exhibition results.

Christie’s partners in this arena include Evans & Sutherland, a leader in the fulldome community. “E&S recently took delivery of their first five RGB laser units (D4K40-RGB projectors) for their demo center in Utah and an additional five for the U.S. Space and Rocket Center in Huntsville, Alabama,” said Boehme.

Boehme and Garrido pointed out that the same qualities (versatility, color saturation and brightness, multi-unit capability, etc.) that make RGB laser projection well-suited to giant screens also apply to projection mapping, nighttime spectaculars, touring productions and concerts, sports events, story-based experiences for theme parks, visitor centers, museums, immersive art displays, historical re-creations, world expo pavilions and more.

Garrido said, “One of our big partners has been talking about how, going forward, RGB laser

technology will allow them to do new things, supporting ROI on several levels. The color range allows effects and animations not before possible. It supports extremely punchy animation. It can have great impact on a dark ride experience, touching theatrical lighting and effects in addition to the projection light on the screen. It helps everything to stand out and tell the story properly, in addition to being reliable and robust.”

Rec. 2020 and the color space

For a deep dive, see the white paper on Rec. 2020 and laser projection prepared for Christie by Matt Cowan at www.christiedigital.com/techpapers/rec-2020-whitepaper.pdf.

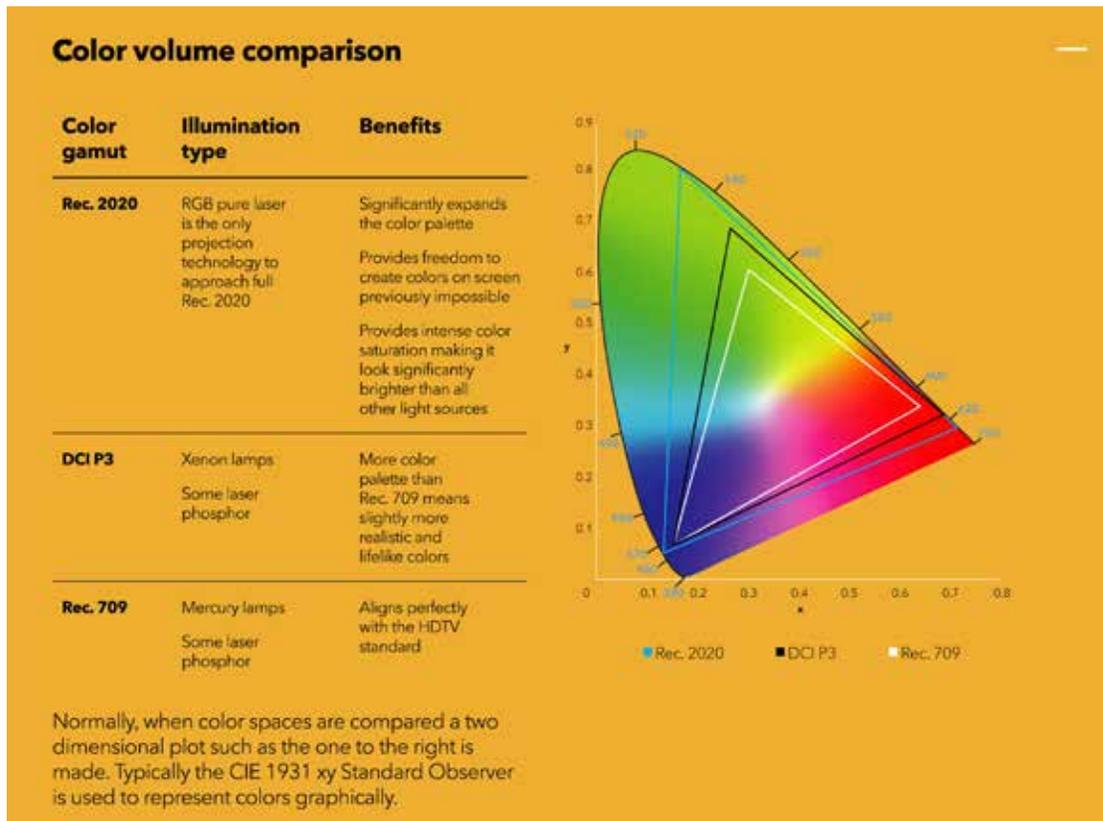
Three key points:

1. Rec. 2020 color is a superior color space in terms of representing the real world and achieving precise color matches. It can reproduce colors not possible with Rec. 709 (associated with HDTV) or P3 (associated with DCI, the Digital Cinema Initiative).
2. RGB laser projection supports Rec. 2020.
3. Once you’ve seen the Christie color demo shootout of Rec. 2020 vs Rec. 709 and P3, as Bryan Boehme says, “You can’t unsee it.”

“Rec. 2020 color provides the opportunity to display a better representation of real-world colors than the commonly used color spaces for television and cinema,” states color scientist and entertainment specialist Matt Cowan in a 2015 white paper on Rec. 2020 and RGB laser projection prepared for Christie. “The standards committee for Rec. 2020 chose color primary coordinates that are at the extreme edge of the visible color space. These color primaries are achievable with RGB laser illuminated projection technologies. Practically achieving



Museums, dome theaters and visitor attractions projection are some of the likely markets for Christie's new RGB laser projection systems.



these primaries is not limited to single wavelengths, but can be accomplished with a bundle of wavelengths. RGB laser illuminated projectors are ideal for achieving this.”

As mentioned above, there’s an aesthetic power and a business incentive for working in the Rec. 2020 color space. “This is what creative people in LBE have been asking us for: a larger creative palette, a palette that allows them to do things bigger and bolder than ever seen before,” says Boehme. Adding that today’s entertainment universe is increasingly populated by licensed and branded content and characters, the power to achieve the exact color – whether for skin tone, a costume, a mascot, art reproduction, a product or company logo, a sports uniform, etc. - is all-important.

Garrido has been meeting with customers and partners in live events staging and LBE development and reports that across the board, “They all love the colors. Most are looking for punchiness in image, something that catches the eye and will not fade into the background, that remains vibrant even in ambient light, that stands out even in very large format situations. That’s what RGB pure laser allows. Authentic, vibrant colors. Detail and crispness.” Those viewers are perceiving something called “color volume,” according to Garrido. “Color volume gives the impression of higher brightness, but it really is color saturation.”

“People are blown away by the ability to see that much more color,” says Boehme. “For many years, Rec. 709 was interpreted as the best color we’d be able to produce with projectors. We’re about to shed that.” He emphasizes that it’s necessary to see Rec. 2020 in person. “You can’t take a picture of it – our phones are

all color spaced at Rec. 709. Once you do see it, you can never go back to thinking about color, or color reproduction, the same way.”

Wavelengths don’t change

Christie continues to invest in and market 3DLP and 1DLP laser phosphor projectors, while positioning RGB laser projection as the pinnacle of laser-illuminated projection.

The “RGB” in RGB laser denotes Red, Green and Blue, and refers to its use of individual red, green and blue lasers to generate light, a key differentiator from the more commonly known laser phosphor projection, as well as from lamp-based projection.

Both laser phosphor and RGB laser are lampless technologies; the key difference is how the light is produced. Laser phosphor uses blue laser diodes as the primary light source. To generate the three primary colors – red, blue, green – the blue light from the laser diodes shines onto a spinning wheel that is coated in a phosphor compound. The blue light excites the phosphor, emitting yellow light. The yellow light is then segmented using dichroic coatings to create red and green light while the blue light component directly passes through a diffusion segment in the phosphor wheel.

RGB laser, on the other hand, is not only lampless, it is wheel-less and solid-state. It employs individual red, green and blue laser diodes as its light source, and they are scalable. The scalability supports ever increasing levels of brightness and the individual,

primary color diodes support the Rec. 2020 color palette.

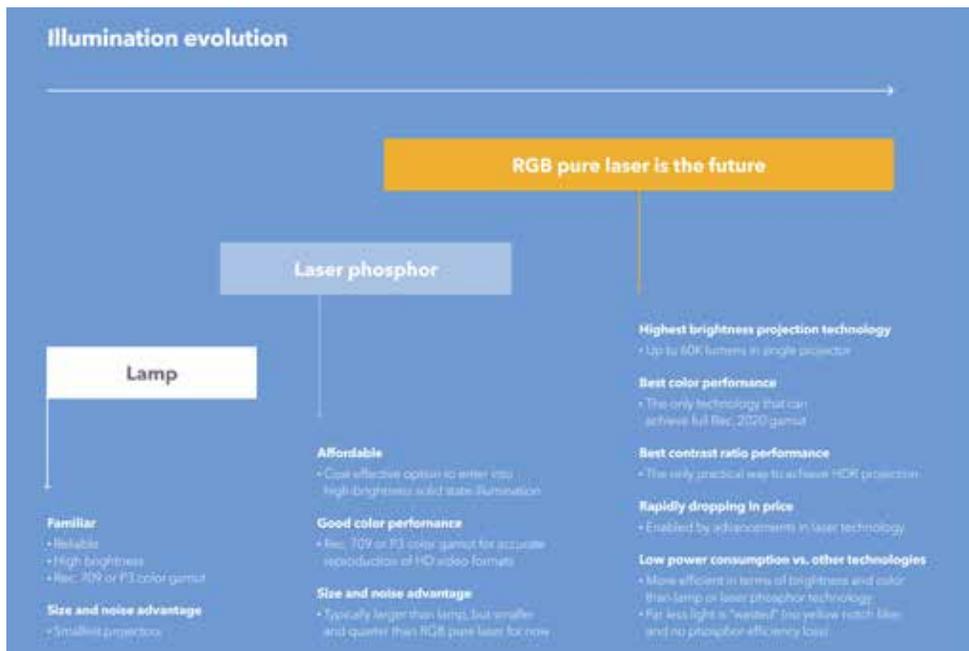
Consistency is another benefit. The Rec. 2020 color palette and the RGB laser light provide accuracy, range, and consistency. RGB laser light does not degrade the color as the projector ages (as opposed to lamp-based projection). As a result, the RGB laser projector has the power to readily match a display again and again - a boon for branded content and situations where the projectors will be repeatedly switched on and off, such as for a touring show, traveling museum exhibit or convention presentation. "When specific colors are used in a production, the client wants and expects to see those colors," says Garrido. "One of the things that our customers in rental and staging are very pleased with is how the Christie RGB laser projector can store and recreate the color again and again."

Solid state manufacturing plus RGB pure laser light is key to consistency, even as the units age, according to Christie, because wavelengths don't change. "With lamps, you have gases, anodes and cathodes, a yellowing glass," Garrido says. "With RGB lasers and solid state, you have a very predictable aging characteristic. As they get older, they lose light. Not quality of light - wavelengths don't change, which is why you're able to precisely recreate color." After 30,000 hours the unit will have lost 20% of its initial brightness, according to Garrido. "If you bring in a new projector, you can turn that one down to match, or replace the laser optical system on the aging projector. And they don't age as quickly as lamp-based projectors do."

Efficiency

Additional benefits attributed to Christie RGB laser projectors vs lamp-based are that they deliver more light more efficiently, with less power. It's partly due to the nature of RGB laser light, Garrido explained. "RGB laser light wants to stay in a straight line, but the light from a lamp wants to scatter," he says. "So by nature, in RGB laser projection you have less stray light to deal with, and a better contrast ratio as a result. This is further improved by the high contrast lenses used in RGB laser projectors; they have elements that help control the scattering of light."

Heat generation and form factor are attributes that add up, positively, when considered along with lighting, HVAC and other systems, especially in a limited-footprint, fixed install space. Per Garrido, "RGB laser illumination has a lot less thermal output (10,000-15,000 BTU per hour) than a lamp-based product (17,000-20,000 BTU per hour)." Wiring and connection needs



are also simpler and more in line with what most venues typically have available, noted Garrido: single phase power for the RGB laser projector vs 3-phase power for a 7 kw lamp-based projector. "An installation can replace its existing projection system with a Christie D4K40-RGB to fill a 25-foot screen and give its customers a compelling, new experience. It's an all-in-one box with no external components - an easy replacement with existing infrastructure. You hang it and turn it, in any orientation, paying attention to normal concerns such as providing clearance for air circulation and exhaust, and a safety zone around the laser source. These are some of the things that customers have gotten excited about when we started showing off the product," says Garrido. "They see how easily they can upgrade."

The promise of RGB laser

A well-established leader in AV, Christie has a 90-year history and track record of active involvement and outreach among its customer base. The dialogue and partnership with creatives and integrators helps the company keep its business verticals aligned and its products on target. [See "Relationships, Passion and Quality, InPark issue #71, <http://www.inparkmagazine.com/christie-relationships-passion-and-quality/>]

RGB laser has some very big screens to fill, and Christie is on the job. •••



Want to learn more?

To understand more about why color volume matters, and see how lamp and laser technologies compare on key features and cost of ownership, download the free e-book "Illuminating ProAV" at christiedigital.com/illuminationguide

The French connection

Meet Michel Linet-Frion

by Julien Causeret



Michel Linet-Frion, Creative & Innovation Director, Pierre & Vacances / Center Parcs, is being honored with the Peter Chernack Distinguished Service Award by the Themed Entertainment Association (TEA). He will formally receive the award on April 13, 2019, during the 25th Annual TEA Thea Awards Gala presented by Chimelong, at Disneyland Resort in Anaheim. Julien talked to Michel about his career, accomplishments and his TEA Distinguished Service recognition.

I first met Michel during a 2013 TEA mixer event in Paris. Then, during a three-day TEA Europe & Middle East Division behind-the-scenes excursion that Michel helped to organize in 2016 at Futuroscope (Poitiers) and Center Parcs Bois aux Daims, I had the chance to really get to know Michel over the course of the one-hour drive between the venues. I learned about his career and his fascinating involvement in the industry. That conversation gave me a glimpse of Michel's creative soul, his vision and his passionate involvement in all the projects he works on. I really enjoyed this specific moment of our friendship.

Michel has been instrumental in developing TEA's European presence and more recently helped expand into the Middle East market. Through my conversation with him, I hope to share with you the many facets of Michel Linet-Frion and what earned him this honor. Michel- we are all proud of you. Bravo! -- J.C.

How did you get started in the industry?

I am a licensed architect but very quickly I started deviating from conventional architecture as I was lucky to find opportunities as a student in exhibition design, events and leisure parks during the 1980s. When Disney decided to come to France, I set my sights on working for them...and I did, because I was an architect but also because I spoke English. Interestingly, I met Walt Disney himself when he came to the Calgary Stampede festivities. My class (I must have been about eight years old) was chosen to be around him in the parade as he was riding his big white horse! Sadly, I seem to have lost the one photograph I had of us together.

How did you get involved in the TEA?

For this I must blame Nick Farmer! He was always talking about TEA, and I was frequently hiring his company to design and build our attractions in Parc Astérix. We joined the organization

somewhere around the year 2000. Another connection is that I have been involved in several Thea Award recognized projects, including:

- Space Mountain, Disneyland Paris (1996)
- L'Oxygénarium in Parc Astérix (2001)
- Center Parcs Bois aux Daims eco resort (2017)

Why do you find TEA to be an important organization for you and our industry?

TEA is unparalleled in its representation of our industry and as a creative director, TEA provides a way to meet other creative people and discuss our projects, our "recipes," etc. This is done without needing a formal approach, only needing to say "Hi! I am part of the TEA like you..." and the conversation starts.

Since I left Disney, I've found opportunities within large companies that operate various leisure sites where my role (currently Creative & Innovation Director at Centre Parcs) is to develop both existing and new sites, to keep them as attractive and innovative as possible. Since I typically rely on contracted expertise and talent for each project so as to create the best project team tailored for each project, TEA has been extremely valuable in helping me find ideal project partners.

What achievement are you most proud of in your career?

For me, every new project ends up frequently as "my best one so far." I don't really like looking at the past, because there are always things you would change in retrospect. Instead I like to focus on looking forward to the next one.

Who or what inspires you?

Can I say "everything?" Usually I am guided by trying to find the best "product" that will create a positive emotion for our guests. I always make choices and decisions with this in mind...that's why I have never been able to design anything for myself!

What do people in the industry not know about you?

I always carry my camera with me, and I really enjoy shooting photographs of what I see, whatever the context. Then I spend time looking at these, sorting them by themes; every once and a

while I publish a Blurb book (go on blurb.com and you can find them under my name). My latest one was called “details” and is a collection of details that have no unifying thread, only details of daily life that have caught my eye and triggered some kind of emotion. I would be pleased to share this passion of mine with whomever is interested!

What are your future plans?

I plan to continue my endeavors to create wonderful attractions and experiences. Every day is a new day for me with high hopes.

• • •



Julien Causeret (julien@eca2.fr) is a French professional from the leisure and tourism industry who has worked for 6+ years for the internationally known show production company ECA2. As Business Development Executive, Julien is in charge of building new relationships with location-based entertainment destinations. He brings to the team his knowledge of the attraction and themed entertainment industry in order to connect and inspire creative and technical minds. He has worked on two Thea-awarded multimedia shows: “Wings of Time” (Sentosa, Singapore) and “Fountain of Dreams” (Wuyishan, China). Other projects include “Lake of Illusions” (Shanghai, China),



“Eastern Sunrise” (Rizhao, China) and more recently the multi-awarded Opening Ceremony of the 17th FINA World Aquatics Championships (Budapest, Hungary). In addition to his work at ECA2, Julien is a foodie and budding chef, hand-carves wood spoons and practices his golf game.

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JUSTICE LEAGUE: Battle for Metropolis honored with a TEA Thea Award

By InPark's editorial team

InPark has covered Six Flags' Justice League attractions since they first opened in 2015. In this article, based on previous reporting from Judith Rubin and Martin Palicki, we look at the evolution of the attraction and what led to the version at Six Flags Magic Mountain being named for a TEA Thea Award.

The Thea Award for Outstanding Achievement from the Themed Entertainment Association (TEA) for JUSTICE LEAGUE™: Battle for Metropolis at Six Flags Magic Mountain is a recognition well deserved. While the Magic Mountain version is specifically the one receiving the Thea honor, it represents a series of attractions and a new direction that has helped to redefine the Six Flags franchise.

The idea for the attraction had been percolating for over a decade before the first two JUSTICE LEAGUE installations opened at Six Flags Over Texas and Six Flags St. Louis in 2015. In 2017, the seventh installation of the attraction debuted at Six Flags Magic Mountain. It's an enhanced version of the original with the latest in technology, additional scenes and new characters.

A new generation of media-based dark rides

The ride builds on a trend that started in the late 1990s when destination theme parks began adding high-end, projection-based media dark rides with motion base vehicles. JUSTICE LEAGUE: Battle for Metropolis took that trend and made it accessible to parks and populations outside of the major theme park resorts.

Sally Corporation 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, RealD provided the 3D projection system and the gaming system was created by Alterface Projects.

Sally's Rich Hill gets the superhero's share of credit for bringing JUSTICE LEAGUE to life. As lead designer on the project he led the ride from concept through installation to opening.

Physical + virtual

Guests enter the Hall of Justice where they learn that several members of the JUSTICE LEAGUE (the good guys) have been captured in the city of Metropolis. The guests are called upon to help find and free the good guys, and capture The Joker and Lex

Luthor (the bad guys). The guests are next introduced to the ride vehicles and the technology they will use to stun villains and free the heroes.

Donning 3D glasses, guests enter the six-passenger ride vehicles to begin the adventure. According to Hill, the ride was always designed with 3D media in mind. "We wanted the characters and scenes to pop out at guests, and the best way to do that is with 3D," explains Hill.

The ride layout takes vehicles through a series of fabricated sets and computer generated (CG) environments. With the help of lighting, effects and immersive design techniques, the physical and virtual are deftly integrated, with much of the ride environment projected onto immersive, curved screens. "We worked hard to mix the practical with the virtual," says Hill. "Tangible effects make a difference. And for the CG portions, we took a lot of care to make it look like virtual vistas, as opposed to just sitting in front of a TV screen."

During the trip through Metropolis players can shoot at targets both on the screens and in the real environment, with real-time, gaming-style interaction. At the end, scores are calculated and displayed, along with a photo of each player taken earlier in the ride.

Vehicles and gear

The six-passenger vehicles for the attraction are Oceaneering's Evo-6™ product. The JUSTICE LEAGUE attractions were the first installation of the Evo-6™, which is derived from an eight-passenger vehicle called Evolution, first debuted in 2005.

Each vehicle has a motion base capable of 360-degree spins (yaw) and can move at speeds up to six feet per second, although they rarely go that fast. The vehicle also contains onboard lighting and audio. Onboard audio playback comes



These photos from the original installation of JUSTICE LEAGUE: Battle for Metropolis show the storyboard concept sketch from Sally, construction and a photo of the ride in operation. *Images courtesy of Sally*

from an Alcorn McBride AM4 Digital Audio Machine. Audio amplification comes from Alcorn's AmpTraXX amplifier.

The gaming system is a core element of the attraction. Alterface Projects developed the patented interaction system, which is based on laser and camera detection technology. According to Alterface Projects CEO, Benoit Cornet, "This system avoids putting fragile components into the interactive devices, which means simpler and cost-effective maintenance."

Each vehicle wirelessly transmits scoring data to a central computer located backstage. This isolates the sensitive equipment from the vibrations and movement of the ride vehicle, enhancing reliability.

The ride will continue

The attraction has exceeded expectations in all of its seven installations, and signaled a new direction for Six Flags parks. Superhero branding is not new to Six Flags, but it had, in the past, been mostly applied to roller coasters and thrill rides, which skew to younger audiences. Not only are state-of-the-art dark rides a new offering in their own right for Six Flags, they are also

embraced by a much wider demographic, serving up plenty of adventure and story, but without the bumps, jolts and G-forces.

Perhaps this achievement is most impressive at Magic Mountain due to its Southern California location making it a competitor with other, formidable leisure destinations. It is a model for what smaller parks can do in the shadow of larger operators – and what inventive creative teams using modern technology can help them accomplish.

As former Six Flags Magic Mountain Park President Bonnie Sherman expressed it: "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."

What might be next for Six Flags, and for the team that gave us a new adventure in Metropolis? When asked about additional installations, all parties are coy. But disruptive success of this kind seems bound to engender more, and we look forward to the announcement. •••

Andrew O'Rourke: Google THIS

CMU grad talks about Google's role in shaping the future of location based entertainment

Interview by Martin Palicki

A recent graduate of Carnegie Mellon University and Duke University alum, Andrew has provided internship and freelance work for Disney, The Bezak Company and the Computer History Museum. In late 2018, Andrew became an employee of Adecco working on assignment at Google. He is also on the TEA International Board of Directors as an Associate Member.

What is your title at Google and what are you responsible for?

My new role as a Jr. Experience Design Lead, contracting with Google, encompasses both experience design and production of the worldwide portfolio of Google Experience Centers. Lately I've been focused on opening the newest center, The Grove, based in Redwood City, CA. I've found myself doing everything from projection mapping on moss, to coordinating facility installation, to helping work out how the Google Assistant might play with a grove of trees. It's all in service of inspiring and enlightening guests about the amazing potential of Google's technologies.

What led you to your current role with Google?

Years of preparation got me ready for this, but getting the position was all about timing and maintaining connections. I had met one of my current colleagues through school and we stayed in touch through various TEA events. A few months after discussing the position with this colleague during a chat over lunch, I moved to Google.

How does this job fit in with your education/career progression?

My career path thus far has been pretty wide-ranging - and I wouldn't have it any other way - but the common thread that's driven me all along is a passion to foster a better understanding



of humanity and our world through experiencing our collective stories. I honed my storytelling skills as a documentary filmmaker and through my time in LA working in media production at Di Bonaventura Pictures and Disney. I learned how to harness the power of technology and interactive techniques at Carnegie Mellon, and have had a chance to apply them to physical spaces through my time at Walt Disney Imagineering and the Computer History Museum. My new role presents a unique chance to develop technology-powered experiences that combine entertainment and education, so it's a great mix presenting some really interesting design opportunities.

People may not necessarily think of Google when they think of themed entertainment. Why should they?

As we all know, themed entertainment is a lot more than theme parks, and Google's Experience Centers represent a blend of theatrical and exhibit elements that bring our stories to life in a uniquely Googley way. Though Google may be a tech company, the team are no strangers to the industry, with many hailing from theme park, museum, or architecture backgrounds, so we hold a deep understanding of the power of storytelling in physical space.

What was up with that dark ride Google built for the 2019 Consumer Electronics Show and were you involved with it?

My group had nothing to do with Google's CES dark ride, as we generally focus on facilities with more permanence, but didn't our colleagues do an amazing job?!

What role do you think technology and data have in designing visitor attractions of the future?

We are seeing an industry-changing expansion of the definition of what an attraction is, where it is, and how it begins and ends. The idea of pushing people through a show box or exhibit every

few minutes will be supplemented by - and perhaps one day far in the future even supplanted by - longer-form narratives that bridge attractions and themed areas. Of course, these types of attractions already exist across our industry, but the format is in its infancy. I liken it to computer games in the 1980s; we're starting with a lot of adventure games and collecting achievements in different forms, but that will evolve as the artform matures.

Much as in gaming, that evolution and growth are where technology comes in. Databases are a great start for tracking guest interactions, but I think Artificial Intelligence-driven game masters and characters will be the things to watch, as they will allow new genres, types of participation, and guest roles to scale in personalized ways that are operationally unfeasible today. Across the industry's entertainment and educational spaces, these longer-form, bigger-footprint experiences will hold a lot of power to immerse and connect guests as never before, and potentially have quite an impact on their lives.



And now, a red-carpet question for the Associate Director of the TEA International Board: Will you be attending the 2019 Thea Awards Gala in Anaheim on April 13, and if so, who will you be wearing?

I will be there, and I will likely be sporting my pink-patterned Polynesian bowtie supported by a cast of the latest 2015 fashions from Nordstrom Rack. •••

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An eruption of accolades

Universal's Volcano Bay honored with a TEA Thea Award

By Rick West

On May 25, 2017, Universal Orlando Resort's third theme park, Volcano Bay, welcomed its first public guests. The park has since been acclaimed by fans and professionals within the themed entertainment industry, and was named to receive a TEA Thea Award from the Themed Entertainment Association. In connection with the Thea Award, Volcano Bay will also be the subject of a Thea Case Studies presentation during the annual TEA Summit. The Summit takes place April 11-12 and is followed on April 13 with the 25th Annual TEA Thea Awards Gala, presented by Chimelong. The big weekend of events takes place in Anaheim, California, at Disneyland Resort.

An official statement from the TEA Thea Awards Committee reads, "The entire park beckons with the promise of escape, relaxation and adventure and lives up to the belief that 'Water is Life and Life is Joy.' Volcano Bay raises the bar for waterparks in general, with a highly-themed environment and a fun, festive and relaxing atmosphere."

The addition of Volcano Bay in 2017 was significant not just for NBCUniversal, but as part of the continuing evolution of the Central Florida tourism corridor.

Volcano Bay is a large property, coming in at about 53 acres. The park has four zones: Krakatau (the volcano, rising 200 feet into the Orlando skyline), Wave Village, River Village, and Rainforest Village. Combined, they are home to 18 attractions, ranging from wave pools and lazy rivers to heart-stopping slides and plunges.

The attractions range from kiddie pools with tiny slides and charming interactive elements, to world-class, thrill-seeker slides, including Ko'okiri Body Plunge – a dramatic, 125-foot-drop at 70 degrees (near vertical) from near the top of Krakatau. The towering plunge takes only seconds, as riders zip through an enclosed tube through the heart of the volcano and pass along a clear tunnel in one of the park's pools near the base of the mountain.

Also geared toward adults, and intertwined with the volcano, are the Kala and Ta Nui Serpentine Body Slides. Like Ko'okiri, these are body slides that feature trap door-style launches, where riders literally have the platform pulled out from under them, sending them plummeting into the tubes below.

Most of the names featured at Volcano Bay are Polynesian, such as the Kopiko Wai Winding River, Taniwha Tubes, Ika Moana,

and TeAwa – The Fearless River. A favorite attraction at Volcano Bay is the Krakatau Aqua Coaster, a slide where riders sit behind one another in rafts that have been designed to look like waka taua (Maori war canoes). This unique water coaster doesn't rely solely on gravity, but rather, linear induction (magnetics) to propel each raft very rapidly up steep hills before sending them careening down another drop or through a series of banked turns within the volcano itself.

Volcano Bay has an abundance of food and drink in every section of the park. The park has two featured bars – Dancing Dragons, and the Kunuku Boat Bar.

Throughout the park are cabanas for rent. Each cabana comes with its own TapuTapu kiosk, from which guests can reserve their rides while relaxing in the shade. There are also lounges and chairs available on the beaches and elsewhere.

One of the pioneering aspects of Volcano Bay is that the park features “virtual queues” for its attractions. Upon entering the park, each guest is given their own TapuTapu wearable band. They walk up to an attraction entrance and put themselves into a virtual queue by “tapping in” at the kiosk with their TapuTapu. A

message is received on their TapuTapu LCD display telling them how long their wait is going to be; the band vibrates to remind them when it's time to return.

TapuTapu also streamlines the process of purchasing food, beverages, and merchandise throughout the park, as well as rental locker operation. There are also interactive elements that guests “Taptu Play” throughout the park that trigger water fountains, special effects, and even a selfie station. •••

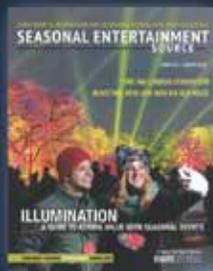
This article originally appeared in “Theme Park Adventure” and is excerpted here with permission. All photos courtesy Theme Park Adventure.



Rick West (rickwestmss@gmail.com) is Creative Director of Midsummer Scream - the world's largest Halloween and horror convention, and themed entertainment industry show writer/creative director who has worked for such companies as Thinkwell, BRC Imagination Arts, The Hettema Group, IdeAttack, and The Producers Group. Rick is also a frequent contributor to InPark Magazine.

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Global gaze

Asian attractions dominate the 2019 TEA Thea Awards

By Philip Hernandez

The attractions industry is booming in Asia. Mainland China expects to have 59 new theme parks by 2020 (“China Theme Park Pipeline Report,” AECOM, 2018.), and quality is keeping pace. This is reflected in the slate of TEA Thea Award recipients being awarded this April. Forty percent of the Theas (six out of 15) were named to Asian recipients (detailed below).

Asia’s attraction boom

The development of the attractions industry in Asia has had a unique trajectory. The sector is young, with variations from country to country and has developed on a fast track compared to its mature counterpart in the West. Theme parks in the West began as small, low-tech attractions (think Knott’s Berry Farm) that grew in technological complexity over time. In Asia, the pace has been faster and technology-focused from the outset.

According to forecasts from IAAPA, the Asia Pacific region will account for 62% of global growth in attendance for the theme and amusement park markets, with spending to increase to \$21.5 billion in 2022. By comparison, North America spending is forecast to expand to a \$29.7 billion in 2022 (“IAAPA Global Theme and Amusement Park Outlook: 2018-2022,” IAAPA, 2018).

China and Japan

China was the fastest-growing market (16.5% increase in 2017), accounting for 83% of the overall growth in attendance for the region. Attendance benefited in 2017 from an entire year of operation from Shanghai Disney Resort and Fantawild Oriental Heritage. China will remain the quickest growing Asia Pacific market for the next five years.

While the attractions market is expanding in China, Japan remains the largest market in the Asia Pacific region. Spending in Japan’s amusement park market expanded 2.4% to \$6.7 billion in 2017. By 2022, Japan’s spending is projected to top \$9.2 billion with China trailing just behind at \$8.18 billion (“IAAPA Global Theme and Amusement Park Outlook: 2018-2022,” IAAPA, 2018.).

Attendance Drivers

The opening of new parks and attractions will drive attendance growth for the next five years in the Asia Pacific region. Two of the main trends seen at these parks are 1) attractions that use popular movie IP and 2) higher ticket prices. In China, Disney-

Pixar Toy Story Land at Shanghai Disney Resort, and Shanghai Polar Ocean Park both opened in 2018. Universal Parks and Resorts is increasing its investment in Universal Studios Beijing from \$3.3 billion to \$6.5 billion. Six Flags has plans for three parks in the Nanjing area - the first opening in 2021 - and is planning 11 parks in China in the coming years.

The Asian recipients of TEA Thea Awards in 2019

The Asian projects being honored in 2019 with TEA Thea Awards range from an LED waterslide to a giant revolving theater, but they share a set of common elements:

- **State-of-the-art technology**

Every recipient relies on a leap in technology.

- **The dissolving of boundaries**

Each of these projects alters boundaries in some way regardless of platform or category (theme park, museum, water slide, auditorium, parade, dark ride), each recipient alters the medium’s boundaries. What if a water slide rotated and was also a light show? What if exhibits in a museum moved and interacted with one another? What if set changes disappeared from a live performance? Each of these projects in some way dissolves traditional boundaries of the form and challenges the industry to keep up. The guest experience is more fully engaging than ever, and it’s just the beginning.

- **Multi-generational appeal**

Families are the core market for themed entertainment in the East as in the West - although cultural norms and the role of family differ – and this is reflected in theme park and attraction design.

Fantawild Oriental Heritage

Fantawild Oriental Heritage in Wuhu opened in April 2017. It’s the 22nd park developed and operated by Fantawild Holdings. The park blends aspects of traditional Chinese culture with technology-driven attractions. It features nine thematic areas, 12 major attractions, and a cultural heritage town. In-house animation and special effects units at Fantawild developed these attractions. “It brings together an exceptional blend of live entertainment, large-scale shows, and engaging dark-ride experiences to deliver a truly unique and compelling family destination,” stated the TEA Thea Awards Committee.



The Legend of Nuwa at Fantawild Oriental Heritage in Wuhu. Photo courtesy Fantawild.

Besides operating theme parks, Fantawild produces original animations, themed performances, and consumer products. For a media company to expand onto the theme park platform to leverage IP and merchandising has been a growing trend. However, Fantawild finds a niche in its dedication to integrated technology. Fantawild is committed to spreading Chinese culture across the globe, with culture as its core and technology as its support,” per its published philosophy.

Technology is likewise at the heart of Fantawild’s mother corporation, Huaqiang Holding Group (established in 1979), whose portfolio demonstrates a substantial investment in the field. Among them is Huaqiang Electronics World (Shenzhen), a comprehensive trade and exhibition center for electronic components in China. A technology company turned theme park developer in Asia Pacific’s fastest-growing market is a company for us all to watch.

Legend of Camel Bells

Legend of Camel Bells is a live-action production with all the grandeur of legendary Chinese storytelling. The production brings the audience along with a group of traders who are traveling the Silk Road from China to ancient Rome during the Tang Dynasty (618-907). Along the way, the travelers encounter extreme weather, life-threatening dangers, and fantastic sights, all presented with half a dozen elaborate, animated sets. Xia Chunting, chairman of Huaxia Wenlv Group, produced the show.

In conventional live-action production, scenes play out on a single stage as the audience witnesses set changes. In Legend of Camel Bells, the auditorium itself revolves, bringing the audience to the next set. Set changes disappear; thus, the sets are more elaborate. “The six sets for the show (one for each story chapter) ring the audience platform. Each set is an elaborate, permanent installation with integrated technology systems, rigging, and effects. The rotating auditorium is capable of revolving 360 degrees, as well as back and forth, to bring the audience into position relative to the sets as the story unfolds.” (“Legends, camels and ACE,” InPark Issue #76 cover story, Jan 2019).

The Thea Awards Committee statement cites “stunning stage effects, massive props, extreme scenery, a huge cast, animal actors, a 15-meter-tall volcano and snow mountain, an 18-meter-high Buddha and a 20-meter-high by 40-meter-wide waterfall - all presented on the massive, oval-shaped stage, backed by a 4,000-square-meter LED screen... highest level of visual imagination and design, theatrical flair, showmanship, and execution...wows the audience.”

MORI Building Digital Art Museum— teamLab Borderless

While the exact definition of “Immersive” is contested in our industry, three elements continually surface: complete environments, agency, and consequence. Immersive experiences allow guests to make choices that alter their experience, all



The Legend of Camel Bells. Photo courtesy of ACE.



Exhibition view of MORI Building DIGITAL ART MUSEUM: teamLab Borderless, 2018, Odaiba, Tokyo © teamLab

contained within a complete environment (or microcosm if you prefer). With a few exceptions, museums and their exhibits are not immersive. But what if they were? What if exhibits moved between rooms and responded in real time to what you do? What if there were no “rooms” but rather the floor, ceiling, and walls merged into one endless canvas? This project brought together architects, engineers, programmers, CG animators, mathematicians, musicians, and designers to create such an immersive museum in Tokyo.

After exhibitions in Singapore, London, Paris, and Shenzhen teamLab collaborated with local urban landscape developer MORI Building Co. Ltd. to create the permanent attraction being honored with a Thea Award. MORI Building Digital Art Museum—teamLab Borderless is a massive, three-dimensional experience that takes place in five different zones within a 10,000-square-foot space. The artworks flow out of rooms, communicate with other works, influence, and sometimes intermingle with each other without boundaries.

“This simple yet innovative combination of analog interactive installations and advanced projection-mapping visuals equals a world-class, non-linear entertainment experience that allows thousands of visitors daily to explore, wander, and discover at their own pace. The level of technical complexity (520 computers/470 video projectors/interactive sensors, etc.) and the overall quality of the experience makes ‘Borderless’ a new reference point and potentially a ‘game-changer’ in the industry,” stated the TEA Thea Awards Committee.

Nemo & Friends SeaRider

Rides can be expensive to build. Theme park operators generally wait decades to receive the full ROI on rides, especially those that are heavily themed. When a market (Asia Pacific, for instance) is technology sensitive, themed rides get outdated rapidly. What’s the solution? Refurbish and repurpose. Proper execution is tricky, but Disney is on a roll (likely due to their experience with Western parks). Disney received two Theas in 2018 for

Attraction Reimagining: 1) Guardians of the Galaxy – Mission: BREAKOUT! and 2) Frozen Ever After. 2019 sees Disney receiving another for SeaRider.

The Disney/Pixar films Finding Nemo and Finding Dory inspire the SeaRider simulator ride, which opened in 2017. Part of Tokyo DisneySea, SeaRider was repurposed from its predecessor, StormRider. SeaRider includes a new exterior theater façade, a new pre-show, and a real-time experience for each group of voyagers.

The storyline for SeaRider is this: At the Marine Life Institute in the heart of Port Discovery, scientists have created a substance called “Chidiminium” that can conduct electricity and shrink materials. This new material is used to safely shrink the SeaRider, a fish-shaped submarine in which guests ride. The SeaRider features artificial fish intelligence, which allows it to think like a real fish and operate without a pilot. Guests dive into the sea aboard this fish-submarine and meet marine life such as Nemo, Dory, and Marlin, who join passengers on a journey through the ocean, where they encounter numerous characters from the two Finding Nemo films. Each voyage on the SeaRider vehicle is composed in real time with more than 576 different video clips that create varying storylines for each 14-minute ride.

The Thea Committee wrote, “...beautifully executed and subtly transformed...plenty of surprises and action to entertain...a charming and exciting ride for the whole family.”

SlideWheel

The SlideWheel at Chimelong Water Park is the world’s first rotating water slide. Chimelong included SlideWheel, designed by Wiegand Maelzer, in the park’s April 2018 grand opening. The SlideWheel is a one-of-a-kind 110-second experience comprised of sliding, swinging, twisting, shaking, rotating, and zero gravity. Up to 480 passengers an hour can slide through on four-person rafts.

The German-made water slide doesn’t stop there – SlideWheel turns into a light show at night. The 24-meter-tall, rotating

SlideWheel uses over 700 LED lights on the interior and exterior to create a stunning visual seen throughout the park. The light show capitalizes on the physical slide structure and eliminates the need for extra support rigging (generally an eyesore). The lightweight LED lights (the norm now due to their many advantages over incandescent fixtures: energy savings, compact form factor, longer life etc.) make the feat possible. Thus, the attraction not only succeeds on novelty of experience, but adds entertainment value to the evening offerings.

The TEA Thea Committee wrote, “SlideWheel is a highly engineered and innovative achievement that provides guests both visual and physical sensations that are unique to the waterpark industry.”

Universal Spectacle Night Parade – The Best of Hollywood

Parades are a theme park staple. The classic recipe has been to present a character on a float repeating a scene, with dancers in between. Universal’s new parade re-imagines the format. Each segment is an evolving narrative where characters impact the environment and exit the float.

The Universal Studios Night Parade—The Best of Hollywood, at Universal Studios Japan in Osaka, implements an innovative

parade-control system that synchronizes onboard and off-board projection mapping with the progressive movement of parade units choreographed to a musical score. The massive, virtual, movie-based environments synchronize with puppeteered creatures and live performers to achieve a dazzling, multi-sensory experience for guests.

For example, a full-size Hogwarts Express rolls down a cloudy projection mapped street. The windows reveal students enjoying conversation before - a dementor attack! Nearby students (dancers) cast spells which fend off the Projected Dementors. Other environments include Transformers, Jurassic World and Despicable Me.

“Universal Studios Japan has dramatically reinvented the stage on which their nightly pageant performs. The result really does let guests ‘live the movies,’” wrote the TEA Thea Awards Committee. •••



Philip Hernandez is CEO at Gantom Lighting, Editor-in-Chief of Seasonal Entertainment Source magazine, and Founder of the Leadership Symposium for Seasonal Attractions. Contact Philip at: philip@gantom.com



The SlideWheel installation at Chimelong Water Park. Courtesy of Chimelong



Relaxation, adventure, education

A return to Discovery Cove

By Judith Rubin

With the opening of Discovery Cove 20 years ago, SeaWorld established an influential, new operations model for theme parks. It has stood the test of time, remaining fresh and relevant by adhering to its foundational premise while investing in expanded and updated experiences.

We looked into how the park has evolved since opening in Orlando in July 2000, maintaining its core identity while providing fresh incentives for return visits, becoming more inclusive to better accommodate all guests and enhancing its educational quotient.

The basics: Discovery Cove is a property of SeaWorld Parks & Entertainment. It was a pioneering model for a theme park in being a premium-ticket, no-lines, all-inclusive experience. SeaWorld took the risk that people would pay for what Discovery Cove offers, and they were right. The basic ticket starts at \$149, and daily attendance is capped at around 1,300. The price covers food and drink all day - including freshly prepared meals - use of

the park's wetsuits, snorkel gear and accessories such as flotation vests and pool noodles, wildlife-safe sunscreen, and access to the park's richly themed waterways, beaches and lounge furniture.

Extras you can pay for include the prized swim with dolphins, educational training experiences with the Discovery Cove zoological team, private cabanas and daybeds, and photos. There are also multi-park admission and program options that include SeaWorld Orlando, Aquatica, and Busch Gardens Tampa.

Discovery Cove is an adventurous, yet relaxing day in paradise, where everything is provided, and you can enjoy it all without leaving Orlando (the closest natural beaches are an hour's drive away). Your Discovery Cove waterfront day-resort sojourn lets you skip the potential downsides of the beach, too. There are no dangerous tides or jellyfish to look out for, nothing in the fine, white sand that might cut your foot. Restrooms and retail are all a few steps away; disabilities and special needs are accommodated.



Discovery Cove is also a season extender. Temperatures that might be considered too cool for regular beach-going are offset by Discovery Cove's outdoor heaters, full-coverage wetsuits and warm water. It was a sunny, 70-degree day when we visited in January. A native Floridian might have found it brisk, but we Midwesterners were sharing the park happily with plenty of tourists – groups of teens and young adults, couples and families, and judging by the accents we heard, many were visiting from places that know real winter.

Much in the way Universal CityWalk and Disney Springs deliver a town-square, walkable urban experience in a controlled environment, Discovery Cove delivers a visit to a resort setting. And along with relaxation, it delivers enrichment, in keeping with SeaWorld's education and conservation mission. In addition to being a leisure destination, the 22-acre park (expanded from the original 15 acres) is home to some 10,000 tropical fish and many other animals – including birds, otters and other small mammals - in addition to dolphins, stingrays and sharks.

2019 – Discovery Cove becomes a Certified Autism Center

In February, Discovery Cove announced that in conjunction with the International Board of Credentialing and Continuing Education Standards (IBCCES), it had completed a staff-wide autism sensitivity and awareness training as well as an onsite review of the park property and guest experience. This process resulted in the park being designated a Certified Autism Center (CAC), per IBCCES – ranked the first all-inclusive day resort and animal interaction experience in the U.S to receive this certification. Discovery

Cove's sister parks Sesame Place and Aquatica also carry the CAC accreditation.

Discovery Cove staff will receive ongoing training to assist guests with Autism Spectrum Disorder (ASD) and their families, to help ensure a positive experience during their visit. "We are committed in our efforts to offer families inclusive activities for children with autism and other special needs," said Kyle Miller, President of Discovery Cove.

Myron Pincomb, Board Chairman of IBCCES said, "This should be the industry standard, and we're working with leaders in the field to make that happen."

2018 – New adventure options

In 2018, Discovery Cove unveiled the park's new Animal Trek, which gives guests the chance to explore behind the scenes and become better acquainted with Discovery Cove's animal residents. The 60-minute private, behind-the-scenes tour is open to groups of 12, ages six and older. Discovery Cove animal experts guide participants to interact with many of the park's birds and small mammals in the Explorer's Aviary and to meet the park's family of otters in Freshwater Oasis. There are also possible interactions with an anteater and a sloth. Woven into the experience are need-to-know facts about the risks of illegal exotic pet trade, bird longevity and the Species Survival Plan that is a tenet of Discovery Cove and its sister properties.

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2017 – Rays and sharks

In 2017, Discovery Cove introduced its Ray Feeding and Shark Swim programs, billed as “giving guests the opportunity to spend time in the water with some of the world’s most misunderstood sea creatures.” There is an upcharge for both programs. The Ray Feeding session takes place early in the morning just as the park is opening. Guests are allowed to hand-feed rays and get a private tour of The Grand Reef, which is home to the rays and thousands of tropical fish.

The Shark Swim brings guests together with the park’s shark team and an opportunity to see the animals up close, learn about their anatomy and the threats sharks face in the wild. Guests have the option to put on a snorkel and swim into closer proximity with the sharks, seeing them from above and even coming face-to-face with them in the deeper part of their habitat. Discovery Cove donates five percent of the proceeds from Shark Swim to the Guy Harvey Ocean Foundation, which conducts scientific research and hosts educational programs aimed at conserving the marine environment.

2011-2012: Freshwater Oasis and The Grand Reef open

Freshwater Oasis opened in 2012 to provide guests the opportunity to wade through clear springs, swim and relax under a rainforest canopy and come into proximity to otters and marmosets. Access to Freshwater Oasis and the Grand Reef is included in the price of admission.

The Grand Reef is an artificial reef environment of 2.5 acres and nearly a million gallons of water kept at 77 degrees Fahrenheit. It features multiple levels of exploration and discovery, from shallow waters to deeper swimming adventures and beach, to snorkeling among the reef and a helmet dive adventure.

Exploring along the reef habitats with its paths, bridges and islands, guests can view and encounter many animals (some of them safely behind transparent barriers) including exotic fish, lionfish and reef sharks. Many areas of the reef are just a few feet deep, so even those who don’t know how to swim can explore underwater. For an additional charge, guests can put on diving helmets and walk along the floor in the SeaVenture experience.

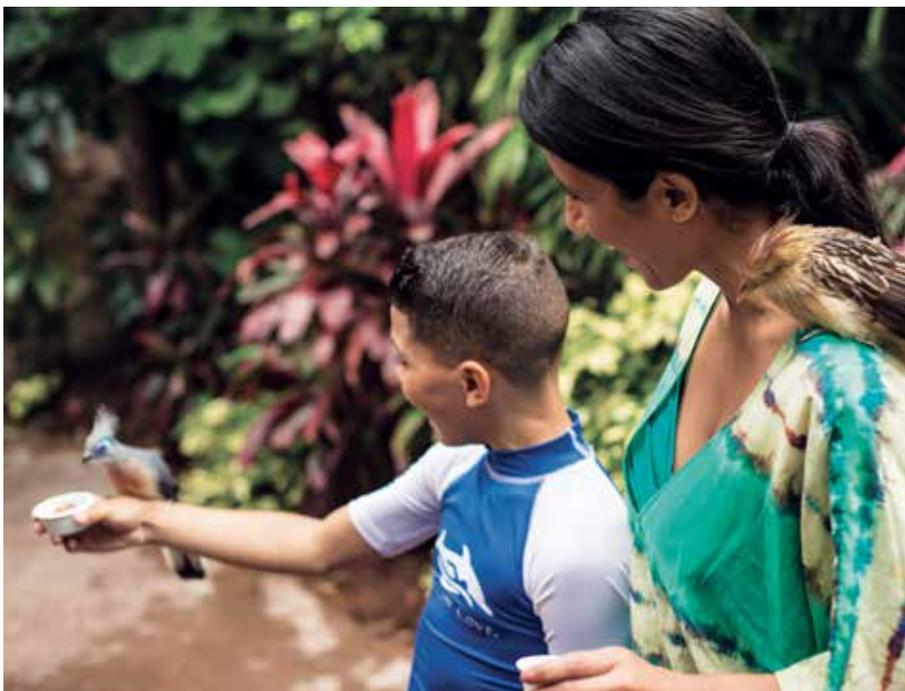
One of the pod – the Signature Dolphin Swim Experience

Discovery Cove demonstrated the viability of offering a customizable, VIP experience, a model that has largely been adopted by most major theme park operators as an option to their regular admission ticket. The park’s Signature Dolphin Swim Experience is the outstanding example.

The Dolphin Swim has been the park’s star attraction from the very beginning. There is an upcharge for this popular “fin-ale” and once-in-a-lifetime photo op. As the official park language expresses it, you become “one of the pod” in a 30-minute immersive experience that includes learning about dolphins from the park’s animal care specialists.

Deciding over time what to keep, what to add and what to replace are critical to maintenance and growth. The vision that led to creating Discovery Cove has been validated by two decades of success. With Discovery Cove, SeaWorld gave its audience something they wanted, even if they didn’t previously know they would want it. Discovery Cove continues to be a model for many things - overall guest experience and customer service, pricing structure, combining education and entertainment – a viable business model that also supports SeaWorld’s mission of animal conservation. •••

Guests can explore the parks aviary (left) or indulge in complete and total relaxation (right). All photos courtesy of Discovery Cove, except for right photo below, courtesy of the author and her very relaxed husband.



A white right-pointing triangle containing the text 'ic19' in a bold, lowercase, sans-serif font. The background of the entire page is a photograph of a large, brightly lit exhibition hall with various booths, people, and stage equipment. A large screen in the center shows a person surrounded by sunflowers.

ic19

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