



inpark MAGAZINE

issue 99, Nov / Dec 2023
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Media Kit & Editorial Calendar

InPark tells the story of branding, IP, entertainment, theming and technology in the attractions industry. We highlight innovation and leadership for designers, creators, developers, owners and operators.

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PRINT & EDITORIAL

EDITORIAL CALENDAR

#100 – JAN/FEB/MAR 2024

Deadline: February 16, 2024

Targeted distribution at:

- TEA INSPIRE / Theas (March 14-15, Los Angeles)
- USITT (March 20-23, Seattle)

#101 – APR/MAY/JUN 2024

Deadline: March 29, 2024

Targeted distribution at:

- Saudi Entertainment + Attractions (May 7-9, Riyadh)
- IAAPA Expo Asia (May 27-30, Bangkok)
- Licensing Expo (May 21-23, Las Vegas)
- ACM children's museums (May 15-17, Madison, WI)
- InfoComm (June 12-14, Las Vegas)

#102 – JUL/AUG 2024

Deadline: June 7, 2024

Targeted distribution at:

- IAAPA Expo Europe (September 24-26, Amsterdam)
- Licensing Expo Europe (September 24-26, London)

#103 – SEP/OCT 2024

Deadline: August 4, 2023

Targeted distribution at:

- WWA (October, TBD)
- TEA SATE (TBD)

#104 – NOV/DEC 2024

InPark's 20th Anniversary Issue

Deadline: October 4, 2024

Targeted distribution at:

- IAAPA Expo (November 19-22, Orlando)
- MAPIC (TBD, Cannes)
- ISE (TBD, Barcelona)

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- Inside back cover \$1,200 per ad

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NUMBERS & DEMOGRAPHICS

Website

Average page views (per month): 46,000
Average users (per month): 40,800

Magazine Subscribers

4,400

Industry breakout

50% Theme park/waterpark owners/operators
20% Museum curators/staff
25% Suppliers
5% Others

Readership geography ranking

1. Americas
2. Asia
3. Europe
4. Africa, Oceania

Social Media Network

15,500 Facebook
4,450 LinkedIn
1,310 Instagram
1,140 YouTube

Weekly and Monthly Emails

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Average Open rate: 36%
Industry average: 26%
Average Click rate: 3%
Industry average: 1%

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- Boosted posting of press release + Top 5 inclusion

\$4,000

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- Three months block ad on website
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\$3,000

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\$2,000

- Half page ad in 4 (four) 2023 issues
- One month block ad on website



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The leading indicator that is Europe

**Martin Palicki,
Publisher**

I just returned from the IAAPA Expo Europe and Brand Licensing Europe shows, held in Vienna and London, respectively. Both events signaled the full-throttled return of business to the industry.

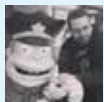
At IAAPA, attraction and ride announcements were numerous, from the Angry Birds Pigvasion collaboration with Attraktion! (see page 55) to Jora Vision's Tir na nÓg land at Emerald Park. The IAAPA Opening Reception party at Schweizerhaus restaurant was a sell-out success, followed by the who's who of the industry Plan B party, hosted by movemotions and Convivous. TEA's EMEA division hosted their own mixer the following night, bringing together themed entertainment professionals for a delightful al fresco dinner. TEA also honored Björn Heerwagen in their booth as one of the newest TEA Masters (see page 81).

Brand Licensing Europe's event focused on the LBE market, and it's clear that many brands are quite interested in investing in experience-based attractions, although all don't have the experience or staffing to dive right in. Rovio, for instance, relied on expertise from partners like George Wade and IMG to help make connections with both designers and developers to create new Angry Birds experiences (see page 55).

Both shows indicated the current importance of Saudi Arabia for the industry, a trend I pointed out in my issue 96 editorial. Europe's relatively close location to the Middle East means it's well-positioned to provide services, design and fabrication to projects in the region. Additionally, European IPs seem to resonate well with Middle Eastern guests.

Now, the industry turns its attention to IAAPA Expo. If the energy generated by these two European shows are any indicator, the attractions market is poised for a fantastic event in Orlando, and an auspicious year ahead.

Martin founded InPark Magazine in 2004, combining years of experience working in themed entertainment with a passion for writing and design.



Joe Kleiman, Senior Correspondent

Raised in San Diego on theme parks, zoos, and IMAX films, Joe Kleiman would expand his childhood loves into two decades as a projectionist and theater director within the giant screen industry. In addition to his work in commercial and museum operations, Joe has volunteered his time to animal husbandry at leading facilities in California and Texas and has played a leading management role for a number of performing arts companies. Joe has been news editor at InPark Magazine since 2011, becoming the publication's senior correspondent in 2021. His blog, ThemedReality.com takes an unconventional look at the attractions industry. Follow on twitter @themesrenewed



Natural partners: Brands and LBE

**Judith Rubin,
Editor**

In the big picture of global brand building, Location-Based Entertainment (LBE) is one of the portals for consumers to learn about a brand, story/world or character and follow it. LBE spans both entertaining and educational attractions, permanent or traveling/popup, standalone or in a wide range of settings and venues.

There is huge potential for growth and innovation in this realm. Today a branded or IP-based attraction may be a primary component of a holistic, multi-platform rollout plan, with the IP holder deeply engaged in the process from start to finish. Some brands have set up verticals dedicated to finding and making the most of opportunities in LBE.

Prominent players in the LBE space today include family-oriented brands such as Crayola, Hasbro and PEANUTS; media franchises such as Harry Potter, Star Wars, AVATAR, Marvel Studios' Avengers and Sesame Street; gaming brands such as Nintendo and Rovio; iconic television series such as Stranger Things, FRIENDS™ and SpongeBob SquarePants – and many more.

At the heart of these projects is a successful team collaboration that involves and respects the needs of the multiple stakeholders, from both the licensing side and the entertainment side. To satisfy the demanding fan base while also creating a great guest experience brings additional considerations wherein brands will want to partner with the brain trust of the themed entertainment community.

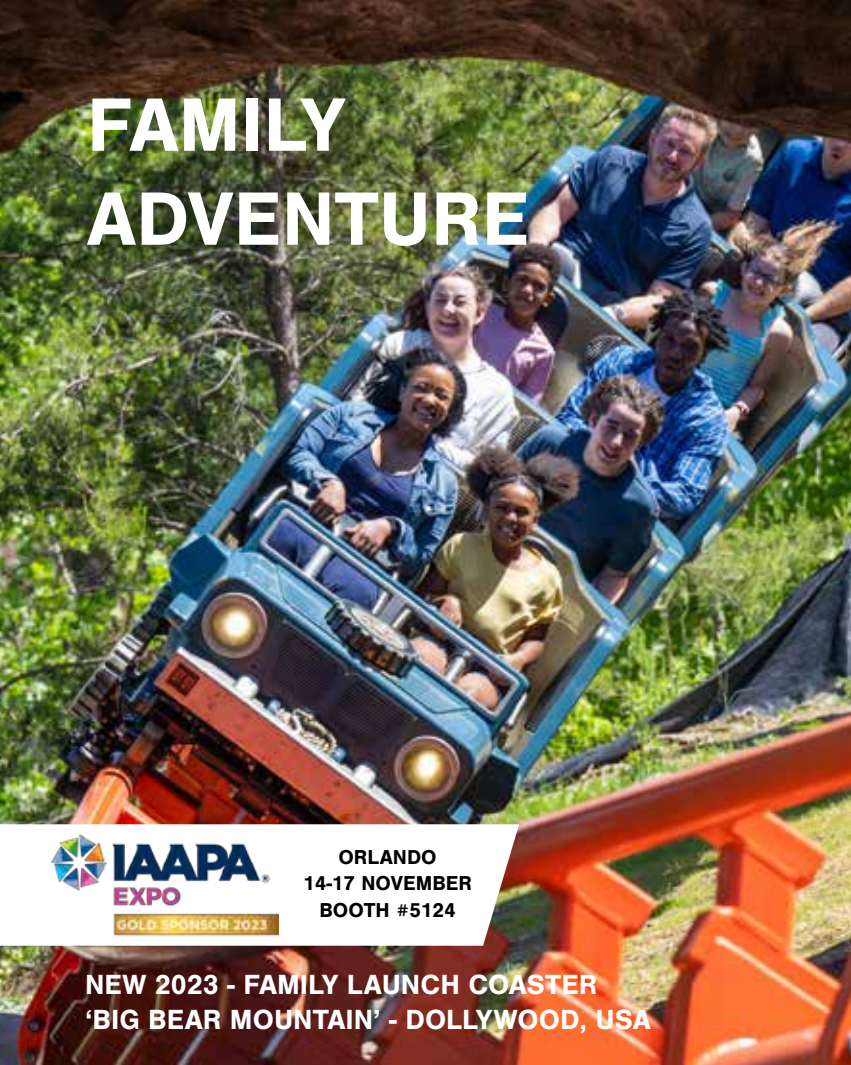
The attractions industry and brands/IP are inherently complementary – I would even venture so far as to say they need one another. LBE can help brands by expanding their universe. Brands help attractions through the instant recognition and aura they convey, invoking trust and reassurance to the expectation of the guest. An effective collaboration will succeed from both directions, with an impact greater than the sum of the parts.

There is a promising future as the attractions community and licensing community work to recognize, explore and make the most of their shared interests. It's one of the areas InPark covers on a regular basis. We're pleased to be a media partner to Licensing International, and encourage attractions industry members to look into their trade events, Licensing Expo and Brand Licensing Europe.

This article originally appeared on the Licensing International Executive Voices Blog, and is excerpted with permission. Visit www.licensinginternational.org.

Judith helps drive content to serve the attractions industry, fostering professional connections, business development and the meaningful exchange of information. She has been contributing to InPark since 2005 and became editor in 2010.

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ISE preview with MD Mike Blackman

by Martin Palicki



Mike Blackman, Managing Director, ISE

InPark Magazine is pleased to be a media partner for the annual ISE (Integrated Systems Europe) event for AV and systems technology. ISE is celebrating its 20th anniversary at the 2024 gathering in Barcelona, Spain (January 30-February 1 at Fira Barcelona Gran Via). You may register to attend ISE free at www.iseurope.org with our unique code **inpark**.

To better help attendees prepare, InPark publisher Martin Palicki interviewed Mike Blackman, Managing Director of ISE, about the upcoming gathering.

Congratulations on the 20th anniversary of ISE. How will you celebrate the occasion during the upcoming show?

We will be creating several show-floor features that celebrate 20 years of ISE, as well as looking forward to the next 20 years of innovation. Our journey from humble beginnings to becoming the definitive event in the pro AV and integrated systems industry has been a remarkable story of year-on-year growth. During this time, ISE has served as a catalyst for groundbreaking technological advances, fostered meaningful connections and dialogue, and propelled the systems integration industry to new heights. Keep an eye on our website for news of these 20th anniversary celebrations.

It's certainly an exciting year for ISE, not only are we celebrating our 20th anniversary, but also ISE 2024 will be our largest-ever show, with more space and more exhibitors than ever. The show floor is already 17% bigger than last year and ISE 2024 will also welcome more than 80 confirmed companies making their exhibitor debut.

In what ways have you seen the AV industry change in the course of ISE's two decades, particularly as it relates to themed entertainment?

Over the past 20 years, the AV industry has undergone significant changes driven by advancements in technology, shifts in consumer expectations, and the desire to create more engaging experiences. These changes in the AV industry have collectively contributed to more immersive themed

entertainment experiences, blurring the lines between reality and fantasy while meeting the evolving expectations of visitors.

Throughout the years at ISE, we've seen some incredible developments. One of the most notable changes has been the transition from analog to digital projection systems. High definition and 4K projectors have become standard, allowing for sharper and more vibrant visuals which can be seen across theme parks today. Moreover, the AV industry has embraced 3D technology and VR to create more immersive attractions and experiences, providing visitors with a deeper level of engagement and interactivity. At ISE, these features can be found across the Multi-Technology zones on the show floor in Halls 3, 4 & 5.

Another key advancement is in the audio space. Sound design has become more sophisticated, with vast improvements in audio technology such as 3D audio and spatial sound. These innovations enhance the auditory experience, making it far more realistic for visitors. Visitors to ISE can start their journey exploring these technologies in Hall 1 at the Lighting & Staging Zone, or Hall 7 for the Audio Zone. Also don't miss the ISE Sound Experience, with demo rooms in Hall 8.0 and an outdoor demo stage between Halls 4 & 6.

Tell us about some of the new features coming to ISE in 2024.

Well, the big news for ISE 2024 is that we have two brand new halls - we will be opening in Halls 1 and 4 for the first time. We will also be opening a new entrance - so we will have three main entrances - South, East and (new) North - to help smooth the entrance/exit experiences for all.

Between our exhibitors, conference programs, show floor features, and off-site experiences, we will offer a dynamic platform for manufacturers, integrators, distributors, end-users, and industry enthusiasts to engage in a comprehensive showcase of cutting-edge products, solutions, and thought



Attendees of ISE 2023 enter the Fira Barcelona Gran Via. Photos courtesy of ISE

And lastly, wear comfortable shoes!

What advice do you have for your more seasoned attendees?

Each year at ISE brings something different. It's always good to plan ahead - review the agenda, exhibitor list, and conference programme in advance to identify and prioritize the places you really don't want to miss.

ISE is a fantastic place to network, spend some time making connections and prioritizing meaningful conversations; you'll find you come away feeling accomplished.

leadership. Attendees can look forward to a host of immersive demonstrations, insightful keynotes and panel discussions, as well as exceptional networking opportunities.

Themed entertainment is only a small piece of the AV pie, but why is it important and how does it relate to other market segments?

While themed entertainment is a specialized sector within the AV industry, it plays a crucial role in shaping and influencing various other market segments. Themed entertainment often serves as a testing ground for cutting-edge AV technologies such as projection mapping, audio systems and more, to gauge and understand audience reactions.

Themed entertainment applications place a strong emphasis on storytelling and audience engagement. These techniques used across the industry create immersive experiences for visitors, which can then be adapted for use in museums, retail environments, corporate areas and more.

What are your best tips for people attending ISE for the first time?

Prepare to be amazed. ISE 2024 is set to be our largest show ever, and experiencing the show floor for the first time is truly a remarkable experience - everywhere you look there is incredible technology.

Allow yourself plenty of time to explore. The show is set across eight halls, so there's certainly lots to see! To really make the most of the show I would recommend dedicating a few days to visit and really take in the full experience.

Seek to find something new - never experienced one of our conferences before, or is there a Technology Zone you've not had the chance to visit yet? Now's your time! There's plenty to experience across the four-day show.

Barcelona seems to be a well-liked new home for the ISE show. Why do you think it's a good fit?

Renowned for its rich cultural heritage, stunning architecture, and innovative spirit, Barcelona serves as an ideal backdrop for the next phase of innovation and growth in the pro AV and integrated systems realm. We've had fantastic local support since we moved here, and it really does feel like home to us now. The Fira Barcelona Gran Via is a state-of-the-art exhibition center that is easy to navigate for visitors and allows us to grow as a show thanks to its size.

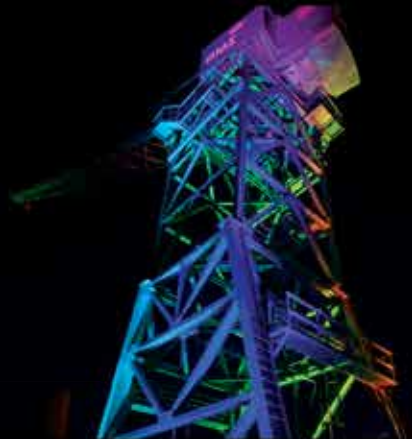
Barcelona is strategically situated in Europe, making it easily accessible from around the world. Its well-connected transportation infrastructure, including a modern international airport and train links, allow easy access for exhibitors and attendees, and the local transportation provides a simple, stress-free experience.

There's also plenty to explore outside of the show, which makes it a great place to experience some of the local culture. We are planning a number of special activities throughout Barcelona, including extending our partnership with the Barcelona Llum lighting festival – watch out for more news in the coming weeks. •



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Dramatic reveal

IA Stage emerges from behind the curtain

by Michael Oliver

From dark rides to immersive experiences, from theme parks to museums, haunted attractions, resorts, pop-ups and more, themed entertainment is dominated by the desire to tell a story. Little wonder that many in the themed entertainment world come to it with a theater background, from a world whose heart and soul is presenting the narrative in dramatic form and in real time. Little wonder, as well, that there are companies with a foot in each world, bringing their experience and expertise to serve both markets. One such company is InterAmerica Stage Inc. (IA Stage).

Located roughly 25 miles northeast of downtown Orlando, IA Stage has, since its inception in 1989, and without a great deal of fanfare, been working with many of the major players in themed entertainment, providing them with some of the most advanced stage equipment on the market, from overhead rigging and specialized stage machinery, to show action equipment, structural design and engineering services.

Mark Black, Founder and CEO of IA Stage, explained that his company became active in themed entertainment when clients sought him out during the company's first years in business. "In the early '90s, I was approached to provide rigging services and equipment at a major theme park in Central Florida," says Mark. "We accepted the offer and quickly became well-known, earning a reputation for being safe, efficient, accurate, and hardworking. We were soon present on all properties in the area on a daily basis."

Connecting with ATL

In recent years, IA Stage has stepped up its visibility in the themed entertainment industry by participating in the Attractions Technology Lab (ATL). The raison d'être of ATL is to showcase the tech components of themed experiences – and the collaborative nature of the industry - via working demonstrations of rides and attractions. Open to industry professionals, ATL events are scheduled around relevant trade shows for the convenience of those traveling to attend. (For

The James River Church in Ozark, Missouri features Main Traveler Curtains that measure 33' high by 104' wide. All photos courtesy of IA Stage

more on the Attractions Technology Lab see InPark Magazine, Issue #96, “Full Access to the Toy Box,” April 2023.)

The next iteration of ATL will take place November 10-17, 2023, at Oceaneering Entertainment Systems in Orlando. IA Stage will be well represented there, featuring its SkyAscend™ self-climbing hoists and PL600 projector lifts. “Themed environment designers and consultants; technical staff; operators and managers; technology companies and influencers in the attractions industry should make a point of visiting,” says Mark.

IA Stage’s involvement with the ATL “started a few years ago when Christie and Alcorn McBride needed some rigging for their ATL at the ‘church’ [a workspace that formerly was a church, now used as a screening and demo room at Alcorn McBride],” says Mark. “We provided the rigging equipment and labor. That first rig included the motors that are still being used in the ‘church’ for demonstrations.”

The founding members of ATL are Alcorn McBride, Christie, Garner Holt Productions, Oceaneering and Weigl Controls. Mark says that being part of this group “feels like graduating to a new level. We had been recognized as serious riggers by venue owners, operation managers, design teams and so forth. Now we are being accepted as a helpful resource that all founding and associate firms involved with ATL and the industry it serves can depend on.” Being part of ATL helps IA Stage clarify to colleagues and potential clients the wide range of products and services available from the company. “We do a lot of different things and that certainly fills our days with new challenges and with pride!”

Top IA Stage products for themed entertainment

According to Mark, IA Stage products or services typically in demand for themed attractions include the following:

- Black masking drapes. “It goes without saying that you don’t want a park-goer to see what goes on behind the curtains. It would ruin the magic! IA Stage has installed miles of masking drapes.”
- Acoustic isolation and sound absorbing flexible panels and drapes. “In an immersive ride, it is imperative that audience members never hear the sounds of the machinery that help create the immersive environment. At IA Stage, we create and install sound absorbing panels and drapes that negate these sounds and aid in the fully immersive experience.”
- Show action doors. “These are the mechanized divisions often found between dark ride scenes. If it needs to fly in, fly out, drop, shake, twist, talk, or spit fire, IA Stage can engineer,

fabricate, and install top-quality show action equipment. We’re a UL508A certified industrial control panel shop.”

- Hoists and winches of all kinds. “We manufacture fully customizable ANSI-E1.6 compliant hoists in our Central Florida facility. You’ll see chandelier hoists and lighting palettes in the themed entertainment industry, as well as motorized projector lifts.”



Mark Black, Founder & CEO, IA Stage

- SkyDeck™ wire tension grid “provides safe maintenance access and fall protection for dark rides.”

- Installation and commissioning of millions of dollars’ worth of animated figures. “We started out as a rigging company, and specialty rigging is our...well, it’s our specialty! We’re proud to employ ETPC certified riggers, and we can move objects of any size and shape - from an F-20 jet to delicate Chihuly hanging glass sculptures - safely and respectfully.”

- Structural support. “IA Stage specializes in designing, fabricating, and installing structural support systems for lifts, props, catwalks, and many other pieces of equipment. Our team designs, engineers, fabricates, and installs secondary steel into facility structures for a multitude of clients. In concert with this we also provide the facilities’ structural engineers with all of the load and connection information necessary for them to integrate into a new or existing facility.”

- Safety systems. “I can’t stress the need for safety in the entertainment industry enough. Fall protection is still among the top ten frequently cited OSHA violations each year. Did you know that IA Stage is an authorized dealer of Tractel products? They provide world-class safety solutions for working-at-height, too.”

Above all else, safety

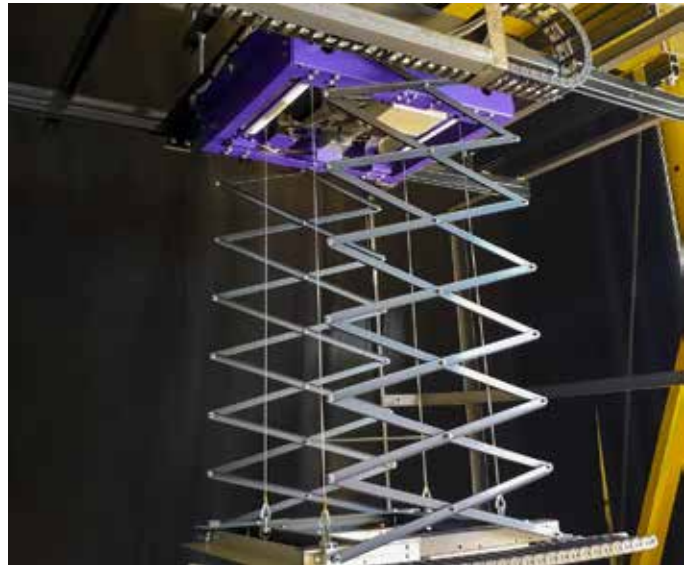
Safety is one of the highest priorities for IA Stage and the company’s two primary markets (theater and themed entertainment). There is overlap, but each market has its particular needs.

“Whether we’re rigging for themed attractions or theater productions, the skills and knowledge required are quite similar,” he says. “The materials and techniques used in providing scenery and masking draperies also share many similarities.” Necessarily, “as we are working above an audience, performer, or a theme park goer, we look to safety above all else,” says Mark. “In fact, this slogan has become a key tagline for us - ‘Safety Above All Else!’”

The nature of the space and how it is used changes the approach and complexity when it comes to ensuring safety.



This Round Sky Ascend is lowered to give a view of the moving lights on the truss as well as the art installation in the middle.



PL-600 Projector Lift - this unit has vertical and horizontal travel capability.

Guests walk or ride through an attractions space, putting humans and equipment into proximity in ways that don't generally happen in conventional theater. Notes Mark, "Theme park machinery is designed to meet much higher engineering and safety standards, particularly when it involves rides."

Mark cites the following as contributions to IA Stage's outstanding safety record:

- SkyDeck™. "First and foremost, SkyDeck™ is a woven wire working surface that replaces catwalks and in many cases the need for fall protection. We have installed over 300 SkyDeck™ modular tension wire grid systems worldwide. It really is about Safety Above All Else."
- Automatic railings along ride tracks. "The railings are there to protect our clients and their guests during ride loading or emergency evac situations. For example, the railings automatically move to safeguard the ride track."
- Large projector lifts. "An example is our PL-600. This is an OS (Overhead Safety) rated lift with a 600-lbs lift capacity made for overhead use in rides or places where people are below."
- SkyAscend™. "Our Overhead Safety rated self-climbing hoist, SkyAscend™, is equipped with a pantograph, so it can be safely brought down to floor level for maintenance and such. No ladders required and your feet never leave the ground. We make them in many configurations, and they can be used in dark rides or auditoriums alike."
- Safety netting. "We've worked with the theme parks to provide safety netting, whether in a simple handrail application or ride safety netting, which prevents loose objects and curious hands from affecting the safe operations of a ride."

"How did they get that there?"

Given the protean nature of the technology employed by the themed attractions and theater industries, one question that cries out to be asked of Mark Black and his company is how they remain fresh and up to date after more than three decades of working in these two very demanding and volatile industries. His answer was insightful: "The young talent on our staff certainly helps keep us fresh, but it is our clients' constant needs for new remarkable effects and gags that makes us learn and adapt."

When asked about the direction of future themed attractions, Mark sees the inescapable growth of immersive experiences: "We have all kinds of sensory effects already with motion bases, haptic, olfactory... And there will be more. Undoubtedly there will be more coming."

With an R&D department filled with "an incredible group of designers and engineers...wizards at what they do," as Mark describes them, committed to the challenge of those greater immersive experiences, InterAmerica Stage, Inc. appears well positioned to take on tomorrow with confidence. Although NDAs prevent them from giving specifics on some of their most impressive projects, Mark assures us that "if you have visited any park in Florida, you have most likely walked under or around our work." He suggests, "Every once in a while, look up and ask yourself, 'How did they get that there?' Then think of IA Stage." Visit www.iastage.com. •



Contributing writer Michael Oliver comes to us by way of academia, as a retired literature and philosophy professor whose teaching career lasted some 28 years. Prior to the classroom, his early training and work were in engineering, which took him from nuclear missile silos in North Dakota to the Rhine River, where he worked as a ship's engineer.

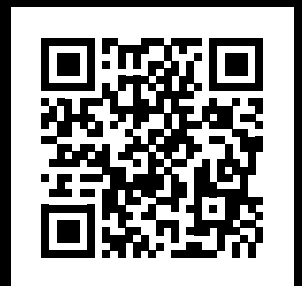


Image Credit: Lightroom - David Hockney



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Localizing AR engagement on a global scale

The SPACE INVADERS AR launch is an immersive, geospatial, branded Location-Based Experience
by Tammie Richards



Media Ridha,
Head of Digital at UNIT9

“We absolutely believe this is the dawn of a new era of localized immersive experiences,” says Media Ridha, Head of Digital at UNIT9. She was referring to the new SPACE INVADERS: World Defense mobile game for Android and iOS. Thanks to a pioneering collaboration between game developer TAITO, Google, and the digital storytellers at UNIT9, players are literally going outdoors to defend their local neighborhoods from Invaders - freed from the gaming console by the ability to use Augmented Reality (AR), on their smartphones or tablets, coupled with the latest features of Google’s ARCore Geospatial technology.

From arcade to streetside is a dramatic platform shift for a classic video game, and SPACE INVADERS became one of the world’s most popular after its introduction by TAITO more than a generation ago. The team worked to achieve a recreation that would be both authentic and state-of-the-art. “UNIT9 were selected as the creative developer for the game, supporting creative and technical production of the experience

alongside Google and TAITO - ensuring that the IP was safeguarded, and the experience harnessed the full power and potential of Geospatial technology,” explained Media.

In the following interview, Media was our guide on how this magical collaboration came together and the project ultimately materialized.

“2023 marks the 45th anniversary of the original SPACE INVADERS hitting the market,” she says, “and TAITO and Google wanted to do something big to celebrate, and leverage Google’s latest ARCore technology - Geospatial API, Streetscape Geometry API, and Geospatial Creator to bring SPACE INVADERS into the modern day.”

Offering something for all players and tapping a deep well of fan loyalty, the 45th anniversary resurgence of the game



“Google’s Geospatial API provided geometry data of terrain, buildings, and other structures within a 100m radius of the user’s current location so that SPACE INVADERS could emerge from all around.” - Media Ridha, UNIT9. Photo by Google, TAITO & UNIT9



“Safeguarding the SPACE INVADERS IP and maintaining authenticity were huge priorities.” SPACE INVADERS: World Defense Outdoor Mode is showcased here on mobile device screens. Photo by Google, TAITO & UNIT9.

became its own “space mission” of sorts. This timely and novel approach helped set a path for future experiential opportunities as Augmented Reality and Virtual Reality are adopted across a multitude of industries. In the realm of Location-Based Entertainment (LBE), it suggests new directions for operators to bring IP to life and increase audience engagement.

Interview with Media Ridha, UNIT9

Tell us more about how the tech is used to achieve a “next level” experience.

Google’s ARCore Geospatial API enables you to attach content remotely to any area mapped by Google Street View and create richer and more robust immersive experiences linked to real-world locations on a global scale. This is game-changing for brands, venues and IP owners looking to seamlessly blend the physical and digital worlds and create localized experiences at a global scale.

More than 100 countries have coverage in Street View, enabling SPACE INVADERS: World Defense gameplay to be adapted to cities, towns and villages. This is unlike previous AR games that rely on AR overlays but no environmental interaction. For instance, in SPACE INVADERS: World Defense, the Invaders can spawn from buildings in the environment. This is the crux of the ‘level up’ in AR technology - and the level of interaction and integration between digital and physical environments that it offers.

How are global concepts of themed entertainment and cultural placemaking impacted when the whole world itself becomes a playground?

The beauty of Geospatial API is that it can turn the whole world into a canvas for play, creating more opportunities for cultural placemaking. Experiences can become more contextual, personalized and relevant for that local audience.

The creative opportunities are uninhibited by physical or location restraints. For themed entertainment, this could mean that IP can be augmented through the context of a specific location - blending creative IP within a skyline, pulling in elements such as nearby landmarks into its narrative, customizing the storytelling experience and making it specific to a user’s immediate surroundings. Combining this approach with gaming brings a sense of playfulness.

How does this game rollout open new vistas for Location-Based Entertainment?

It’s important to understand the impact this will have on themed experiences of any kind, not just gaming.

Immersive IP activations and launches can be tailored to local areas, connecting on a deeper level with different cultures and neighborhoods. In a theme park, this technology can eliminate the need for costly physical build changes, with digital content being refreshed with ease to effectively theme different areas and offer visitors a magical and ever-changing experience.

Wayfinding can also be revolutionized with this technology. Cultural institutions can use it to elevate guided tour experiences (an exemplary collaboration between Google and the Singapore Tourism Board is revelatory). There's also a huge opportunity for immersive retail, with stores able to expand their physical footprint into the space around them. We helped Gap and Mattel do this to launch their Barbie clothing collection, taking over Times Square with Barbie characters anchored to Gap's flagship store and neon pink signs popping up all around the square for full immersion.

Can you elaborate on decisions supporting AR as the story-making approach?

Using AR was inherent to the whole experience - the technology was the perfect way to bring SPACE INVADERS into the real world in 2023, and it's an incredible storytelling tool. We knew that we needed to make this experience fun - and by bringing the IP together with the latest interactive and immersive technology, we were able to create a game that we knew both older and younger players would enjoy. Making the tech invisible and intuitive was a conscious decision to bring surprise and delight to the game design while making it easy and enjoyable for players to use.

The features of Google's ARCore that we used - such as Geospatial API and Streetscape Geometry API - and the integration of other APIs to consider the user's weather conditions and nearby environment meant that we were able to influence the game mechanics and visuals to create an even more compelling story and draw players into the world of SPACE INVADERS.

We did, however, make the decision not to solely rely on AR to drive the narrative of the entire experience. It can be tiring for users to keep holding their hands up for a prolonged period of time in an AR experience. This knowledge influenced our gameplay development and led us to introduce a mode of play where users can hold their phones down instead of straight in front of them and battle Invaders on-screen. This new 'Invader's dimension' of play allowed us to introduce new levels and provided an extension to the story.

Tying into Google's grid was a bold step. Was it always a goal to get users to go play outside?

We worked closely with Google from the outset, and it was always a requirement that the game would utilize the Geospatial API and its key features as part of the game. We wanted to showcase the power of these tools and highlight the new location-based experiences they can unlock. Google wanted to encourage players to experience their neighborhoods with new eyes, discovering places they might not have before. So, enabling users to go outside and turn their own neighborhoods into playgrounds was very much a key aspect of the experience.

Geospatial API provided geometry data of terrain, buildings, and other structures within a 100m radius of the user's current location so that SPACE INVADERS could emerge from all around. This allowed us to explore whole new levels for players to explore, with Invaders travelling over roofs, through narrow passages, flying around and over skyscrapers, and diving back to street level.



"We helped Gap and Mattel launch their Barbie clothing collection, taking over Times Square with Barbie characters anchored to Gap's flagship store and neon pink signs popping up all around the square for full LBE immersion." Photo by Google, Gap, Mattel & UNIT9

We have also launched an Indoor Mode for players who prefer to game at home or who are not able to play outside (there may be no or low Google Street View coverage in the area) extending the reach of the game even further.

What efforts were undertaken to ensure authenticity in delivering the game onto the new platform?

Safeguarding the SPACE INVADERS IP and maintaining authenticity were huge priorities. TAITO played a critical role in ensuring that our design, game mechanics and storytelling aligned with the original, while providing us with the flexibility and imagination to push it into the future.

The SPACE INVADERS IP is and will always be legendary within the gaming industry - it means so much to so many. We wanted to pay homage to the original title while bringing it into the modern day, elevating it with the latest immersive technology. We respectively paid close attention to elements like Invaders movement and patterns, exploring audio by upgrading the original sound effects, and keeping that arcade style playability and high score goals. But we were also able to get a bit creative and incorporate new additions, such as new weapons, power-ups and the real-time condition-adaptable levels. Successfully balancing that sense of nostalgia with cutting-edge technology to appeal to multiple generations of players was a challenge, but one which was successfully approached thanks to close work with our stakeholders from TAITO and Google.

How are you making it all happen, tech-wise, for long-term operations and QC maintenance?

Close collaboration with Google and TAITO from the beginning, throughout the launch and continuing now

afterwards, has been crucial to ensure the ongoing success of the experience. We have an incredibly talented team of experts at UNIT9 with a rigorous process of long-term live ops and support plans in place. We've also been monitoring live feedback loops in audience responses to consider new features where relevant.

It is truly exciting to contemplate what comes next for these new technologies. Attractions industry gurus have long mulled best practices to entice and redirect visitors' eyes (and brains) up and out of their mobile devices. But audiences are forever changed, and rather than fight smartphones as a distraction, incorporating the device into experiences offers greater potential for fandom success and engagement, with built-in added benefits such as data capture and deeper consumer impressions. Now, there's the power to unleash immersive experiences in our own backyards. – T.R.

Attractions by UNIT9 helps brands and institutions unlock the future of experience and reach new audiences. Visit <https://www.unit9.com/attractions> •

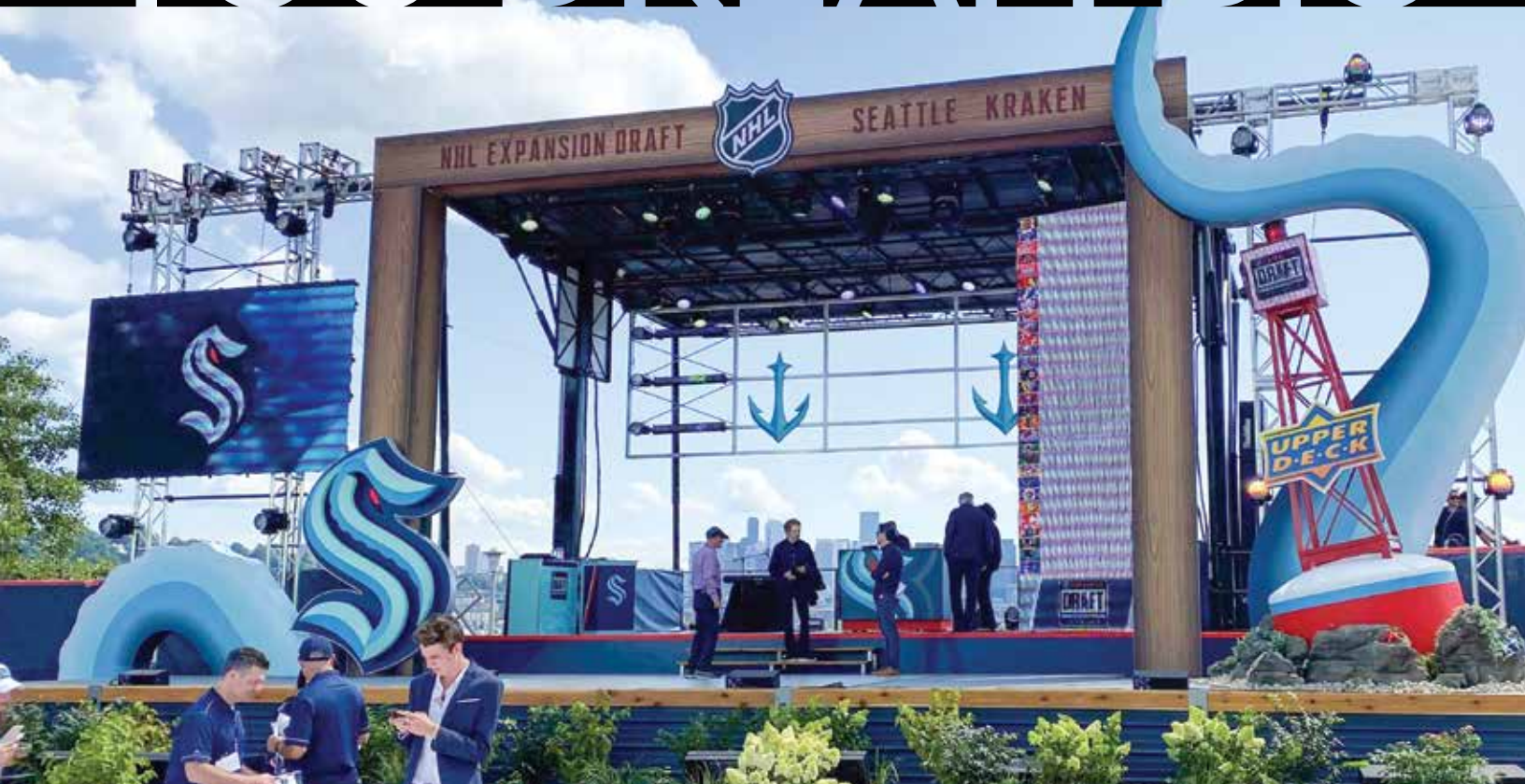


With 30+ years in events, brand marketing and entertainment experiences, Tammie first trained professionally as an actor and production stage manager at LACC Theatre Academy. Six Flags Show Operations led her into permitting and technical field production for movie premieres and publicity stunts. She recently served as Themed Entertainment Association's Director of Events, producing their Thea Awards show galas, experiential design conferences, and IAAPA-week events annually from 2014-2021. Tammie is known by peers for her smile and witty humor, while balancing life with a happy hubby and mothering 3 sons (who all lean in for her peck on the cheek). Visit www.pearsonrichards.com



From arcade to streetside is a dramatic platform shift for a classic video game, and SPACE INVADERS became one of the world's most popular more than a generation ago. The team worked to achieve recreation that would be both authentic and state-of-the-art. Photo by Google, TAITO & UNIT9

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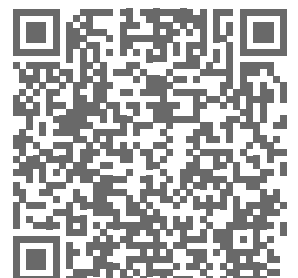
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Driven to success

Just Add Power's video over IP platform shifts Savoy Automobile Museum into high gear

by Ed Qualls, CEO, Just Add Power

Savoy Automobile Museum in Cartersville, Georgia is a world-class museum and showground that sits on approximately 37 acres and showcases an assortment of automobiles. A unique, popular option for visitors is the ability to look under the hood of cars of different makes, models, and eras via a cutting-edge AV system. Rounding out this world-class museum and learning experience are an assortment of displays and videowalls throughout the massive venue, with Just Add Power's video over IP platform in the driver's seat.

The challenge

The automobiles themselves are the main attraction in the 65,000-square-foot facility - which features four temporary exhibition galleries, a 297-seat theater, research library, cafe, and two private dining rooms. Supported and complementing the autos and various spaces is an extensive AV system, which called for a high attention to detail. There are 50 LG displays throughout, including an LED video wall in the Great Hall and marquee, and a massive 16'x20' video wall in the theater.

The Savoy creators wanted a flexible distribution system that would allow staff to distribute any video source to any screen, with the touch of a button on iPads running the Crestron Go control app. There was no shortage of sources either, with a multitude of cameras in each of the galleries and the theater, laptop wall inputs in the dining rooms, LG webOS digital signage players, and Blu-ray players. This would require a flexible IP-based video distribution, capable of distributing any source up to 4K and UHD resolution, with ultra-low latency to any screen in the network, whether it was a standalone display or one of the many videowalls throughout the museum.

The solution

Just Add Power fulfilled all the requirements of the Savoy Automobile Museum by offering a modular and scalable video over IP distribution solution. Just Add Power's devices ensure low-latency transmission of 4K and UHD video to any display across the museum's network. The system employs Just Add Power transmitters and receivers, which



were configured across seven Luxul XMS-7048P switches, utilizing the museum's Cat-6 network infrastructure.

To distribute the range of sources at the museum, 18 3G+ 767DSS transmitters were installed. The 767DSS allows input up to eight audio channels from the Just Add Power system for playout on Dante-enabled and AES67 devices, and extracts up to eight channels from the audio network for playout across the system. This proved an ideal solution, since the museum is heavy on live audio, using several Audix wireless mics to conduct tours and presentations. Additionally, two 717WP2 wall plate transmitters

were installed in each dining room, enabling users to share laptop content on any screen in the building.

Each screen in the system is equipped with a Just Add Power 509POE receiver, capable of processing Ultra HD and 4K video over a single Cat-x cable. The 509 POE features an onboard pass-through network port, so that any PoE device can be connected; a network soundbar, IP TV control, or a single display location can be expanded into a video wall. The receiver also easily expands the number of PoE devices that can be added to the system by connecting a PoE switch to the port. This provides greater network flexibility that isn't restricted by the number of cable runs permitted; when the Savoy wants to add onto their AV experience, the system can be expanded quickly and easily. The dining room also employs four Just Add Power 518AVP receivers, featuring adjustable delay and stereo audio output via a 3.5mm port, allowing audio to be extracted and sent to any display.

The entire system was configured using Just Add Power's AMP software, which is designed to simplify the setup process for network switches and for individual Just Add Power devices. It discovers the switches and the individual devices on the network, presents them in a list, and allows installers to name them, configure their IP addresses, and assign channels to

transmitters - while assisting with updates when new firmware is released.

Results

Using Just Add Power, integrator Data & Sound Specialities was able to drive a 4K video over IP system worthy of the Savoy caliber. With a tap of a button on iPads running the Creston Go app or wall controller, staff can select any source for any screen with zero visible lag, scaled to fit the display or videowall, whether it's a live camera and mic feed for live presentations in the galleries or theater or to push media from their media sources. Jim Sharkey, CTS-D/I, RCDD, Data & Sound Specialities, said, "The quality, flexibility, scalability, and reliability are all baked into the Just Add Power system - just what you want in a video over IP system that is future-proof." •



Ed Qualls is the CEO of Just Add Power. The company is headquartered in Seminole, Florida. For more information, visit justaddpower.com



Above and opposite: The Savoy Automobile Museum in Georgia turned to Just Add Power to provide a flexible AV distribution system that allows staff to pair any video source with any screen in the facility. Photos by Just Add Power



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You can't spell personalization without AI

Mad Systems leverages AI to enhance visitor experiences with new Alice™ and Lory™ technologies

by Wendy Grant

Now that patent applications have been submitted, Maris Ensing, founder of the pioneering technology company Mad Systems, is ready to tell the world about his team's work to harness artificial intelligence (AI) and deliver dynamic visitor experiences through its newest innovations, Alice™ and Lory™ (both patent pending). He forecasts that initial implementations of both technologies will be in venues within the next 18 months.

Alice and Lory will integrate smoothly with QuickSilver®, the unique wired/wireless Mad Systems AV platform based on non-proprietary hardware, but Mad will also generate non-QuickSilver® specific versions to be used with other systems.

Introducing Alice, the dynamic media generator

"Alice is a tool that allows us to hyper-personalize information and experiences," Ensing says. "With Alice, you can create a

curated Body Of Knowledge. Then that Body Of Knowledge is used as the basis from which personalized information is derived that meets visitors' stated interests and needs."

Ensing shared a hypothetical example of implementing Alice in an exhibition about Leonardo da Vinci. First, visitors register and share basic information such as their age, preferred language, and areas of interest; this information helps Alice determine how to personalize for each person. For a 42-year-old, French-speaking art aficionado, Alice will display information in French about da Vinci's unique use of sfumato (a painting technique). For a 78-year-old, vision-impaired former engineer interested in the design and structure of da Vinci's war machines, and whose first language is Spanish, Alice provides audio content in Spanish, along with high-contrast imagery and video exploring the artist's creations. For a fourth-grade class on a field trip, Alice shares an introduction



Maris Ensing



Clayton Ferguson



Greg Burks

Opposite: Created with AI, this image illustrates the potential of magical multimedia experiences with Mad Systems' Alice™ and Lory™ technologies. All images courtesy Mad Systems (and AI)





Alice™, the multi-media generator from Mad Systems

using images and audio that conform to the school system's science standards for that grade.

Using facial recognition technology such as Mad Systems' CheshireCat™, a radio-frequency identification (RFID) card, or even visitor's smart devices, an ever-wider range of personalization is possible. Ensing says, "We've tested this out with the latest AI technology, and find that now we can tailor content for any age, for any area of interest and in any language, based on a curated Body Of Knowledge, even allowing for different presentation styles. We support hundreds of languages at this point. Incorporating AI technology provides us with an unprecedented level of flexibility."

Alice will know if a person is visiting for their second or fourth or tenth time, and have the ability to provide new content with every visit. According to Greg Burks, Senior Software Development Engineer for Mad Systems, "Alice [and Lory, detailed below] make it possible to deliver variable content. Two people standing side by side could even have information presented simultaneously to meet the personalized preferences of each."

Meet Lory, the personalized media delivery system

Ensing related that the creation of Lory, the next big Mad Systems innovation, was inspired by changes in the hearing aid industry. Due to a 2022 FDA ruling, hearing aids are becoming more affordable and accessible. In addition, their manufacturers are rapidly adopting Bluetooth technology in place of an inductive loop interface. This results in a new opportunity to

expand and simplify the sharing of content for visitors using hearing aids. "We can stream information over WiFi to people's smart devices, and from there it can be transferred to their hearing aids using Bluetooth," Ensing says.

Multiple languages can be streamed at the same time. Moreover, the user interface is not restricted to hearing aids. It can go to other devices, such as a visitor's own AirPods, or headphones supplied by the venue.

But what about sharing content with people who have no hearing at all, who use sign language? In seeking to answer this question, Ensing learned that there are multiple sign languages for different languages. His team is now testing Lory to support not just multiple languages, but multiple sign languages by streaming video-based information too. They're exploring the use of AI-generated avatars to generate sign language video clips. And for vision-impaired visitors, the Mad Systems team is also working to enable Lory to communicate tactilely, ultimately outputting information to Braille devices.

Both Lory and Alice can also provide practical guidance in addition to exhibition content. Given that they know where the user is within a venue, the systems can provide location-based information, sharing nearby points of interest or services. If the visitor is near the theater, for instance, Lory can tell them about the next show. If the content is presented on a screen as well as through audio, Lory can share a trailer for a show. Visuals can be delivered to venue screens or to visitors' smartphones.

Your favorite character can be your guide

Alice and Lory can generate avatars that allow each guest in a theme park, museum or other venue to choose the character that will be their personal guide.

Ensing explains, “We’re currently working with a venue that would like us to have five virtual people who meet you as you walk in. Each one provides a different viewpoint, and you can choose your preferred character to take you through the venue – or, if you do not want an avatar to show you around, you can ignore them entirely.”

They had considered filming five actors going all the way through the museum, stopping at each exhibit. But Alice allows for a new approach. Using the same technology that creates deepfake images, five images of people are all that is needed to set up the characters and their avatars. These avatars will lead visitors through the venue, with Alice delivering the content geared to age, interests and language.

“But this is where it really gets interesting,” says Ensing. “Imagine a teacher with 15 school kids arriving at a visitor center. The teacher registers, indicating that “These kids are seven years old, they are here to learn history and I want to lead them through the museum myself. We can take the teacher’s picture and turn the teacher into an avatar.” Now the teacher-based, AI-controlled avatar can lead them through the entire venue, speaking to the students at each exhibit, providing content appropriate for their age and learning needs – and even use different languages as necessary.

“Those are the kind of possibilities that we’re now looking at and working toward,” Ensing says. An avatar of the captain of a ship could guide a family on a cruise ship. A chef avatar can help you select your meal at a restaurant and wine to pair it with.

Ensing admits to having continual “wow moments” as he ponders the possibilities of what Alice can do. “Ultimately, think about smart cities,” he says. “You could have a personal concierge avatar who helps you get to the right bus or make appointments or a host of other things. Thinking about applications in the care industry, Alice can generate an avatar companion for an 85-year-old person who has memory loss. This is how this technology can lead us into the future.”

Curation and versatility

Concern about the quality of the content that Alice might provide is something that might come up for anyone who’s toyed with ChatGPT or other AI, and received unusable responses drawn from dubious sources. Limiting the AI’s working knowledge to a curated “Body Of Knowledge” from which the AI works is the key. This means that Alice’s responses are drawn from a written narrative, researched and written by curators, and delivered in the style of the original written document, ensuring quality control of the information delivered.

Alice can quickly search the documents in a collection or a curator’s research or the historical video footage an institution owns. Curators, subject matter experts or AI can metatag images, such as the photos in a historical society’s collection, video footage of a museum’s resident artists describing their creative process or a zoo’s keepers talking about the animals they care for. Then, when a visitor indicates they want to see what a historic site looked like when it was originally built, or how a sculptor created a particular artwork, or what it’s like to take care of tigers, Alice will be able to create a personalized narrative and a video that addresses the visitor’s interest, with information derived only from the curated information that has been supplied.





Meet the Mad Systems team attending IAAPA Expo: Tricia Ensing, Paul Kent, Toni Losier and Maris Ensing

Alice can vary the length of the content to suit the visitor’s requirements. Someone who’s in a hurry might have 30 seconds, whereas a superfan might want to spend two-and-a-half minutes. And, again, it can be in virtually any language. In fact, multiple languages can be displayed at once. Says Ensing, “I walked into our lab the other day and we had Chinese, German, Arabic and English on the screen at the same time, displayed in such a way as to cause minimal distraction.” The different languages can be displayed on different areas of a screen, or on different screens, all at the same time, to support a multinational audience as necessary.

Alice can generate a variety of experiences beyond text and imagery. Sound effects, music, motion and even smells could help to transport visitors to the hanging gardens of Babylon or the edge of a volcano. In addition to projection and screens, audio-only is another possibility. “Alice uses text-to-speech very well,” Ensing says. “It’s feeling so close to having a real human talking to you that I think we’re close to being able to deploy that.”

The wide range of dynamic communication provided by these new patent-pending options takes Mad Systems’ advanced technology another step towards providing the experiences future audiences will require. Alice’s customized, curated experiences can be displayed on screens or projected surfaces, or be used as part of interactive experiences, and only use non-proprietary hardware. Alice can work with anything from standard screens to VR headsets to projection mapping onto 3D models. Staying in touch with client needs is, of course, just as much a priority as the march of technology. Ensing notes, “We want to use existing delivery methods and we want to be as agile as possible. We

do not want to build equipment or design hardware. We want to create systems that deliver ultimate flexibility and longevity, that are as maintenance-free as possible, for our clients, based on non-proprietary hardware. We know that’s what they need.”

Teamwork makes the dream work

Collaborating with Mad Systems on various projects that will incorporate Alice and Lory is VoodooXR, a new company founded by Clayton Ferguson to develop mixed reality content for historical experiences and museums.

“We’re at the start of a new age right now,” says Ferguson. He previously worked with Mad Systems as exhibition and attraction producer on the Crayola IDEAworX traveling exhibition. This high-profile, successful traveling exhibition had its initial run in 2021 at the Franklin Institute and is still on the road. It utilized the Mad Systems QuickSilver AV system, which Ferguson praised for its capacity, form factor and versatility.



Lory™, the personalized inclusive media delivery system

“QuickSilver truly is wireless, and the control part fits in a small, rolling server rack,” says Ferguson. “It connects all the pieces of an experience together and makes the components controllable. Every piece works individually, but also holistically. And with the AI technology that Mad Systems is patenting, it allows new levels of interaction and story-deepening ability, in creating experiences that can become alive, all around us. We’re working together to tell personalized, unique stories.”

Alice’s first incarnation may be semi-automatic, but it will become more and more automated over time, especially as capabilities change in the field of AI. Given that Alice and Lory



Mad Systems' headquarters is in Orange, California, with representatives around the world.

are flexible technologies implemented using non-proprietary hardware, by implementing them now, venues will benefit by being on the leading edge and enjoy the technologies' future growth and changes.

"Let's face it," Ensing says. "We're not the only ones playing with AI. Our audience is, too. They expect personalized experiences. We need people to get fired up and tell their friends and family, 'You have to come and see this!' That's how we get repeat visitors. That's how we get an expanding audience."

Ensing says the entire Mad Systems team is contributing to the development of the AI innovations.

Greg Burks, who previously held various roles for the Walt Disney Company, is primarily working on Alice. He says he's excited to be working on a new system from the ground up. "We are coming up with ideas and giving them a try. And in the process, we'll realize that there are four other things we could try," he shares. "We get to play with AI every day here. This is stuff that has not been done before with software. It's a lot of fun. And it will blow audiences' minds."

"I think that what we are creating is not evolutionary - it's revolutionary," says Ensing. "It needs to be fun. It needs to be entertaining or educational - or ideally, both. But it needs to be able to deliver personalized experiences - because that's what people expect. If they don't expect it today, I can guarantee you that they will expect it tomorrow."

Mad Systems will attend the International Association of Amusement Parks and Attractions (IAAPA) Expo in Orlando and are available to take meetings there. To get in touch, or to arrange to see Alice and Lory and other Mad Systems technologies in the lab at Mad Systems headquarters in Orange, CA: info@madsystems.com; www.madsystems.com. •



Wendy M. Grant has worked in marketing for more than 25 years. She served as Director of Marketing and Communications for San Diego's Fleet Science Center for 13 years. She served on the Marketing Committee for the Giant Screen Cinema Association and she was a board member for the Giant DomeTheater Consortium. Prior to working in the museum field, she was Director of Marketing at Marine Corps Air Station Miramar. Since 2019, Grant has worked as a communications consultant, writer and editor.



Island Waterpark at Showboat Hotel Atlantic City took advantage of the latest designs in kids' play areas, including tipping buckets that have been engineered to disperse water over a broader area.

Play is fundamental

WhiteWater's holistic approach to Complete Kids' Play Areas

by Martin Palicki

The kids' play area in water parks is getting a makeover. Over decades, it has grown to become a staple at waterparks, and now it is evolving to meet the changing needs of both operators and guests. The goal is an even more family-friendly, integrated waterpark experience that also reflects the changing dynamics operators face.

As part of this renaissance, WhiteWater has developed the Complete Kids' Play Area, with four components designed to elevate the art of waterplay for everyone. "We provide a whole solution for parks, that includes all the elements of a traditional play structure but makes it more appealing for families to enjoy together while also being easier to operate," says Jordanna Bower, Vice President, Business Development for WhiteWater.

The Complete Kids' Play Area includes adults

With a home office in Vancouver, Canada, and regional offices around the world, WhiteWater is perhaps best known for its lineup of thrilling waterslides and innovative, multi-level interactive attractions. But the company also has been a key supplier of water play areas for decades. They have seen firsthand how both guest and operator needs have evolved over time.

On the guest side, families today are looking for places where they can play together as a group. "Many parks were designed to serve young kids, teens and adults in different areas of the park," says Mark Weston, Product Manager, Aquatic Play for WhiteWater. "But that doesn't support the natural way family groups want to play."

Not only do families want to enjoy time together, but there also must be spaces where the parents can relax while the kids play nearby. “You can have a great, well-thought-out area for kids to splash around in, but if parents don’t have a fun and comfortable place to stay, the family won’t be staying for long,” says Bower. That means having lots of seating, rental cabanas, nearby restrooms and a bar, all within view and earshot of the play area.

On the operator front, a lot of the change is being driven by personnel challenges. “Parks are having a significant staffing problem when it comes to finding lifeguards,” says Bower. “Older structures, typically built above a shallow pool of water with slides starting and ending in multiple locations, requires more lifeguards to cover the entire area.”

WhiteWater’s solution is the Complete Kids’ Play Area, consisting of four components: interactive play structures, spray toys, waterslides, and non-slip safety flooring. WhiteWater has focused on and enhanced each component in order to create a more family-inclusive, higher-quality, more engaging, and safer experience for everyone.

Play structures

WhiteWater recently added the new play structure AquaForms, a modular system with customizable activities and attractions. Unlike other play structures, AquaForms does not have set footprint sizes. The interchangeable components can be

configured in virtually unlimited combinations for almost any space.

Instead of boxy support structures, AquaForms utilizes a monopole pedestal structure, allowing for up to 22 feet between supports. Guardrails are either clear or translucent, which, along with the minimal support structure, creates better sightlines for both lifeguards and parents. Cause-and-effect interactive play features combined with kinetic elements activate the experience, modernizing a proven piece of entertainment.

Spray toys

As a mother of two, Bower pays particular attention to the details of a play area and has used her insight to help WhiteWater craft better products. “I started noticing spray features that were exactly at eye height for my 2-year-old,” she explains. “Also, tipping buckets are fun, but they can really take a toddler by surprise with the amount of water crashing down; now we design to disperse the water over a larger area.”

Other unique enhancements include activation switches for spray toys that require no electricity, relying instead on water pressure and guest movement for activation.

Waterslides

Kids’ play structures can now feature smaller versions of WhiteWater’s popular waterslides. “We realized that creating



Island Waterpark at Showboat Hotel Atlantic City features WhiteWater’s AquaForms modular system that allows for a variety of water play components, including slides. All photos courtesy of WhiteWater



Mark Weston



Jordanna Bower

junior versions of our rides just for younger kids creates a connection between kids of different ages,” says Bower.

Weston agrees: “Kids aspire to do the things older kids can. With our mini version of some of our iconic slides, a younger kid can ride the Mini Boomerango and share the same ride experience as their older sibling who rides the standard version. They can talk and bond over that experience of weightlessness.”

Life Floor

WhiteWater’s partnership with Life Floor (which began in 2018) is one effective way to maximize lifeguard effectiveness and reduce injuries at the same time. Designed for both safety and aesthetics, Life Floor is a soft surface that takes the place of a pool of water beneath a play area.

“One of the reasons we started working with Life Floor is because we realized that kids are just going to run no matter what you tell them, and eventually that leads to falling,” says Weston. “The advent of the non-slip floor surface really changed what we can do.”

The Showboat showpiece

An excellent, current example of this complete, holistic approach to kids’ areas is Island Waterpark at the Showboat Hotel Atlantic City. Opened on June 30, 2023, the new indoor waterpark is the latest addition to the resort, which also features an extensive family entertainment

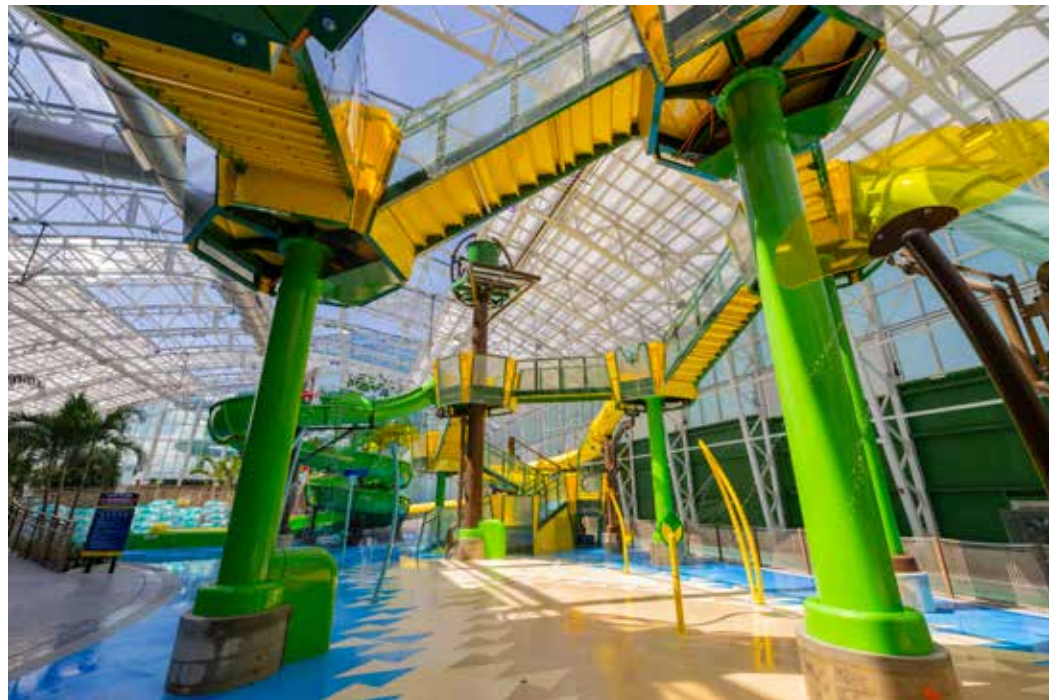
center. The 100,000 square foot park sits under a glass structure with a retractable ceiling. The park is long and narrow, with most of the larger slides on each end. A surfing simulator from FlowRider occupies one corner.

The central area of the park features WhiteWater’s AquaForms play structure, surrounded by abundant seating and ringed by a lazy river. Unlike other play structures, which typically have more of a mountain peak shape to them, the AquaForms installation is linear, following the shape of the waterpark space.

“In many ways, this is the exact opposite of a densely built tower structure,” explains Weston. “You can see the entire thing all at once and figure out where everything is located. The fun comes in choosing which of the activities you want to enjoy and finding the path to get there.”

According to Bower, the design was inspired by the common challenge of limited space inside the park. “We needed to create an area that was good for very little kids but also provided interest to the tween population. We landed on the idea of elevating nearly the entire structure, which also created more space for seating around the play area,” she says. With Life Floor beneath, little kids can play on the ground level and older kids can climb into the play structure and explore.

The structure is light on theming, a trend that both Weston and Bower see continuing. Instead of dimensional props, the structure is more stylized, relying on bold colors and shapes to grab attention. Life Floor provides another opportunity to add in theming and style, while complementing the patterns and colors of the AquaForms structure.



Elevated AquaForms created two distinct play areas, one at ground level for smaller children and an upper level play area for older kids.

“There will always be a place for the big, themed play structures,” says Weston. “But many of the smaller facilities want just the essence of a theme, with cleaner lines and design.”

Island Waterpark incorporated some other, notable firsts for WhiteWater. “Once we decided to elevate the structure, we tried to see how high we could take it in order to add elements not typically found on a play structure,” says Weston. The highest point on Atlantic City’s AquaForms is 25 feet, allowing for WhiteWater’s first freefall slide on a kids’ structure. The team also took the opportunity to add AquaLucent translucent designs to the slides as well, furthering the connection between the larger and smaller slides.

“I think with this style of kids’ play area, Island Waterpark has been even more successful than we anticipated,” says Weston. “We are now referring to this structure as Elevated AquaForms and looking at other ways to expand upon it for future installations.”

“Can we go higher? Can we add another level above?” asks Bower. “These are the things we are looking at now as we expand AquaForms.”

Exploring next-level play

Weston, who first came into the industry after studying psychology, sees Complete Kids’ Play Areas as the first step in a new direction for play in waterparks. “I like to look at trends in other types of play outside of the waterpark industry and see how we can integrate them into properties,” he says. Weston is currently looking to develop new attractions targeted towards tweens that incorporate their natural love of adventure and challenge experiences. “I’d love to see a Mini AquaDrop slide soon – that would really appeal to the kids who might not be ready for the big slides but also want more thrills,” says Weston.

And with the modular, customizable design of AquaForms, just about everything is on the table. “AquaForms allows us to fully lean into what the client wants and allows us to work with the land and space they have available,” says Bower.

With both the AquaForms of today and those currently in development, one thing is clear: WhiteWater will continue to elevate the art of play for the entire family. “Every time parents engage in play with their kids, it’s a win,” says Weston. “Our job is to make that happen naturally.” •



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Monster makeover

With American Monsters and Onionhead's Revenge haunt at Mall of America®, Miziker Entertainment expands as owner/operator

by Judith Rubin

Onionhead's Revenge is a brand-new, immersive and interactive haunted attraction that ran for six weeks (Sept 15-Oct 31) at Mall of America (Bloomington, MN) for the 2023 scare season.

American Monsters LLC, the parent company and IP rights holder of Onionhead's Revenge, was jointly formed by Miziker Entertainment and Haunted Hotel, both based in Southern California. Miziker Entertainment is a worldwide leader in themed attraction design and production, with a global clientele and 40 years in business. Haunted Hotel has reigned in the haunted attractions business since 1992, with haunts that include The Haunted Trail in San Diego's Balboa Park, featured in the New York Times as one of the top haunted attractions in the US.

This endeavor will be something to watch – not just for attractions professionals, but also for those with an interest in haunts, immersive experiences, seasonal projects and the shopping center space. In this splashy new venture, the team is pushing boundaries on all fronts.

With 5.6 million square-feet and over 40 million annual visitors, Mall of America® (MOA) is the largest shopping and entertainment complex in North America and an ideal location for this new immersive attraction. It offers prominent visibility, a good demographic fit, and the opportunity to deliver a major haunt experience to a region that is considered under-haunted.



In the Onionhead's Revenge lobby, a wrecked truck with forgotten occupant sets the stage for the experience ahead.



American Monsters “hauntepreneurs” (L to R): Charlotte Huggins, CEO; Greg Defatta, President; Sean Chung, Creative Director; Dylan Defatta, Haunt Director; Ryan Miziker, Partner. *All photos courtesy of Miziker Entertainment*

From Miziker to Monsters

If Onionhead’s Revenge fulfills its promise, American Monsters could well rank with the likes of Meow Wolf and Illuminarium as a producer of fresh, bold, highly creative collaborations from artists helping redefine the LBE terrain.

“We’re really excited to tell this story,” says Charlotte Huggins, CEO/Executive Producer for both Miziker and American Monsters. A well-known firebrand in attraction and specialty cinema production, Huggins came to Miziker 10 years ago. Owning and operating their own attractions was part of a five-point plan she instigated shortly after joining the company to work alongside Ryan Miziker (Chief Creative Officer) and create “Miziker 2.0” as founder Ron Miziker, Ryan’s father, dialed back his role.

With extensive involvement and direction from Sean Chung (Miziker President/Senior Project Director), they developed a body of unique IP inspired by monster folklore in the US that would form the backbone of American Monsters and the basis of its new attraction concepts. They spent two years fleshing out the concepts including original art, music and character development. Searching for a location to put a first attraction into play, “We found the right venue when we chatted with Chris Grap and his boss, Jill Renslow, from Mall of America at IAAPA Expo in November 2022,” says Huggins. (Grap serves as Lead Storyteller and Experience Designer at MOA, and

Renslow is Chief Business Development/Marketing Officer). “They said, ‘Would you be interested in doing a haunted experience at MOA?’” Huggins recounts. “We happily replied, ‘Why, yes... by the way, we have a concept brewing!’” After several conversations, the green light came in late March.

Scouting the mall, the team identified a 45,000 square-foot space that satisfied their wish list. It was the second floor of a former, three-story Bloomingdale’s, with good ventilation, high ceilings, parking, mall and direct garage access. “It was and is incredible,” says Huggins. “We are ‘Hauntepreneurs!’ We are a new anchor at Mall of America!”

The Monster Pass

Onionhead’s Revenge draws upon an American ghost legend that grew out of a real-life story in Southern Louisiana involving the persecution of a boy who was brutally killed by a vigilante mob after being wrongly accused of the murder of a young woman. (Following this incident, the boy’s attackers also came to bad ends.)

The experience is rich in AV media, original music and radio plays, scare-actors and animatronics, as well as food, libations and merchandise, all themed to the Onionhead story and designed for everyone over the age of 10. Per Huggins, the attraction covers 28,000 square feet, including an extensive graveyard setting, church and an enormous lobby with a Slidell-



Haunted Hotel operates two popular and successful haunted attractions in San Diego: the Scream Zone and the Haunted Trail. Like Miziker Entertainment, Haunted Hotel is a family business, with a father-son dynamic. Defatta's son, Dylan, has taken a leading role in running the company. But the connections go even further in the case of American Monsters. Friendship between Defatta's family and Huggins's goes back for many decades – coincidentally, to Louisiana. "I'm in business with a person I trust like my own brother, and another I trust like my own son," Huggins says. "We can get things done quickly and smoothly because of this life-long foundation."

themed bayou, storefronts and Vern's Moonshine bar, all of which visitors can enjoy with no entry fee. Ample space remained for back-of-house amenities - and future expansion such as a custom music venue.

Inside the mall, costumed characters lead guests to the entrance marked by huge, wrought-iron gates. There are multiple levels of engagement - free (the substantial lobby experience) and paid (general admission, fast pass and the expansive Monster Pass). Ticketing is online or in-person. The average expected dwell time is around 30 minutes.

As the driving creative force in this project, Sean Chung says, "We came at this from our experience in themed entertainment and storytelling with an exploratory element. I felt something could be achieved elegantly by walking into an interconnected world of reality and horror, and that there could be a significant emotional payoff. When you are standing in the middle of the expansive cemetery – the main set – you are able to look across the haunt and see into the bayou set and the church. You'll be thinking about which path to take. Because it's not predictably linear, it accesses the guest's imagination and elevates their experience and enhances the scares."

At the heart of the attendance model is the Monster Pass, providing access to secret rooms and additional layers of story. "The Monster Pass makes our haunt really special, wrapped in a package of exploratory aspects and character interactions, giving additional breadth and depth," says Chung. "We sought to combine the lower throughput of an intimate immersive experience with the larger throughput of a haunt."

Motivated general admission holders will discover that they can also find their way into some of those deeper levels of experience, but the Monster Pass confers a level of status and control. "Rather than an elite path, there are two paths that complement one another," says Chung.

Onionhead was designed to deliver on all levels. As Chung says, "With or without a Monster Pass, you will still get scared out of your mind."

Ahead of the trend

With 33 years of scaring people, Greg Defatta and his team at Haunted Hotel bring owner/operator savvy to American Monsters and Onionhead's Revenge. Currently,

When it comes to haunts, "We have always tried to stay ahead of whatever the trend is," says Defatta. "I'm really liking this new version of haunted houses and the new concepts it contains. I take my hat off to Miziker and their team of incredible professionals."

Some of the LA crew that Miziker brought in to join the Onionhead team are Production Designer Dan Rucinski, VP Marketing Marti Boone, Stage Manager Lashette Showers and artists like Christopher Ulrich and



James Brown. “What we’ve created with them is not like a traditional linear haunt. It has a lot of unique, interesting surprises,” Defatta adds. “The use of lasers in appropriate areas is something of a game-changer, allowing us to quickly shift the mood of a room. Likewise, the use of projection can transform the whole environment. We create whatever we want people to see and feel. There are rooms guests may not find on the first visit, so it inspires return visits. Everything is fully thought out, including every character, down to their background, habits and look.”

Haunted Hotel’s considerable expertise was essential. “We flexed our muscle in every aspect of the venture, from hiring to training,” says Defatta. “Our builders helped train other builders in aspects such as how to mount and integrate equipment out of reach of the public, and what materials to use. Haunted houses take a beating like nothing else. You need to build it right the first time.”

200%

Chris Grap talks more like a themed entertainment pro than a shopping mall executive, and his background is also nontraditional. But then, Mall of America isn’t your ordinary mall, billing itself as a global tourist destination. While Onionhead’s Revenge may be MOA’s first haunt, the facility already has a significant number of attractions, including Crayola Experience, FlyOver America, Nickelodeon Universe, SEALife Aquarium and Museum of Illusions. The mall is handily situated near MSP airport.

Grap, who has been with MOA for 11 years, has close connections to the stuff haunts are made on. His previous experience is in film production, with a specialization in special effects makeup - as he describes it, “blood, guts, and gore for a bunch of horror movies with Roman numerals in the titles.” MOA had been on the lookout for a haunted experience that was up to their standards when American Monsters came along.

“I’m happy to share the opportunities I’m aware of in this market, being very tied into the horror community and other communities that love these types of attractions,” Grap says. “If Onionhead delivers on even 50% of its promise it’s going to be 200% better than anything else of its kind in the market. I truly believe this approach is unique. I think the best types of experiences lend themselves to three levels - casual observers, curious explorers, and super sleuths - and Onionhead’s Revenge has all that.”

As malls over the years continue to adjust the mix and the model for today’s consumer markets, MOA has been a trend-setter – a living example not just for



Above and opposite: Detailed scenic elements play a big part in setting the scene - along with scare actors - for the complete experience.

malls, but for regional attraction development. “The way I see it, MOA has a 30-year jump on everybody,” says Grap. “We are THE mall. Malls that want to survive and thrive need to do what we’re doing. Trends come and go, but the things we do exceptionally well are things that don’t go out of style. MOA is a recognizable brand, akin to that of a theme park, and that implies a promise to live up to, in terms of guest experience.”

Grap explained that people plan multi-day visits to MOA just as they would to a theme park, and that experiences function as anchors and destination drivers just as do major retailers. “We don’t try to hit a specific ratio of entertainment to retail – just to be the best we can be. Try things. Let things grow organically. Know your audience. With Onionhead’s Revenge, we hope to deliver something that is a destination driver for years to come.”

Opportunity and trust

Ultimately, says Chung, “Our passion and focus on story and creativity are what is truly going to make this special. For me, it’s about creative freedom; not just the decisions, but the process in general. It’s very interesting and rewarding to be able to start from scratch and have the story evolve as the project evolves.”

“Our industry has to keep evolving, and I think this is a leap forward,” says Defatta. “There is so much competition - but the cool thing about our haunts is that our competitors have nothing on us!”

“Onionhead’s Revenge will be the premier haunted attraction between here and Orlando or Anaheim, as far as I’m concerned,” says Grap. “This is a partnership characterized by opportunity and trust. Miziker and Haunted Hotel, both wildly and widely respected experts in their fields, have come together like a haunted house supergroup.”

Huggins says, “Our company is growing and changing; we’re going out into the immersive attraction space in a very big way. We have great plans for the future of American Monsters.”

More information: Miziker Entertainment (www.miziker.com); Haunted Hotel (www.hauntedhotel.com); www.americanmonsters.com. On Instagram (if you dare) @monstagram_official. •

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It's a PEANUTS party

75 Years of Happiness and decades of success in branded entertainment

by Judith Rubin

The Peanuts comic strip by Charles M. Schulz, first published in 1950, became the portal to a universe of utterly human and timeless characters, themes and stories that sparked imaginations and affection around the globe. PEANUTS™ today is a powerful family brand that thrives on many different platforms. In the attractions space, which includes Location-Based Entertainment (LBE), Peanuts has been innovative, influential, and busier than ever with Snoopy, Charlie Brown, Lucy, Linus, and the rest of the gang delighting millions of guests across a wide range of venues including theme parks, science centers, museums and botanical gardens.

“We have so much in development right now,” says Craig Herman, VP, Global Brand Experiences at Peanuts Worldwide. With Craig Herman as our guide, we explored several new,

existing, and reimagined Peanuts experiences around the world (see below) as the brand prepares to celebrate “75 Years of Happiness,” a 15-month celebration that will commence Oct 2024.

Even with many projects already in the pipeline, Peanuts is ready for more – much more. The possibilities for creating great Peanuts-themed guest experiences are well-nigh endless with a rich IP, an international audience, multigenerational appeal, today’s tools of immersive storytelling and a high level of interest in themed entertainment markets.

“We want to complement what we’re already doing in the market,” says Herman, who is looking forward to meeting and exchanging ideas with operators, developers, and producers

“With the renovation of the park’s Camp Snoopy area debuting in the Summer of 2024, there will be even more new rides and adventures to explore than ever before,” says Jon Storbeck, GM of Knott’s Berry Farm.

this November at the IAAPA Expo in Orlando. “We’re here to make connections and explore potential partnerships for bringing the beloved characters to fans around the world through meaningful experiences and attractions.”

Theme parks

As Herman likes to say, “Peanuts lets a kid be a kid, and lets an adult be a kid again.” This makes theme parks an ideal setting. Peanuts partnerships with theme parks have been transformational, successful, and enduring - bringing the Peanuts magic to millions of guests and expanding revenue and merchandising opportunities for operators. The collaborations with Cedar Fair and Universal Studios Japan have stood for decades and established a leading model for IP-based experiences in themed entertainment venues.

Peanuts and Cedar Fair have been partners since the 1980s and are still going strong, engaging guests through immersive lands, rides, and family activities. “Cedar Fair has been our exclusive North America theme park partner for more than 40 years, bringing joy to families and creating lasting memories,” says Herman.

Two Cedar Fair properties - Knott’s Berry Farm (Buena Park, CA), and Kings Island (Mason, OH, near Cincinnati) - will introduce extensive upgrades to their Peanuts-themed “Camp Snoopy” areas in Spring 2024, perfectly timed to celebrate the 50th anniversary of Snoopy’s intrepid Beagle Scouts troop. “The Cedar Fair creative team brings years of exemplary theming experience to the redesign of these iconic parks and we’re very excited to collaborate on these two projects,” says Herman.

Knott’s Berry Farm is bringing new energy to Camp Snoopy. “With the renovation of the park’s Camp Snoopy area debuting in the Summer of 2024, there will be even more new rides and adventures to explore than ever before,” says Jon Storbeck, General Manager of Knott’s Berry Farm. Storbeck adds, “Camp Snoopy at Knott’s Berry Farm was the first area inside a theme park dedicated to young children. This area has delighted generations of families for over four decades, since the Knott family and Charles Schulz formed a trailblazing partnership in 1983, enabling kids and their families to step inside the world of his iconic Peanuts characters. All of us at Knott’s Berry Farm are thrilled for this collaboration and partnership with Peanuts Worldwide to continue into the future.”



In 2023 The Dallas Arboretum and Botanical Garden’s annual Autumn at the Arboretum was themed to “It’s the Great Pumpkin, Charlie Brown.” It featured the Peanuts gang, along with a Pumpkin Village of themed pumpkin houses and a maze for younger visitors.

Photos: Dallas Arboretum and Botanical Garden

Meanwhile, at Kings Island, General Manager Mike Koontz means business when he says, “Family fun is at the core of our business.” Kings Island is augmenting its kids’ play options and complementing its existing Planet Snoopy area by adding Camp Snoopy, to open in Spring 2024. “Being able to connect families by offering new ways to play using the iconic Peanuts brand enables us to create one-of-a-kind environments and experiences all in one place,” says Koontz.

Koontz continues, “The addition of Camp Snoopy within our award-winning kids’ area will offer an even bigger playground for parents, kids and the entire Peanuts gang. It’s a summer camp like no other, including a Peanuts-decorated, soapbox derby roller coaster race, plus an expansive interactive area with daily ‘camp-tivities’ hosted by Snoopy and friends that encourage kids to be free to explore, become a full-fledged member of the Beagle Scouts and enjoy outdoor fun and freedom within our park.”

Changing focus to Asia, Universal Studios Osaka, Japan is in talks now about revitalizing its Snoopy Studios attraction, a dedicated kids’ area that aligns with Universal movies and entertainment, with Snoopy in the director’s role. USJ has partnered with Peanuts for more than 20 years, bringing Snoopy and the gang to its guests through rides, experiences and events.

Peanuts in Orlando

“All Systems Are Go” at Kennedy Space Center Visitor Center is a unique, live theatrical production using Peanuts characters articulated as larger-than-life puppets to tell the story of space exploration and the relationship between NASA and Peanuts Worldwide. With performances three times a day, seven days a week, the show launched in April 2023 and continues through 2025. “With its STEAM-based content and immersive storytelling, the show is running at capacity, delighting fans old and new,” says Herman.



Craig Herman
VP, Global Brand Experiences
Peanuts Worldwide



John Storbeck
General Manager
Knott's Berry Farm



Mike Koontz
General Manager
Kings Island

Gaylord Hotels has a tradition of presenting unique displays of themed ice carvings for the winter holidays at several Gaylord properties around the US. By way of a partnership between Marriott and Gaylord Hotels with Peanuts Worldwide, the annual Gaylord ICE! at the Gaylord Palms in Kissimmee, FL (near Orlando) will be themed to “A Charlie Brown Christmas.” It opens in November this year.

Pumpkins and our pal Snoopy

Open since 2020, Snoopy Garden was a first-of-its-kind themed greenspace, occupying 20 acres on JeJu Island in South Korea, combining Peanuts elements with the natural landscape and atmosphere. Its popularity and success have been such that a 30-acre, second-gate expansion is now underway to support longer visits and overnight stays. This includes a family-oriented resort complete with a variety of Peanuts sports-themed activities, a world-class hotel, camping, food, and retail. Projected opening: Summer 2025.

Pumpkin patches and botanical gardens are an ideal pairing, and in 2023 The Dallas Arboretum and Botanical Garden held its 18th annual Autumn at the Arboretum (Sept. 15-Nov. 1). This marked the Arboretum’s second time partnering with Peanuts Worldwide, and the 2023 event was themed to “It’s the Great Pumpkin, Charlie Brown.” It featured the Peanuts gang, along with a Pumpkin Village of themed pumpkin houses and a maze for younger visitors. “A lot of Peanuts storylines lend themselves to seasonal events and attractions, and a pumpkin festival is a natural fit,” says Herman.

In the sports milieu, Peanuts Worldwide has partnered with award-winning production company Rockefeller Studios on Snoopy Sports - a brand new, multifaceted, interactive experience for all ages. Attendees will be selected to join a Peanuts character’s team to play Snoopy’s version of football, baseball, hockey, soccer and more. “The builds and theming look amazing,” says Herman. “This goes way beyond traditional mini-golf; the experience is fully immersive and designed for fans of all ages.”

Jonathan Rockefeller, President Rockefeller Productions, says, “We’re thrilled to give fans the chance to play ball with Charlie

Brown, Lucy, Peppermint Patty, Linus, Woodstock and other iconic Peanuts characters. Snoopy Sports is a one-of-a-kind experience that’s equal parts whimsical and thrilling. We can’t wait for friends and family to enjoy a day of playful competition inspired by our pal Snoopy.”

These collaborations build on the rich themes of activity, community and nature replete in Peanuts and suggest options for many more. “The strong emotional connection people have to Peanuts is what’s kept it relevant for 75 years,” says Herman. The universally relatable, evergreen brand that is Peanuts engages with the simplicity of its visuals, stories, characters and situations. It’s about children and other creatures interacting with one another and the world. There are sports, kite flying, holidays, space travel and sleeping under the stars. There are friendship, puppy love, pets, wildlife, family, music, school days and field trips. It’s a well that never runs dry.

Speaking of field trips, a major announcement will be forthcoming from Peanuts for a new attraction in the educational space for 2025. At this writing, Herman could only offer a teaser, indicating that it would be a first-of-its-kind for Peanuts, and that it would engage children with hands-on activities to stimulate creativity and imagination.

The power of branded entertainment

As it approaches 75 Years of Happiness, Peanuts is helping lead the way in branded experience - not only in terms of historic partnerships, but the newer generation of branded LBE taking shape over the past 5-10 years.

“What we’re doing in LBE and attractions demonstrates not only the popularity of Peanuts,” says Herman, “but how Peanuts is extending the brand to more immersive guest experiences that allow guests to step into the world of Charles Schulz. The ability to interact with characters - in the form of playspaces, themed attractions, interactive exhibits, Instagrammable moments - all drive quality guest experiences.”

The trend has been recognized by industry – it’s been highlighted for a number of years at the IAAPA Expo, and now fully embraced by Licensing International, which adopted an

LBE theme for recent trade shows in Las Vegas and London. “LBE is the fastest growing category in the licensing world as more and more brands recognize the value of fan engagement,” says Herman.

“For Peanuts, it is vitally important to think strategically about experiential partnerships as we continue to grow this arm of the business,” says Herman. “It is important to connect with audiences on an emotional level, and to be able to support our award-winning consumer products program.” Peanuts continues to build a strong base in China, South Korea, and Taiwan while also looking to expand into the UK, Germany, Italy, France where the brand is extremely strong.

Part of the story of success is striving for consistency and quality as well as growth. “We carefully curate our partnerships and work with clients to personalize every new attraction we open,” says Herman. “We think strategically about how it fits the brand strategy, asking ourselves key questions in the decision-making process: How can we deliver a unique and memorable guest experience that aligns with the brand goals and objectives? Are we able to tell an authentic story? How will the guest interact with the characters? This is where we focus, and this is how we succeed.”

For more information or to set up a meeting, email craig.herman@peanuts.com. •



Kings Island (Cincinnati) is augmenting its kids' play options and its existing Planet Snoopy with the addition of Camp Snoopy, opening in spring 2024. *Artist's concept courtesy of Kings Island*



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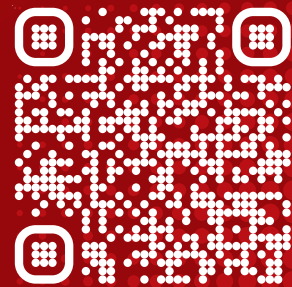
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Illuminating insights

ETC adds to lineup of fixtures and control functions for use in theme parks and attractions

by Joe Kleiman

ETC is a long-established leader and pioneer in lighting and control equipment. The company is best known in the theater sector but also has a strong standing in the attractions industry, with many prestigious projects and clients around the globe. The company has been employee-owned since 2015 and is based in Middleton, Wisconsin; the CEO is Dick Titus. A simple credo in the mission statement is, “We listen to our customers and give them more than they expect.”

After decades of serving the themed entertainment sector, in 2018 ETC formalized a dedicated group of specialists, project managers and field service engineers in Orlando to continue supplying theme parks, standalone attractions, resorts, museums, cruise ships and more. One of the faces of the department is Scott O’Donnell, Themed Environment Specialist. He worked as an ETC dealer for 13 years, followed by a decade as a Field Service Engineer. O’Donnell stays in

tune with market needs. He has helped shore up awareness of the company and its products in the attractions space and is devoted to mentoring the next generation. He gives every indication that in his current role, he is living his dream.

At this writing, ETC was basking in the afterglow of a successful and high-profile new project in the Middle East. A leading marine life park operator recently opened a celebrated new venue, which integrated a variety of ETC control platforms and other products into its systems to help achieve certain effects. In several areas, large LED arrays behind floor-to-ceiling scenic background murals change throughout the day (and seasons) to appropriately provide a natural lighting scheme in the themed land, each mural designed to portray a unique part of the world or ocean. This lighting scheme, controlled by ETC platforms, not only supports the circadian rhythms of guests, but also helps with animal health,

Above: Originally the US Pavilion at Expo 74, the Spokane Riverfront Pavilion’s lighting is pixel-mapped and controlled by an ETC Mosaic system. *All photos courtesy ETC*

approximating the lighting levels throughout the day and year that correspond to their wild habitats.

Lighting components and functionality were also provided to facilitate presentations and simplify maintenance accessibility in the new marine park.

With O'Donnell's expert guidance, we set out to explore some current trends and ETC products that will be of interest to designers, lighting professionals and technical integrators in the attractions industry.

The great outdoors and the wet indoors

Introduced last November at the 2022 LDI show, the ColorSource VXT is the newest in the company's popular line of ColorSource architectural lighting fixtures. As part of the fifth generation of ColorSource lighting, it comes complete with a five-color array of red, green, indigo, and lime, which allow for a wide range of color combinations.

In addition to its color versatility, the VXT is designed to operate in outdoor or wet conditions. The electronics portion of the fixture is fully sealed to be watertight and certified at IP65 standards. "The VXT is ideal for illuminating architectural or landscape features, outdoor theatrical productions, and interior spaces where there's a lot of moisture in the environment, such as flume or boat rides," says O'Donnell.

The move to LED

No discussion of ETC would be complete without mentioning the popular Source Four. Introduced in 1992, the Source Four was a breakthrough lighting

fixture that became one of the company's biggest success stories, adopted worldwide. By utilizing a custom halogen bulb and a reflector positioned behind it, the fixture significantly reduces heat output allowing for longer operation with a cooler temperature beam than comparable reflector-based lighting. This significantly reduced the risk of damage or warping to gels, shutters, and other attachments designed for patterns, while maintaining a cool temperature beam for performers, animatronics, and sets. The Source Four is also a pioneer in LED light sources, using an eight-color array for vibrant, nuanced color or a Daylight HDR array for tunable white light.

Look up and around in the field, and you can spot Source Fours in attractions as varied as dark rides, haunts, and pre-programmed shows as well as theaters and building exteriors in theme parks and attractions across the globe. A recent large installation is Warner Bros. World Abu Dhabi, utilizing over two thousand Source Four LED Series 2 fixtures.

But with so many incandescent Source Fours in the field, ETC is committed to helping venues upgrade their existing fixtures to LED sources as well. The company recently introduced the Source 4WRD Color II LED, a simple retrofit of existing Source Four fixtures, eliminating the need to replace it with a completely new luminaire. In less than five minutes, an existing Source Four unit can be converted from halogen to LED lighting. "The burner assembly, where the bulb is housed, is removed from the back of the fixture," says O'Donnell. "Then you just replace it with the LED retrofit unit and snap in a new reflector. It's really easy to do. This is part of our commitment to listening to our clients and coming up with cost-effective solutions that exceed their expectations."

The 4WRD Color II LED also does not sacrifice the features of the original Source Four unit. Using an 8-pin RJ45 connector, the unit can receive instructions via DMX (a one-way control system) or DMX/RDM, which involves a two-way conversation between the control unit and the lighting fixtures.



Opened in 2021 at Vienna's Prater amusement park, the Gesengte Sau roller coaster is illuminated by ETC Source Four lighting fixtures & controlled by a Mosaic Show Controller X.



The historic Loeff Carousell in Spokane's Riverfront Park is highlighted by ETC Source Four PARs, linear LED strips, and automated wash features through an ETC Paradigm processor and a Mosaic Show Controller X controlling five distinct universes of lighting.

New features for control

While individual fixtures, such as the ColorSource VXT and the Source Four can be controlled via smartphone or tablet applications, ETC's control solutions make it easy to illuminate and integrate everything from a small showroom to entire parks.

Just as you are likely to find Source Four in the lighting grid, you may well spot an ETC control console in the booth or equipment room. According to O'Donnell, while it is possible to operate multiple attractions, such as dark rides, off a single control platform, it's recommended that each have its own individual control. This ensures redundancy, which minimizes downtime. "If you have multiple attractions on one console, and something happens to take one out of service, you would have to take them all down." Individual control for each attraction allows technicians to concentrate only on the area in need of service.

New to the control console lineup is the Apex, which ETC considers the flagship of their Eos line of controllers. It's available in three different models, the 5, 10, and 20. The top-of-the-line Eos Apex 20 features 20 motorized faders (the 5 and 10 models have five and ten faders, naturally) along with a full keyboard, programming keypad and haptic and rotary encoders. It also showcases two 27-inch, 4K multi-touch LCD touchscreens in an articulating dual-axis display panel and supports three external display port monitors (1920x1080 minimum, 3840x2160 maximum), with optional single-touch or multi-touch screen control and DDC/CI support. It is a powerhouse for programming with enough simplicity to make it easy for anyone to run a show.

The ETC Eos lighting consoles are designed for precision control for shows and large-scale events, such as parades. For monitoring and controlling lighting throughout a museum, standalone attraction, or an entire park, ETC's Unison Paradigm system is ideal. It can run day-to-day lighting across these spaces and coordinate show, ride, and back of house lighting. ETC's Mosaic products can control animated pixel arrays at the largest scale and respond to triggers, allowing for lighting interactivity with attractions.

Rigging the lights

In addition to lighting fixtures and controls, ETC also has an extensive rigging product line for its customers around the world. At the Daytona International Speedway, custom hoists from ETC were used to levitate winning race cars into the air above the crowds.

The Prodigy series of hoists vary in size based on lighting and space requirements. The Prodigy Flypipe is a modular design with lengths between 18- and 38-feet, which is ideal for smaller stages and environments. On the other end of the spectrum is the Prodigy P75, a low-noise hoist capable of lifting fixtures or theatrical scenery up to 75 feet off the ground.

"With the Prodigy P75, there's the option to add our ETC SoftLift technology," says O'Donnell. "This helps augment the transitions during starting and stopping the process." In a theme park or attraction theatrical production, or a pre-programmed show, this helps provide smooth transitions between scenes.

Inspiring the next generation

A part of the job that Scott O'Donnell is most proud of is mentoring the next generation of lighting designers. The company offers a range of educational resources, including a popular line of posters rich in theater tech information. "The posters are available for students and educators, highlighting different aspects of lighting design and other essential lighting concepts," explains O'Donnell. "We also do a lot of training and educational sessions at our Orlando office. Many of the attendees are students at the local colleges and universities in engineering, theater, or themed entertainment programs. We have the added benefit in Orlando of our products being used in all of the big parks in the area, so the students are able to see for themselves how they work in an operating environment."

ETC was founded in 1974 by four students of the University of Wisconsin (UW), one of whom was the late Fred Foster (1957-2019), a visionary and innovator who served in a variety of positions at the company before becoming CEO. Foster was a theater major and understood the needs of lighting designers



Scott O'Donnell

and concentrated on creating fixtures and control systems based on years of dialogue with customers.

Almost fifty years later, ETC maintains a strong relationship with UW. In addition to providing summer internships for UW students, the company also partners with the University's Manufacturing Systems Engineering Program and Center for Quick Response Manufacturing. The partnerships have resulted in ETC streamlining its development and assembly process, lowering costs, and increasing longevity and durability of its products.

In April 2023, the Students in Themed Entertainment (SITE) conference was held at Ohio State University, hosted by the school's Theme Park Engineering Group, one of a number of such university-level clubs throughout the globe. O'Donnell gave one of the keynote presentations. "I was very honored to have been invited," he says. "I shared with them the importance of networking and meeting people, and how, if you put good out into the world, it has a habit of coming back to you - often when you least expect it." •



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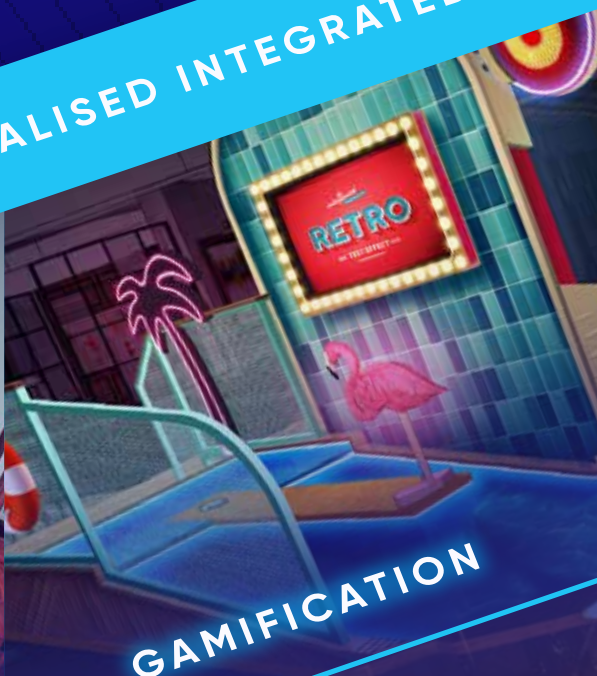
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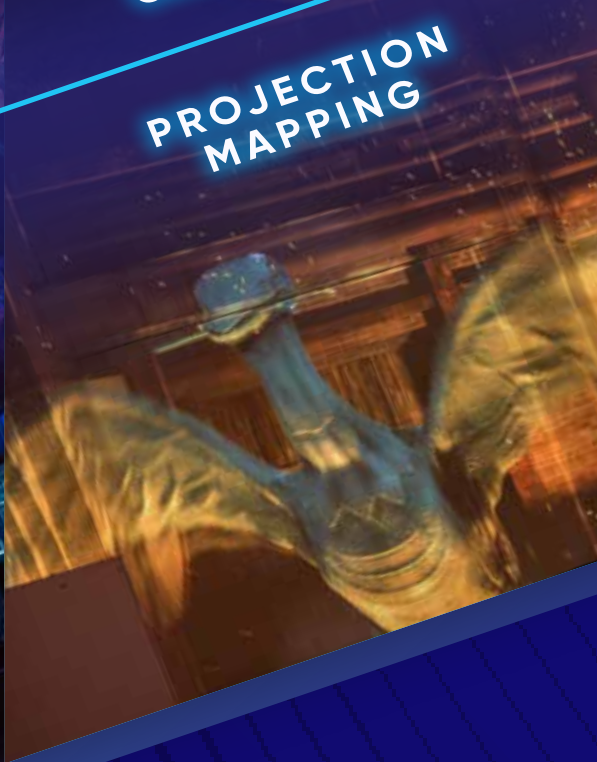
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Bigger, badder, birdier

Delightful destruction and the arc of Angry Birds

by Gene Jeffers

With origins in the 1980s, the demoscene is a mainly European subculture focused on producing self-contained computer programs that produce AV presentations: demos. It is a competition-oriented subculture, within which groups and individual artists compete for technical and artistic recognition. Two decades ago, after winning a Finnish demoscene competition, three university students (Niklas Hed, Jarno Väkeväinen and Kim Dikert) formed the game company Relude. Investors followed two years later and the name of the firm changed to Rovio (bonfire in Finnish). The team focused on developing games for emerging mobile platforms, but effort after effort saw little commercial success.

Finally, on their 52nd try, Angry Birds lit the Rovio bonfire, quickly becoming one of the biggest mobile games and entertainment brand success stories of all time. Rovio's arc of

success had begun on the hilarious premise of players using a slingshot to launch red birds at green pigs in and around various structures. As players destroy the pigs and advance through the game, new types of birds, some with special abilities, become available. The madness proceeds. Praised by critics for its success at leveraging addictive gameplay for all age groups and delivering visual and contextual humor at a low price point, the Angry Birds brand turned Rovio into a profitable franchise.

As the brand grew stronger, Rovio began to step beyond mobile gaming, offering Angry Birds plush toys, soon to be followed by a range of licensed products. By 2013, the Angry Birds Toons animated feature was streaming on its own channel inside the game. The Angry Birds 2 game followed in 2015 - bigger, badder, birdier than the original. The big screen came next in



iSwii by Angry Birds is a one-of-a-kind interactive retail and café experience where entire families can immerse themselves in the world of Angry Birds. *Image courtesy Rovio*



One of Rovio's recent forays into the world of LBE was with Topgolf, a driving range game with electronically-tracked golf balls.

2016 with the worldwide theatrical release of the Angry Birds Movie, distinguished as the first film based on a mobile game IP. Two years later, parent company Rovio had achieved 4 billion downloads of its mobile games. In 2019 the Angry Birds Movie 2 was released; it quickly became the highest-rated video game movie on Rotten Tomatoes and is featured on Netflix.

LBE collaborations

“Rovio’s focus has been on making the Angry Birds world more and more accessible to our fans of all ages,” says Katri Chacona, Head of Brand Licensing for Rovio Entertainment. “The massive popularity of the brand created opportunities to work with partners on other family-friendly and profit-making efforts. In recent years we have been growing those partnerships into licensed LBE projects [Location-Based Entertainment], which we see as a key pillar for our future growth and success.”

One of Rovio’s recent forays into the world of LBE was with Topgolf, a driving range game with electronically-tracked golf balls which is currently available in more than 50 locations in the USA and also in Scotland, Germany, Thailand and the UAE. Angry Birds at Topgolf allows players to virtually harness the power of the characters and, using their golf skills, smash down structures with birdies (golf balls), defeat the pigs and earn points in the process. “It was our first effort to create an experience that combines digital and physical, which also feels exciting and personal,” Chacona says. “The Topgolf team was a joy to work with; they were as concerned as we were to properly

represent and protect the brand. So much work had to be done to perfect the smallest details and elements.”

Topgolf proved to be an ideal partner, as the two firms worked together to create high quality experiences for all ages that involve joy, physical activity, the sense of accomplishment and victory. “Delightful destruction and humor are at the core of Angry Birds,” says Chacona. “With Topgolf we preserve and promote that core while bringing families together, generating laughter and viral moments that people remember for years.”

Strategic alliances have helped fuel the fires of growth. For a number of years, Rovio worked with consultant George Wade and his company Bay Laurel Advisors on various endeavors, including building a new LBE strategy, and identifying appropriate licensing partners (such as Topgolf). In 2020, IMG was appointed as an exclusive agent for Angry Birds in consumer products and LBE licensing to further grow the business. Explosive success has followed, as the Angry Birds IP can now be found on skateboards, Mercedes Benz E-Class consoles, branded sodas, sports environments and hospitality facilities.

New markets, platforms and merchandise

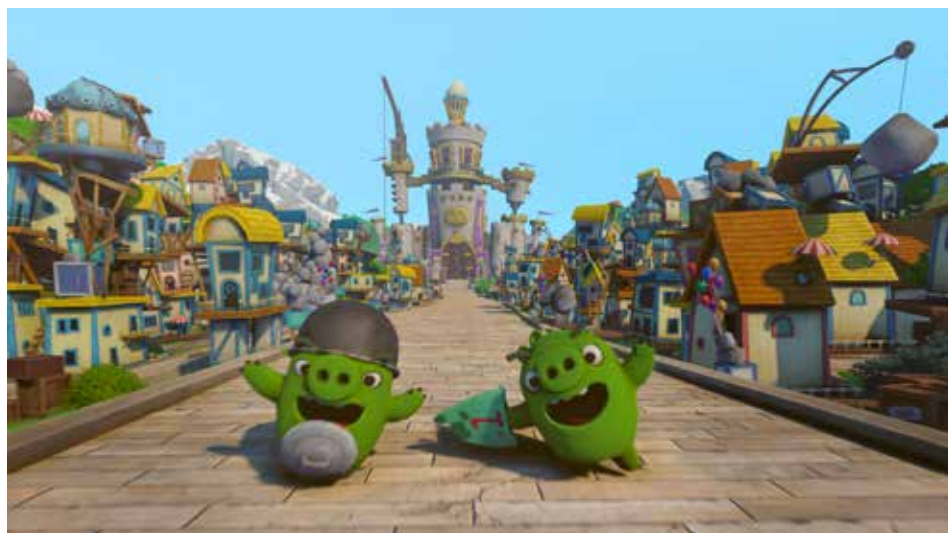
Recently opened in Flushing, New York, iSwii by Angry Birds is a one-of-a-kind interactive retail and café experience where entire families can immerse themselves in the world of Angry Birds. “This was something entirely new for us,” Chacona says. “We have the one site in New York and would love to grow into

new markets.” The 3,300-square-foot café features a collection of Instagrammable NYC-themed statues outside the entrance, a bright mural ceiling with Angry Birds graphics, a vibrant terrazzo counter and flooring resembling dessert sprinkles. Additional unique Angry Birds-themed elements include nest-like wicker and hanging chairs, bird of paradise graphic wall coverings, and tropical plants on the shelves where baby bird hatchlings wander around. The menu is filled with treats based on the brand’s characters. Baristas offer handcrafted beverages while guests enjoy unique games and adventures filled with their favorite Angry Birds and Bad Piggies. And of course, a variety of branded merchandise is available to purchase and take home.

A brand like Angry Birds offers multiple opportunities for licensed partnerships that can zoom in to specific parts of the brand’s universe and create new content off of existing characters and storylines – content streaming deals with Netflix

and Amazon, music licensing, LBE partnerships, merchandise, attractions and rides in theme parks - possibilities abound. “The café is just one of many great ways to present our brand in a very different way, to create a more immersive experience through LBE partnerships,” Chacona explains. “Have a new idea? We are always open to new ideas and partnerships, always looking for where it makes sense, finding and leveraging where there is a natural connection. The key is finding the right partners with the right project.”

A call from Vienna-based Attraktion! led to discussions, a partnership and a deal to create an Angry Birds game option for their new Playneo immersive game installations. “We were looking for IP that would work well for kids and adults in our Playneo installations,” says Markus Beyr, CEO of Attraktion! “Very few IPs work for both, but we knew Angry Birds was very popular across all ages.”



Angry Birds: Pigvasion combines the Angry Birds IP with the PlayNeo technology from Attraktion!
Top Right: Katri Chacona, Head of Brand Licensing for Rovio Entertainment. Bottom left: Markus Beyr, CEO of Attraktion!

Typically set up in a square or trapezoidal form with four to nine players and one side open for spectator viewing, Playneo Play Cabanas feature a proprietary positioning system, which Attraktion! & Playoke (daughter company of Attraktion!) developed during the pandemic. A larger 360-degree version can allow dozens to play at the same time. “Our new system works in any size space, tracking in the 3D environment rather than off the screen,” says Beyr. “This allows for more freedom and more complex installations in the future, like large walk-through experiences.”

Foreseen primarily as ticketed attractions, Playneo installations will offer outstanding audio, video and gaming content. “Watching the Angry Birds movies, we didn’t want mobile game level sound and graphics, but rather wanted to offer cinematic quality for the players,” Beyr explains. “With a lot of help from the Rovio team, we were able to create a high quality Angry Birds game for Playneo in one year. Their team was very positive, excited about creating this game. We never ran into roadblocks on this project, only solutions. They are an amazing licensing partner, very dedicated to going into every detail.”

As a new product, Playneo’s cabanas are already in locations worldwide, their owners and players hungry for new and exciting content. The new game debuted to the industry in September 2023 at IAAPA Expo Europe in Vienna as Angry Birds: Pigvasion; beginning in October, it will be deployed to every existing site and be included on all new Playneo installations.

Testament to the popularity and soaring potential of Angry Birds, Sega recently purchased Rovio for \$776 million. Beyond

the beloved brand, Rovio’s talented team offers an efficient infrastructure for developing and publishing mobile games.

“Finding partners and projects that immerse our fans in the Angry Birds world keeps us busy, keeps us inspired,” Chacona says. “We want to offer people something a little crazy, a little bit bold. There are no limits to finding new ways to make people laugh and play together. We want to surprise; we want to bring big smiles. We want Angry Birds fans to be committing delightful destruction everywhere.”

Rovio Entertainment Corporation is a global mobile-first games company that creates, develops and publishes mobile games, which have been downloaded over 5 billion times. Rovio is best known for the global Angry Birds brand, which started as a popular mobile game in 2009, and has since evolved from games to various entertainment, animations and consumer products in brand licensing. Rovio has produced The Angry Birds Movie (2016), and its sequel, The Angry Birds Movie 2 was released in 2019. The company offers multiple mobile games and has eight game studios—one in Espoo (Finland), one in Stockholm (Sweden), one in Copenhagen (Denmark), one in Barcelona (Spain), two in Montreal and one in Toronto (Canada). The studios also include a subsidiary in Izmir (Turkey) called Ruby Games, which was acquired in 2021. Most of the employees are based in Finland where Rovio is headquartered. The company’s shares are listed on the main list of NASDAQ Helsinki stock exchange with the trading code ROVIO. Sega Europe Limited has acquired more than 90 percent of all Rovio’s shares and will delist the company from NASDAQ Helsinki stock exchange as soon as permitted under applicable laws. Visit www.rovio.com.



Gene Jeffers, former (2001-2013) TEA Executive Director, is currently serving as a Board member for the Greater San Gabriel Pomona Valleys American Red Cross and serves on the Board of the Historical Novel Society. He continues to write in a variety of genres. Based in Pasadena, Gene and his wife Carol (also a writer) look forward to traveling and spending more time with their two daughters, son-in-law and three grandchildren.



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Photo Courtesy of Silver Dollar City, Branson, Mo

Mysterious caverns, ghost pirates, a kraken, & the town drunk

Sally Dark Rides and Daniels Wood Land use Monterey history as an interactive dark ride adventure theme

by Joe Kleiman

In the early 1800s, a French privateer named Hipólito Bouchard was commissioned by the government of Argentina, newly independent of Spain, to attack Spanish colonies in the Americas. Among the towns sacked was what is now Monterey, California. In 1818, Bouchard landed one of his ships and began attacking the local Spanish garrison. By the time his crew entered the Presidio (the military headquarters), and replaced the Spanish flag with the Argentine one, the base was abandoned, apart from a single local drunk named Molina, who was promptly taken prisoner.

Thanks to a collaboration between Sally Dark Rides and Daniels Wood Land (DWL), Bouchard's tale lives on - reimaged as a supernatural pirate adventure in Treasure Hunt: The Ride, a state-of-the-art, interactive dark ride attraction that opened July 2023 on Monterey's legendary Cannery Row. This new, standalone attraction is just a few blocks from the renowned Monterey Bay Aquarium, which for nearly forty years has been the anchor and tourist magnet of the neighborhood. Cannery Row's profile is being further elevated as the aquarium is joined by a new generation of



The ride features interactive media, physical props, projection mapping, and rotating dark ride vehicles. All photos courtesy Sally Dark Rides



Detailed physical sets complement the media.



Ride vehicles rotate around sets and in front of interactive screens.

unique, theme park-caliber attractions, starting with Treasure Hunt: The Ride.

The Treasure Hunt team

Daniels Wood Land is a design and fabrication firm based in Paso Robles, California. DWL creates themed cabins and treehouses, shooting galleries, interactive props, themed sets and environments, animatronic characters, playgrounds, and chainsaw carvings for clients around the world. The company is the focus of the popular Animal Planet show “Redwood Kings.” DWL also designed and fabricated The San Francisco Dungeon with operator Merlin Entertainments, and the attraction ran from 2014 to 2019 on San Francisco’s Fisherman’s Wharf. The company recently expanded its scope, incorporating DWL Amusement LLC in 2021 to own and operate attractions, including Treasure Hunt: The Ride.

Sally Dark Rides, headquartered in Jacksonville, Florida, is a leading designer and provider of dark rides to theme parks worldwide. Recent projects include the rides “Uncharted” and “Sesame Street: Street Mission” (a TEA Thea Award recipient) at Spain’s PortAventura World; the series of JUSTICE LEAGUE: Battle for Metropolis dark rides at multiple Six Flags Parks (the California version of the ride was also honored with a Thea Award); and “VOLKANU: Quest for the Golden Idol” at Lost Island Theme Park in Iowa.

The two companies put together a dream team of creative suppliers to adapt the Bouchard story into an action-packed family ride. Gosetto supplied the ride vehicles. Techni-lux handled attraction lighting, creating an eerie sense of being in lost caverns. Targeting systems were provided by Alterface, an interactive technology specialist with many rides and attractions to their credit. Media production throughout the attraction was by Pure Imagination Studios. Techni-lux, Alterface and Pure Imagination all previously collaborated with Sally on the JUSTICE LEAGUE rides.

From shooting galleries to shooting dark rides

Cannery Row, made iconic by John Steinbeck’s classic novel of the same name, was once home to numerous sardine canneries, the last of which closed in 1973. The area began its transformation into a shopping and tourist destination in the 1950s and ‘60s, as the canneries began moving out. In 1984, Monterey Bay Aquarium, founded by Julie Packard, whose father was a co-founder of Hewlett-Packard, opened on the grounds of the Hovden Cannery, one of the oldest and largest sardine canneries on the west coast. A few smaller attractions, including escape rooms, laser tag, and a wax museum (now closed) have dotted the rest of Cannery Row.

The wax museum was in the basement of a shopping arcade that had repurposed the historic Monterey Bay Canning Company. “We had always wanted to do something there,” says Ron Daniels, President of Daniels Wood Land. “We recently built a couple of automated shooting galleries in some available storefronts – one gallery setting is under the ocean and the other is a carnival midway. We got a call from Cannery Row Company, the primary owner of real estate on Cannery Row and our landlord, informing us that the wax museum had closed and the space was available, and we jumped at it. We were thinking, ‘pirates and dark ride, but with a unique twist.’”

Since DWL had a sharp eye for storytelling and theming, but lacked experience with dark rides, Daniels reached out to John Wood, President and Chairman of Sally Dark Rides. “Our companies have known each other a long time,” explained Wood, “from both exhibiting at IAAPA Expo and at other industry events. This is not the first standalone attraction we’ve worked on, but Ron invited us to join as a partner, and we did extensive research, looking at annual attendance in the area, and determined it was well worth considering. Ron and the DWL team are enthusiastic about the project and it helps that they’re just down the highway from Monterey.” With the new partnership in place, the two main design firms were able to

work together without some of the budgetary constraints of a traditional contractor-client relationship.

The ride - Bouchard the pirate

In the ride, Bouchard becomes a pirate in the style of Hollywood films, with added supernatural elements. Helping lead visitors to the ride are an animatronic barker pirate (animatronics are a Sally specialty) and his parrot situated on a ship's mast in the center of the Cannery Row Marketplace, hawking the adventures that await. This Instagrammable bit of marketing also includes a many-tentacled kraken photo opp. Situated next to the ticketing booth and the stairway leading to the attraction, the pirate and kraken are visible from both the street entrance and two side entrances to the arcade.

The queue helps provide backstory for the dark ride experience to come. As the tale goes, Bouchard hid his fortune of plundered treasure hundreds of feet underground in recently discovered caverns, guarded by a kraken. To get there, guests will need to take an elevator 300 feet below Cannery Row. The entire queue experience, including the elevator preshow, lasts around fifteen minutes. According to Sally Chief Creative Officer Rich Hill, "The elevator plays an important role. In addition to presenting the backstory, it breaks up the queue and helps group guests for our six dark ride vehicles."

Inside, video screens on the sides and top of the room create the illusion of being in a large elevator shaft. A pneumatic floor supplied by Extreme Engineering sits below. A control lever and a phone are attached to the elevator side, incorporating real show controls into props. The elevator apparently fails to operate; the attendant calls a maintenance mechanic to fix the problem. Seen through the overhead "windows," the mechanic doesn't quite accomplish his job; the elevator falls hundreds of feet, crashing into the caverns below.

At this point, the far side of the elevator simulates collapsing, and animatronic figures of the town drunk, Molina, and his trusted donkey can be glimpsed in the caverns. Molina gives

more of the backstory, warning guests that Bouchard's ghost is lurking about.

The queue continues through a mineshaft before arriving at the loading station. Here, guests can insert Power-up Tokens (available for an extra charge) that give them a competitive scoring advantage during the ride. (Nowadays, similar upsell models are offered on a number of dark rides in various theme parks, but these usually require the purchase of a physical item such as a wristband, glove or wand, which Treasure Hunt does not.) Each of the four token stations on the load platform corresponds to a particular seat on the ride vehicle, and powers up the seat's accompanying Treasure Collector.

Alterface supplied the targeting system, which allows guests to shoot at targets on both physical props and real-time widescreen media, similar to the mixed targeting at a previous Sally-Alterface collaboration, "Justice League Invasion 3D" at Warner Bros. Movie World on Australia's Gold Coast. With a Power-up Token, guests increase the amount of treasure they can obtain, along with a rapid-fire ability that allows multiple shots while depressing the trigger. The real-time rendered video, combined with shooting-gallery-style props and the consistent movement of the vehicles, provides for a high variability of gameplay and repeatability. For an additional \$5, guests can purchase an unlimited, all-day ticket, which also allows access to a corridor for repeat rides, bypassing the preshow.

Molina acts as onscreen guide throughout the ride, but inevitably, something always goes terribly, terribly wrong. In the first scene, Molina teaches guests how to fire their pistols and aim at targets. Errant shots from guests cause barrels of gunpowder to explode, creating a torrent of water projected not only on the screen, but also on the floor of the room. A splash of water into the vehicle helps round out the 4D effect.

The water carries the guests to other caverns, where they are introduced to the ghost of Bouchard. Bouchard summons



Sally Dark Rides and Daniels Wood Land executives raise their mugs at the Grand Opening.

the kraken that has guarded the treasure for more than 200 years. Vehicles are sent down a corridor, shaped like the hull of a wrecked ship, with the animated tentacles of the kraken visible overhead, and finally come face to face with the image of Bouchard projected onto a mist screen. The final scene features a battle against Bouchard's undead crew, presented in skeleton form, with physical skeletons popping out from the ceiling just feet in front of guests, another example of physical props smoothly integrating with onscreen media.

Expanding the space through vehicle control

The custom dark ride vehicles allow for a controlled narrative experience. "One of the things that made that ride system such a good fit for this application," says Ron Daniels, "was the challenge of the space itself. In just sheer square footage, we were really pushing the envelope on how small a space you can put a ride into. The ride space, which encircles the lower level queue and elevator simulator, encompasses 60% of the attraction's total 7,575 square feet. With the ride itself being only four minutes long, the four-passenger vehicles feature variable speed and pointed rotation on a fixed track, directing riders' attention to particular elements in a scene. The vehicles go at high speed between scenes and then position themselves at a standstill or slowly moving in front of a screen, and this creates the illusion of the ride being longer than it actually is.

The story is presented through both physical props and large media screens, with media integration and ride control done

in-house by Sally. There are 20 Epson projectors throughout the attraction. The final product feels seamless, thanks to DWL's fabrication and prop construction skills harmonizing with Sally's expertise in dark ride design and animatronics.

A one-of-a-kind attraction, with a possibility for more
Treasure Hunt: The Ride signals a major evolution of Cannery Row by introducing a theme-park caliber attraction to the district. More local developments are on the way, including a top-tier flying theater attraction currently under construction nearby. With these new visitor experiences plus the usual complement of souvenir shops, restaurants and candy stores, Cannery Row is becoming a small-town equivalent to San Francisco's Fisherman's Wharf.

Ron Daniels and John Wood led a toast (family-friendly, with root beer instead of ale) to the gathered crowd of several hundred at the attraction's opening in July, joined by other DWL and Sally management, all decked out in pirate garb. In proper, pseudo-maritime tradition, they also christened the attraction by breaking a bottle on a fabricated kraken.

"Opportunities like this don't come around too often," says John Wood. "The partnerships and teamwork that developed as a result of Treasure Hunt: The Ride will not only help revitalize Cannery Row but also provide a new model of attraction development and ownership for the industry." •



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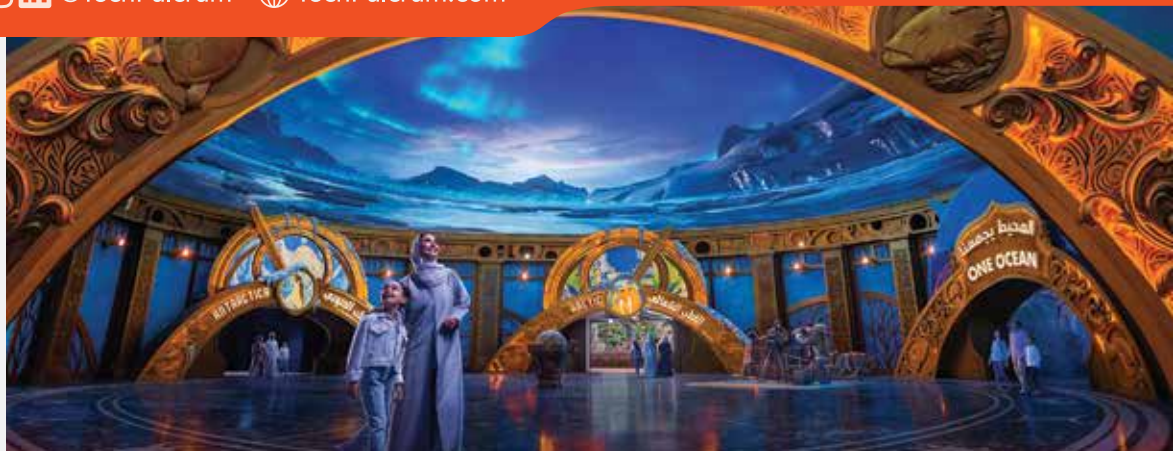
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Education front



Orlando's industry leaders enrich Themed Experience curriculum

by Peter Weishar, Professor of Themed Experience; Program Director, Themed Experience MS Degree and MFA Track, University of Central Florida (UCF)

The UCF Themed Experience Graduate programs are fortunate to be in the international hub of the themed entertainment industry (Orlando). We have drawn on this local industry leadership resource to create an exceptional UCF Themed Experience Advisory Council. Here, several members of that Council share their thoughts on the future of themed experience and entertainment education. We are deeply appreciative of their contributions. – P.W.

Prof. Peter Weishar interviewed:

- Steve Birket, VP Birket Engineering; TEA Past President
- Mike West, President of Innovation West
- Cecil Magpuri, CEO Falcon's Beyond
- Patrick Brennan, VP Walt Disney Imagineering (retired); President, CastleArts
- Adora English, Director, Global Internal Communications at Universal Destinations & Experiences
- Denise Hatcher, Managing Director, AOA

Focused Themed Experience and Attraction degrees and programs are becoming quite popular in higher education. How do you see that impacting the future of our industry? Why do you think the time is right for these kinds of programs?

Steve Birket: Not so long ago there was no lighted path into this industry. No one knew what themed experience was, or that it existed outside the berm of a small number of inaccessible places. Today, themed experience intersects many markets and will continue to be more distributed. The work of academia, industry partnerships, make this possible.

Mike West: Students and young professionals need to understand that the complexities and parameters that beset today's global projects cannot be overstated. Good design is great, but good responsible design is a whole lot better...and more likely to get built!

Cecil Magpuri: The supply of knowledgeable workers must be there, and ready from the get-go. It's more efficient for companies to hire talent from these targeted programs because their learning curve isn't nearly as steep as someone with a degree in an unassociated discipline.

Patrick Brennan: The industry is evolving way beyond the traditional theme parks to a broader set of experiences. Escape

rooms, Meow Wolf, Sleep No More are a few examples. The public is supporting this evolution and there's a great need for cutting edge talent to support this growing industry.

Adora English: This is the perfect time for programs to be developed and to shift according to what the market needs both domestically and internationally. We have a lot of ground to make up as these programs did not exist so widely only a few years ago.

Tell us about interactions you have had with Themed Experience students at UCF that you have found to be particularly rewarding or impactful.

Birket: It is exciting to watch a student go through the curriculum, attend their portfolio reviews, networking events and thesis presentation, then get an email from them, and see their email came from their world-class themed experience developer address.

West: It's always gratifying to review UCF student portfolios. While the work itself is quite impressive, it's the unbridled enthusiasm the students convey about their future that speaks volumes about the program's positive impact, not only on their own lives, but the lives of every guest who will interact with the wild, whacky, wonderful creations the students will design and build in the future.

Magpuri: I was fortunate to be an adjunct instructor for themed experience students. I was impressed by everyone's passion and knowledge of the industry. It made it easy to talk deeply about our design process at Falcon's because I felt the students would get it. Falcon's even hired one of the students from the class, and she's flourishing as a designer.

English: There is nothing more rewarding than watching the UCF Themed Experience students present their final projects in front of a panel of esteemed industry leaders. The years of experience and top tier attractions represented by the panel are quite intimidating - but the students don't just rise to the occasion, they fly! For the panelists, they are reminded of the passion that brought them into themed entertainment in the first place, and walk away inspired by the students for weeks after.

Hatcher: The students at UCF have great passion for the industry. At AOA, we have hired many of these students as

interns. We have offered many full-time positions or have helped them find positions through our connections in our industry.

What qualities, skills and knowledge do you look for in a recent graduate applying to your organization?

West: All graduates will hit the streets having developed certain skills to one degree or another. It's how they intend to apply those skills that can make all the difference. Do they have the courage to fail? Do they see the mountain top and know they will have to work hard and climb to get there? Don't just tell me "I'm very creative." Give me the specifics on how you're going to use all that creativity in a practical, tangible way to ensure the success of the team, the project, and ultimately, the overall guest experience.

Brennan: First and foremost, ability, secondly, someone who thrives on collaboration and finally someone who likes to work hard.

English: We look for candidates who love themed entertainment as much as we do. They are curious, have solid work ethics, and have a sense of what it might take to get the job done. Someone comfortable with sharing ideas, speaking up in a group, and has powerful listening skills.

Hatcher: Students should have communication skills, understand teamwork and how to collaborate with individuals outside their own discipline, and be problem solvers/critical thinkers. They also need to understand how to establish relationships by building trust over time and providing value and great service to clients.

Tell us about your particular contribution of time and unique expertise to help shape the Themed Experience program at UCF.

West: As part of the Themed Experience Advisory Council, I worked directly with Peter and the University to assist in the development of the program, as well as participate in annual student portfolio reviews, and guest lecture. I also arranged the initial meeting with the executive leadership at Universal Creative. That meeting laid the groundwork for the UCF/ Universal Creative Lab, a collaboration where students gain on-site, and classroom experience

with top professionals from the company. I continue to work with Peter and Chris Oliver, V.P. of Engineering and Safety at Universal, on the develop of the program.

English: As the liaison between Universal Creative and UCF, it was my honor to help create student learning experiences with speakers who represent the best in the industry. A unique element of the UCF/Universal Creative Lab is the opportunity for students to learn on-location at Universal Orlando Resort. The sheer joy we witness by the students and speakers makes it one of the most rewarding professional experiences I have ever been part of.

Lastly, Universal Creative has hired many of the students either as interns or as full-time Team Members. Seeing them in the hallways, continuing to learn and excel is quite an incredible gift to all involved.

Hatcher: I help provide real world insights to help create and adapt the curriculum to the changing times. I also provided support for the development of the new Master of Science that was presented to the UCF Board of Trustees. We were successful and it provides further credibility to the great work done by UCF.

From the perspective of an industry professional and advisor to education, what would you like to see as next steps in the expansion and development of themed experience education?

Birket: Recently the UCF Themed Experience program added engineering disciplines as part of their study. I think there is room for industry business, marketing, and management discussions.

West: We need to make a more concentrated effort to expose themed experience education to younger people by introducing them to the wide variety of disciplines involved in creating guest experiences. This will not only help the young students; it will provide for a more diverse workforce in the future, one that will bring a whole new perspective to our industry.

Magpuri: The lines between hospitality and entertainment have become increasingly blurred. There's now focused attention on blending these experiences, so at the postsecondary education level, the same thing can be happening. Cross-departmental programs between hospitality and media is one example. Another is themed experience design and architecture.



Steve Birket



Patrick Brennan



Adora English



Denise Hatcher



Cecil Magpuri



Mike West

Brennan: I believe the program should continue to broaden its offerings, for example, Creative Producing. It should reach a broader pool of candidates both nationally and internationally. Possibly, it would be good to develop specialized undergraduate studies.

Hatcher: We need to do a better job as an industry to support universities and institutions to develop programs like UCF for the future. Immersive storytelling goes beyond theme parks now and more brands and developers need the expertise of the themed experience industry.

Any other thoughts to share?

Birket: I can't say enough good things about the work that you [Peter Weishar] and UCF are doing to illuminate new paths and new creativity into our great industry.

West: I was blessed early in my career at Walt Disney Imagineering to have worked side-by-side with the incredibly talented and selfless men and woman who literally launched the themed entertainment industry. I have always tried to honor their memory and mentoring by passing along what they so humbly taught me.

Magpuri: Working with the UCF faculty and leaders has been an amazing experience. They are kind, thoughtful, hard-working visionaries. I can't compliment them enough!

Brennan: Over the past 15 years, I've been working with you [Peter Weishar] as you have been developing this field of study. I have followed you from SCAD to Florida State and now here to UCF. My support for your work aligns perfectly with my own passion for the themed experience business. With 40-plus years professional experience, I see the benefits of UCF's graduate program in the heart of this amazing industry.

English: Knowing that you can apply most any talent or passion in the themed entertainment industry is a fairly new concept. My message? If you are an artist, engineer, architect, talented in technology, finance, marketing, project management, design, or any number of career choices, chances are that you can apply those skills every day in themed entertainment. And when things get stressful? A roller-coaster ride is only a few steps away! •

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Realizing the dreams

Scenario grows and expands to meet client and industry needs

interview by Martin Palicki

Well-known industry fabricator Scenario has played key roles in themed entertainment projects around the world. Owned by the Kajima Corporation, Scenario is part of a portfolio of leading construction and development companies with offices in the USA, China, Philippines, Thailand, Australia and Hong Kong. Scenario's USA division, led by Dan Moalli, is responsible for all projects in the Western Hemisphere, and the Asia Division, led by Tom Stapleton, runs projects in Asia and the Middle East. Dan and Tom report to CEO Rob Sirgiovanni.

Scenario recently announced the opening of their LA Studio in Los Angeles, California, expanding from Orlando in the North American market. The LA Studio will function as a design headquarters for the company, led by Steven Rambousek, Global Director of Design, and Natasha Wells, Director of Operations, as well as a team of designers, project managers, HR representatives, and financial services specialists.

Greg Senner, Scenario's Director of Project Development, leads the company's business development and estimating team, working to build and enhance relationships with industry professionals to expand awareness of Scenario's diverse capabilities and global reach. We spoke with Greg to learn more about the expansion and planned growth.

Some people think of Scenario as “the rockwork company” but you can do a lot more. What capabilities do you feel often get overlooked?

Yes! We do a whole lot more! One only has to look at our body of work for Universal, Disney, Warner Bros., and others, to understand that we are one of the world's premier show set fabricators, especially when it comes to the physical realization of the world's most iconic IPs. Our artisans, technicians, engineers, and designers are in high demand, and we provide design-assist services to architects and design studios. We offer independent project, program, and construction management services, even if we aren't a party to the fabrication or installation efforts. And our Launch division is re-writing the script on what it means to be a turnkey provider of attraction development.

Tell us more about Launch and your expansion.

With the Scenario LA Studio focusing on design and project management, we have shifted all US fabrication to our two Orlando locations. Combined, these facilities have over 175,000 square feet of shop, office, and storage space, allowing us to design, fabricate and stage scenic and thematic elements of any size.

The Launch division was born of a strategic partnership between OE Experiences and Scenario. Launch is a turnkey development service with a unique, innovative model, delivering business advisory, financial support, and construction management for all sizes and forms of location-based entertainment.

With the combination of OE Experiences' background in financial consulting and business management, and Scenario's decades of project and construction management expertise, Launch is uniquely qualified to bring experiential projects to life. Launch provides full-scale project development services, from blue-sky creative, business planning, project financing, design, and construction, through turnover to the operator.

We believe Launch sets the example for including all these services in a single, collaborative entity. Utilizing our collective expertise and industry connections, Launch enables us to form highly synergistic project teams by selecting partners best suited for a particular opportunity's goals. This affords clients something of great value to them: a combination of expertise, easy communication, and clear vision.

What benefits does focusing US manufacturing in Orlando provide to clients?

The primary benefit is lower overall project costs. But there are other benefits as well. Orlando's prominence in the experience economy has resulted in many of our clients relocating to or consolidating their global design departments there, making collaboration even easier. And as the number-one tourist destination in the USA, Orlando is readily accessible from



Greg Senner



Dan Moalli

many parts of the world. Many of our non-local clients extend their stays when they visit; they can enjoy all the region has to offer and get to know the industry better.

Being in Orlando also means we have access to a large, readily available pool of skilled artisans who help us create our work. Orlando's skilled labor pool has grown by over 200% in the last three years, and companies in our space have all continued to grow as a result.

How will the new Scenario LA Studio better position you to serve the themed entertainment industry?

Not only does productivity increase, but the volume of design, technical assist, and planning work we can take on also significantly increases. Our capabilities in these areas are easily scalable and the depth of experience our teams possess is vast. We are looking at projects right now where we can design the entirety of a location and manage fabrication within Scenario and across vetted industry partners. Being a single point of contact and providing a consistent design voice, style, and process is a huge benefit for our clients within the themed entertainment industry.

Aside from the strategic advantage across time zones, it is important to Scenario that we continue to be easily accessible to our clients across the US and around the world. The three-hour time window between California and Florida helps provide a level of communication consistency that is required today.

Tell us more about market trends and how Scenario is responding to them.

Scenario is at an exciting point in its growth. Orlando has become a focal point for the themed entertainment market in the US, with its attractive business climate and significant pipeline of future projects. Our ability to support creative teams with our large pool of technical designers has seen incredible growth, as Scenario's experience and expertise gets integrated into early-stage design and development, expediting project delivery timelines and managing project budgets more effectively. We are seeing increased demand for turnkey project development services. That's why we started Launch, leaning into Kajima's team of developers, our heritage of successful projects at any scale, and our partners' industry-leading consulting and design services.

We are also seeing growth in projects that replicate nature in outdoor spaces, in hospitality, entertainment, and commercial markets. This perfectly aligns with Scenario's capabilities as premier providers of rockwork and recreations of other natural elements like trees, water features and artificial foliage.

On the production side, we are always working to improve our project processes and equipment, as the demand to shorten project timelines increases. We have the fastest, most accurate rockwork system in the world. It translates large physical or virtual models into individual modules that retain the movement and fidelity of the rockwork design. Those modules



Scenario has been a part of over 20 Thea-honored projects. Photo courtesy Scenario



Scenario did fabrication work for the Thea-honored Warner Bros. World Abu Dhabi

are then exported directly into our 3-D fabrication machinery, creating individual “chips” or rebar sections, which are then assembled in the field like a giant puzzle. Our proprietary concrete mix is then “shot” onto the chips, carved by artisans, then painted. The entire process is 30% more efficient than traditional rockwork done in the field, while retaining the original creative intent. We are moving more and more into 3-D printing and production, and we are taking full advantage of having multiple production facilities across the world to balance our workload. At the moment, we have four shops working on a single project!

You are also going through a rebranding; what changes can your clients expect to see in the company?

Our rebranding is subtle and deliberate, packed with intention: “We are Scenario. We build the worlds storytellers imagine.” We will retain our iconic logo and will begin to roll out and announce new projects, products and people in the coming months.

We are intentionally adopting “A Kajima Corporation” as our tagline, acknowledging the gravitas and support of our parent company. As we grow our reputation to be more than just “The Rockwork Company,” leveraging Kajima’s contributions as an international general contractor assists focus and serves as an anchor to our roots. You’ll see an updated website launching soon that reflects the united efforts of our USA and Asia groups as one global

company. It will highlight our expanded capabilities and company philosophies. This will, of course, also affect our email addresses, so please update your contact database appropriately when the official announcement is made public.

Scenario frequently works on high-profile projects that you can’t always publicly disclose – but the company is also mentioned often in Thea Awards credits lists. What are some of your favorite Thea projects Scenario has worked on?

Yes, we have had the distinct privilege of contributing to nearly 20 Thea Award-recognized projects since 2003. Of these, my favorites are Star Wars: Galaxy’s Edge (Disneyland, 2020), Star Wars: Rise of the Resistance (Disneyland, 2021), Super Nintendo World, (Universal Studios Japan, 2022), Pirates of the Caribbean: Battle for the Sunken Treasure, (Shanghai Disneyland, 2017), and Warner Bros. World Abu Dhabi (UAE, 2020).

How are you positioning Scenario for the future?

We see increasing discussion on this topic every day. AI, VR, AR, gamification, real-time customization of immersive experiences are all being projected as frontrunners for where the industry is heading. Scenario is fortunate that we have such a wide variety of career backgrounds and personal interests within the industry that help us to stay on top of these trends.

But I also think it is important to maintain relationships with our trusted partners and vendors, benefiting from their expertise when we collaborate on projects. We are currently designing a project that integrates audio, visual, and haptics within a themed restaurant on a cruise ship. It requires high levels of integration coupled with deep understanding of the unique requirements of a maritime environment. It’s these kinds of projects that keep Scenario evolving as a major competitor across market sectors.

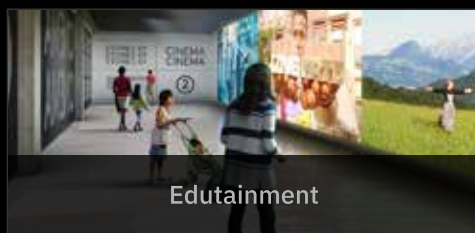
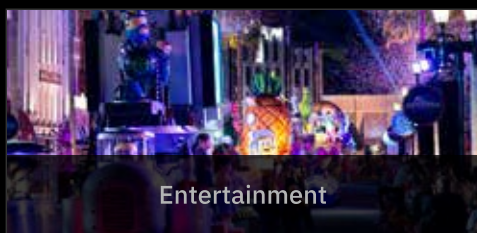
Creating these experiences - even if purely digital - still requires design, integration, and management, which Scenario is amply qualified for. There is additional good news in that themed environments, rockwork, IP characters and IP-based attractions are all still very much in demand. People still want to be transported to other times and places, and Scenario has proven time and again our robust abilities to deliver the elements that make this possible. Scenario builds moments guests remember for a lifetime.

Scenario will continue to build on its global presence throughout the coming years, leaning into its ability to produce work in the USA, Middle East, and Europe, to manage projects of any size, anywhere in the world. We will continue expanding our capabilities as a turnkey developer of attractions, resorts, corporate, and cultural projects across a broad spectrum of creative inspiration. We will continue fostering relationships with industry partners. We will explore new ways to collaborate in markets where we do not yet have a physical presence. In short, we will always, always, always be in quest of ways to improve our performance, our workplace culture, and our ability to “Build Worlds That Storytellers Imagine.” •

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Sound & media ecosystems

A holistic approach to the audiovisual experience

by Mark Mayfield, Director, Cinema & Entertainment Marketing, Q-SYS division of QSC, LLC.

Of the many options for out-of-home entertainment, theme parks have always been at the forefront of innovation. Over the years, they have evolved to offer immersive, multi-sensory experiences that transport visitors to fantastical worlds. Especially in the past 10 years or so, the bar has constantly been lifted to meet guest expectations and remain competitive.

“There’s intense competition from cinemas, sports venues, and big-name concert events,” says Scott Kalarchik, Business Development Manager, Entertainment & Hospitality, for the Q-SYS division of QSC, LLC, and a colleague of this writer. “Themed environment creators have responded with amazing, experiential destinations that allow patrons to truly escape into another world, even for just a little while.” Much of this depends on the use of audiovisual technology, and Q-SYS provides an extensive portfolio of solutions for storytellers and creators of all kinds of immersive experiences.

The heart of AV systems in theme parks

A truly immersive audiovisual experience requires that the sonic and visual elements are seamlessly delivered where and when they need to be heard and seen. Delivering these

sound- and video-scapes relies on an entire system that works together with technologies from a variety of suppliers. Today, many theme park operators look to the Q-SYS platform and its expanding ecosystem of partners to provide that holistic experience.

Q-SYS, developed by leading audio manufacturer QSC, is a highly versatile audio, video, and control platform. Q-SYS has become the backbone of AV systems in many theme parks for several reasons:

It’s totally scalable: Theme parks come in all sizes, from small local parks to massive international attractions. Because it is software-based, Q-SYS scalability allows for tailored solutions, ensuring that audio remains clear and consistent, regardless of the park’s current size or plans for future expansion.

It can be used for a multitude of applications: Q-SYS is widely flexible, allowing designers to adapt audio systems to various environments within the park. Whether it’s an indoor dark ride, an outdoor roller coaster, or a live entertainment show, Q-SYS can be configured to provide a high-quality audio experience.

Plugins – Keys to system flexibility

Q-SYS plugins enable simple integration of third-party software, services, and hardware from technology providers around the globe. All of these plugins are available directly from within Q-SYS Designer software, which is free. Here are just a few of the plug-ins available:

Digital Signage Control

Designed exclusively for digital signage, BrightSign’s purpose-built OS delivers complete signage capabilities and Full HD and true 4K HDR video quality with a dependable solid-state platform. The BrightSign Q-SYS Plugin offers Control Script Mode and Custom Mode. Control Script Mode provides the ability to see the list of files on the player, select from the files, and make use of transport controls that enable manually or automatically showing the correct signage content. Custom Mode allows for



monitoring of the player and up to 100 custom UDP commands that can be sent directly to the player.

Lighting and Show Control

CueCore2 from Visual Productions is a compact form-factor lighting controller for semi-permanent installations and architectural lighting. Designed for nonstop operation, the CueCore2 has no moving parts; the unit is completely solid-state, which allows lighting engineers to ‘fit and forget.’ Although it is bundled with various supporting software tools, once programmed, the CueCore2 can operate completely standalone. It will play back lighting shows, static scenes and dynamic effects through its two DMX-512 universes. The unit can be programmed to respond to a variety of incoming protocols or scheduled to time or day.



It enables centralized or distributed control: One of the key features of Q-SYS is its centralized control. Technical staff can manage and monitor audio and video systems from a single touchscreen controller in a central control room, or from anywhere with a network connection. And it's not limited to Q-SYS components; the Q-SYS Platform includes an ever-expanding catalog of plugins to enable control of many other technologies that are essential to the patron experience (see sidebar).



Fortress Melbourne. All photos courtesy of Q-SYS

broadcast studio purpose-built for esports tournaments. There's also a huge theme-restaurant/tavern, multiple party and event spaces, two licensed bars, VIP video game booths, and board game areas. Q-SYS enables a comprehensive control system that touches on every subsystem of the venue, including lighting and environmental as well as automating such elements as movie nights, corporate games, game state graphics, triggering and more.

It's networked: Q-SYS operates on a networked AV over IP platform, which means that audio and video can be sent and received across vast distances without signal degradation. This is crucial in theme parks where AV must cover large areas.

Integration with other systems: Q-SYS can seamlessly integrate with other systems and technologies within the park, including lighting, special effects, and ride and show control systems.

Gaming and eSports at Fortress Melbourne

In Melbourne, Australia, Fortress Melbourne, a games culture and entertainment venue, features a 200-seat arena and live

Gaming and eSports are exploding categories for out-of-home entertainment, and patrons expect ever increasing new experiences and innovation. "Q-SYS allows us to deliver robust and scalable control solutions, with the ability to say 'yes' to pretty much anything the client asks of us," explains Adrian Davis, Senior Business Development Manager of The Avit Group, the contractor who implemented the system expansion for their client. "Because Fortress likes to push the boundaries of technology for end-user and client experience, Q-SYS is a perfect fit."

article continues on following page

Several control plug-ins are available for ETC lighting products. The Q-SYS plugin package for Unison Mosaic consists of four .qplugx files and an example Q-SYS Designer file, which directly control Mosaic timelines, scenes and triggers. Each control plugin has the capacity to control up to 100 Mosaic objects. The Q-SYS ETC Unison Echo control plugin enables direct control of Echo presets, zones and sequences from a Q-SYS touch screen controller. With this plugin the user can control up to 16 Echo objects. The plugin for Unison Paradigm allows control of up to 100 Paradigm objects via UDP/IP or RS-232, including control of presets, channels, groups, macros and walls. It enables Q-SYS users to manage their lighting and AV controls from a single touchscreen.



Odd Harmonics Nexus brings Macros to Q-SYS, with no scripting required. The user may easily create timed sequences of Actions that allow automating

the Core. Nexus has an extensive library of Actions, each asking for the precise info needed to get the job done. Nexus gives you the flexibility to program while remaining online, without skipping a beat. It is also possible to load a new Nexus database without the need to push a Core file or reload a script.

Forward Thinking Designs offers many plugins for the Q-SYS ecosystem, including FTD Onboard Player, an advanced GPS triggering and audio playback plugin. With support for circles, polygons, headings and multiple routes, it's a recommended solution for parades, tour buses, shuttles, ride vehicles, and other location-based applications, both onboard and offboard. Also, FTD Ottomater is a cue-based show control plugin for Q-SYS. Ottomater quickly and easily gives users control of any named component within their Q-SYS design allowing for ease of programming and flexibility in show design. This is ideal for both operator-controlled live performances and timecode based automated shows.



LEGOLAND Windsor

150-acre coverage at LEGOLAND Windsor

At LEGOLAND Windsor Resort in Berkshire, UK, the Q-SYS Platform handles all network audio and control for the park, including wide-area paging distribution, along with the background music for the retail shops, hotels and open areas, throughout the 150-acre site. “Our park is always evolving and growing, and it is important to have an AV solution that has the flexibility to scale along with it,” explains Mark Boyce, Innovations Manager at LEGOLAND Windsor Resort. “With Q-SYS, we’ve not only delivered well beyond what two systems were handling previously, but it has plenty of horsepower to continue growing alongside the park’s needs well into the future.”



Give Kids The World Village

In sync at GKTW Village

Give Kids The World Village is an 89-acre, storybook resort located in Kissimmee, Florida. It provides families of critically ill children with week-long, cost-free wish vacations. With 166 fairy-tale-themed guest rooms, accessible rides and attractions, the Q-SYS Platform controls automation, audio paths, critical timing sensors, and much more to help create an enchanting experience for families to bond and create new memories.

“We use a wide variety of Q-SYS products, including Core processors, NV Series video encoders/decoders, CX Series power amplifiers and a large number of Q-SYS loudspeakers,” says Ian Cole, chief innovation officer at Give Kids The World Village. “One of the ways that we use Q-SYS is to control automation. We have a number of rides and shows that have moments that are dependent on critical timing from sensors and other things. These sensors feed GPIO triggers back to the Q-SYS processor to play timed audio events.” The result? “It’s a bunch of technology working together, but it creates an emotional response that lets families bond and create a new memory,” he says.



Chimelong Ocean Kingdom’s Journey of Lights

Sophisticated solutions for Chimelong’s Journey of Lights

Every night on the island of Hengqin, in Zhuhai, China, visitors to the breathtaking Chimelong Ocean Kingdom theme park are treated to a spectacular night-time parade. Named “Journey of Lights,” the parade (honored in 2018 with a TEA Thea Award) represents a delicate meeting of art and technology. The Q-SYS Platform processes and routes every audio element from every float and triggers third-party visual controls while maintaining tight synchronization as each float crosses from one zone to the next.

The solution was devised by primary consultant Evan Hall, of Forward Thinking Designs, and utilizes Q-SYS to deliver audio and control for the individual floats as well as full integration with the parkwide audio system. As part of the show control system, Q-SYS enables show synchronization by supplying an overarching control function including an Alcorn McBride unit which is triggered by Q-SYS custom Lua scripting. “Q-SYS gives the team the flexibility to do whatever is needed, whenever it is needed. They didn’t have to go out and buy lots of music servers and control systems,” says Hall. •



Mark Mayfield is Director, Cinema & Entertainment Marketing for Q-SYS, a division of QSC, LLC. Mark has extensive experience in the Pro Audio, Cinema, and Pro AV industries, and is currently vice president of the International Cinema Technology Association. Visit www.q-sys.com

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Building the impossible

COST of Wisconsin blends art and engineering to help create new Gilder Center at AMNH
by Martin Palicki

It's rare that a building's design can become so immediately iconic – an attraction unto itself. Gaudi's Sagrada Familia in Barcelona comes to mind. It is a visual feast – a sculpture that takes the shape of a building. Many architecture critics are already claiming the same for the newly opened Gilder Center at the American Museum of Natural History (AMNH) in New York City. Officially named the Richard Gilder Center for Science, Education, and Innovation, the addition to AMNH is the icing on a very prestigious cake. AMNH boasted five million visitors in 2019 (the most recent year the TEA/AECOM Theme Index ranked museums). It is the ninth most-visited museum in the world, and in North America it is second only to the Metropolitan Museum of Art (also in New York City).

The Gilder Center is a 230,000 sq-ft addition that boasts 33 individual connections across four levels to 10 other

buildings on the AMNH campus. In addition to helping unify the museum, Gilder houses impressive exhibits including an insectarium, the Davis Family Butterfly Vivarium, new collection displays and the immersive Invisible Worlds experience, a projection-mapped environment that takes guests to scientific and natural realms nearly impossible to see under normal circumstances.

Also capturing attention, of course, is the building itself. Designed by Studio Gang, the building is curvaceous and flowing, or in architect-speak, it's nonrectilinear. The west-facing exterior features glass windows peeking out from undulating smooth pink granite forms. The 80-foot-tall interior atrium lobby, evocative of a canyon, is made from a material that coats nearly every surface, applied in novel ways. Openings into exhibit spaces and bridges spanning the atrium

are amorphous – no shape is repeated in the design. The finish is off-white, and although the primary material is concrete, the effect is organic, almost like looking at bone on a microscopic level, with its crevices and tendons stretching across the space.

The skills to build

Coming up with a design of this order requires very specific talents, but figuring out how to build it is another skill entirely. Construction manager and general contractor AECOM Tishman turned to contractor COST of Wisconsin to help create the building – and the construction means and methods. They tasked COST with a unique design-assist role. Instead of just taking plans and building them, COST played a critical part in the team determining – or assisting in – how the architect’s vision would be achieved.

Based in Jackson, Wisconsin with offices in Orlando, FL and Berryville, AR, COST has been providing theme and specialty construction services for projects around the world since 1957. Though their work can be seen in everything from commercial, recreational and residential environments, they are perhaps best known for their work in themed attraction spaces. In fact, the company was founded to create realistic animal habitats at the Milwaukee County Zoo at a time when animal enclosures were being reconceived to be less like cages and more like natural environments. COST is known for attention to detail in

its fabrication and recent projects include work on Lost Island Theme Park, Meow Wolf Convergence Station (Denver) and the Cincinnati Zoo: Hippo Cove, home to the world-famous hippo Fiona.

Gilder provided an opportunity for COST to showcase their skills beyond decorative theming, bringing together design, engineering, fabrication and artistry in new ways. “We were so excited to be part of the team creating this epic project that will be around for generations to come,” said Jeff Sheiber, VP of Sales for COST. “We are thankful the American Museum of Natural History, AECOM Tishman and Studio Gang trusted that we had the unique skillsets needed to achieve their vision.”

Fabrication innovation

The vision and mandate were clear: create a building with almost no straight lines or right angles where no shapes are repeated. Oh, and no visible seams either.

“The museum and designers knew the shape of what they wanted for the building, but they weren’t exactly sure how it could be done,” said COST of Wisconsin senior project manager Sergio Castro. “It was a real collaboration of minds between the engineering group, the museum, the construction managers and us at COST Inc.”



Above and Opposite: COST of Wisconsin used specialized shotcrete and rebar techniques to construct the interior and exterior walls of the Gilder Center at AMNH. All photos are courtesy of COST of Wisconsin

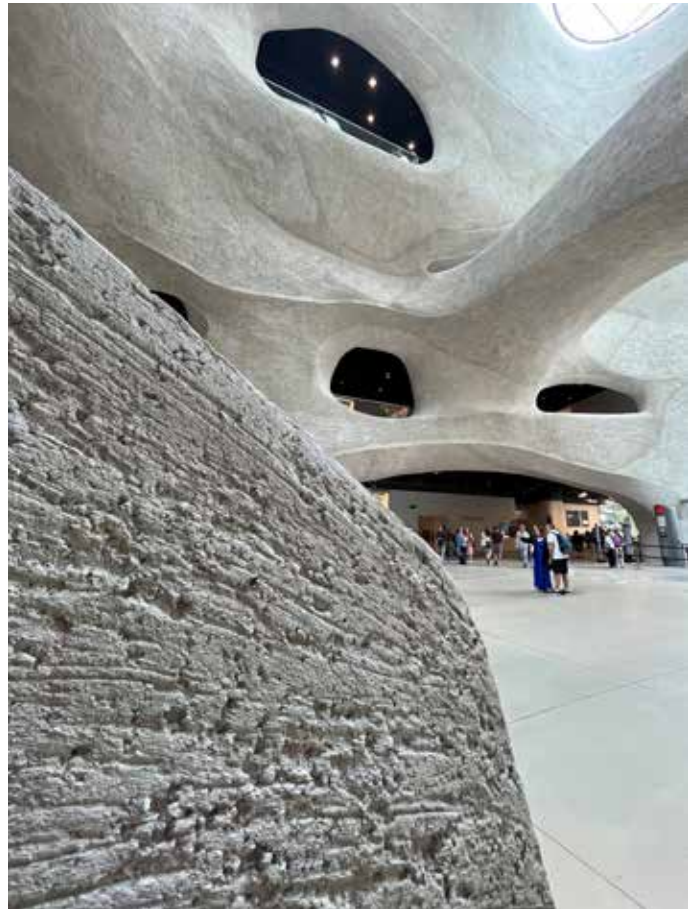
The design team determined that traditional formwork would not be appropriate for the project. That method typically relies on concrete being poured into plywood forms, which are difficult to make into smooth, rounded shapes. The solution was to use shotcrete, a well-established method of spraying a cementitious mixture onto a rebar cage. Shotcrete is commonly used for curved tunnel walls. It's also used for decorative rockwork, such as in theme parks or animal habitats. But the Gilder application had to function as a mix between the two. The shotcrete had to provide the structural support of a tunnel wall, as well as the aesthetic style and finish of decorative rockwork. COST's extensive experience with shotcrete was the perfect fit for the project.

As a proof-of-concept, COST fabricated a sample for the general contractor and Studio Gang to examine. "We created a section of the model at our shop to prove to the team that we were able to execute their vision," said Castro. "And it worked."

"We pride ourselves on being able to find new ways to approach problems and to look at the fabrication process in different ways," said Sheiber. "Gilder shows that with the right approach you can effectively combine constructability, longevity and aesthetics into one process."

An odyssey of rebar

To create the unique shapes of the structure, COST designed, fabricated and installed custom pipe forms and rebar. The pipe formwork acted as a basic guide and mounting point for rebar, which then got sprayed with shotcrete.



The walls have a unique texture and pigmentation.

Construction began with conventionally built concrete perimeter columns and floor slabs. Next, over 900 pipe forms were individually designed, fabricated in Wisconsin, identified, shipped and installed via standard surveying methods. The need for 453 tons of rebar (also fabricated in Wisconsin) was extracted from extensive 3D computer models; the rebar was tagged with identifying numbers that coincided with drawings created by COST's design team. Over 50 semi-trucks traveled from Wisconsin to Brooklyn where a staging yard was set up before pieces were brought on-site for installation.

"Space on the site in the middle of Manhattan was extremely limited," explained Castro. "The logistics behind bringing components to the site had to be precise. We didn't have room on-site to store materials, so items had to be brought from the staging yard in a coordinated fashion."

The pipes were anchored to the slabs, and each individual rebar piece was



COST also prefabricated GFRC planters and benches for the Vivarium.

attached to the pipes. Next, work began on the shotcrete application. Teams worked in sequence, as pipe and rebar sections were completed, shotcrete teams took over and the process continued.

Shotcrete like never before

COST used two different shotcrete mixes for Gilder. The first was a structure coat which gave the building structural stability. It was applied as the first layer over all rebar, as required by the engineer. The structure coat was followed by a finish coat that also produced additional structural qualities for the building but was not required for the building's engineering.

The application was performed via a shotcrete pump and a certified nozzleman in a preplanned shooting sequence, which was necessary to create the specific aesthetics of the building as required by Studio Gang. The thickness of the finish coat was checked prior to completion, to ensure there was not any additional unintended weight on the building. Once the correct thickness was confirmed, COST used a rough trowel technique to the finish surface to achieve its final look. The white color was achieved through the addition of Type I White cement to the mix. No paints or stains were introduced to the surface.

The exterior of the building was handled a bit differently. There are no perimeter columns for the exterior west-facing wall. Instead, COST fabricated a series of premade rebar panels, rather than individual pieces of rebar as was done for the interior. The shotcrete was applied traditionally and can be seen exposed on the inside of the wall. The exterior surface is covered in granite panels, hung onto metal plates that are embedded into the shotcrete.

“The granite panels had an extremely small tolerance for variance, so the prefab rebar panels we produced back in Wisconsin gave us more control over the geometry and allowed us to easily hang the exterior granite,” explained Castro.

The completed building opened May 4, 2023, and has already captivated museum guests and architecture aficionados alike.

“The finished product shows that COST knows rebar and knows shotcrete and we are able to do just about anything with them,” said Castro. “So often theme park professionals look at these tools and just think of pretty rockwork – which of course they are great for! But the capabilities far exceed beyond architectural theming and can be used in truly innovative ways to build the impossible.” •



The Gilder Center is a 230,000 sq-ft addition that boasts 33 individual connections across four levels to 10 other buildings on the AMNH campus.

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Björn Heerwagen

The new TEA Master talks theater, Imagineering and more
interview by Martin Palicki

Walt Disney Imagineer Björn Heerwagen is one of five TEA Masters recognized this year by the Themed Entertainment Association. Honoring industry professionals who have significantly and meaningfully contributed to the artistry and craft of themed entertainment, this year's slate of recipients were recognized at the TEA SATE North America event in Kansas City (October 11-14, 2023). Unable to attend in person, Björn was recently presented with his plaque at the TEA booth during the IAAPA Expo Europe. InPark Publisher Martin Palicki sat down to talk with Björn about his career and being recognized as a TEA Master.

How did you first get started in theater?

I started off in a youth theater in the UK when I was about twelve. I began as a singer and when my voice broke on stage in front of 900 people, I finished the song and went backstage – I've stayed backstage ever since. I joined the technical team and depending on the show we did we would shift around so you might do lighting or audio or costuming on a show.

School wasn't particularly helpful. I failed my SATs and got misdirected. I started a course in radio, radar and telecommunications. At the end of the first semester I failed my exams and at the end of the second set of exams my teacher said "You know, you ought to find something else to do!" So I went to theater school in London. Again we would be in different roles, doing set construction on one show and lighting on another.

In order to pay my way I went knocking on doors in West End theaters and I turned up at one theater one night to drop off my CV and a guy came out and said "Are you looking for work? Can you dress?" I thought "I can dress myself!" So I said yes, and that was my first professional job in the West End as a dresser, for about three weeks. Then I got a job as a stagehand and then a charge hand, which learns all of the stage hand positions. I went up in the flies and learned all those positions and was ultimately able to take over for any of the roles. That allowed me to gain the experience and really fall in love with the technical side of performance.

Can you talk about your transition into Disney?

I was working on a cruise ship as a technical stage manager and I saw the advertisement for EuroDisneyland (now called Disneyland Paris), applied and was hired. My first job was as an AV Technician for everything that moved, from Star Tours to the Steamboat to the Trains. If it moved, I helped fix it! Then



I started doing maintenance for the parade and central control room. From there I became technical director for the Wild West Show.

I applied for a job at the newly formed Disney Cruise Line and that was fantastic because I had done ships before, and so the combination of ships and themed entertainment together really appealed to me. I worked on the Disney Magic and the Disney Wonder as the senior technical production manager. I then went to Walt Disney Special Events group in London. Then I decided I wanted to come back to France as a Technical Director for Disney Village and the Wild West Show. About six months into that role, my boss from Cruise Line invited me to lunch and suggested I switch over to Walt Disney Imagineering for the new Walt Disney Studios Park in Paris. I had sort of a unique role in that I did all sorts of things that nobody else wanted to do: spare parts, training, all of the backroom pieces of what we need to do to hand over an attraction to park operations.

I worked in Spain for a few years and then came back to work on the expansion of the Studios Park as an Imagineer, working on Crush's Coaster, Cars Quatre Roues Rallye and The Twilight Zone Tower of Terror. I worked on the Lion King show production in Paris for a while and then returned to Disneyland Paris as a production manager, and close to the end of that time my manager asked me to be the show manager for Ratatouille: L'Aventure Toquée de Rémy and then the Experience Enhancement Program ahead of Disneyland Paris' twenty-fifth anniversary, which revisited and elevated eleven legacy attractions. From there, I became a Director of Show Design & Production for the expansion of Walt Disney Studios Park. It's been quite a varied career, but I've managed to continue learning and developing throughout.

Your skill set seems so wide and varied compared to many people in the industry.

I never found a niche, I never wanted to do just one thing. And I think that comes from my stage management training background – I've always been interested in the overall. I'm a little bit like the conductor of an orchestra; the benefit of the things I've learned is I can bring my experience to my team members to help them succeed. But I enjoy the cacophony of

everything going around me without focusing on one specific area. I'm passionate about the whole experience.

Mentorship is a big component of the TEA Masters program. What mentors have you had throughout your career?

I've had a couple. Bob Tracht is an important one. He taught me the compassion for and understanding the value of a good team. We don't work in the spotlight; we work backstage and success depends on the entire team. It's not about me.

Bob helped me to realize that it's all about the people. I don't build anything anymore (which breaks my heart, because I used to love going into shops), but it's the people who bring it together and it's the artisans with whom we work. We bring creative intent and idea; they bring art to make it real. We are the guides that help create it.

Also RK Kelley from Disney Cruise Line Entertainment was a big inspiration for me. She's the one who gave me the opportunity there and she's very passionate about what she does and very caring about people.

What does being a TEA Master mean to you?

Just like Walt Disney felt about his legacy, we have the same responsibility as Masters to help bring the younger generation along. My way of going about it is slightly different than everyone else. I think it's difficult to academize something which is a craft. So a lot of the discussions I have with NextGens are about how theater is the grassroots of what we do.

We have a duty to ensure upcoming professionals are given better opportunities than when we were younger. I was extremely fortunate to be in the youth theater I was in. I didn't finish my degree until I was 35. The academic path for me was difficult. But there are other ways to go about it.

So it's important for us as Masters to teach our craft, and it's important to me to not do it with rose-colored glasses - be realistic about it. You really have to work your way up in the industry.

At the same time we need to be open to the new generation and the ideas they bring - it goes back to how we work at Disney and how everyone has a voice at the table. Just because we may not agree with your idea or thought it doesn't mean you are being pushed aside, it's just not right for the moment.

What is your advice to people just starting out?

Go and get some basic experience in a provincial theater or help your friend set up their band in a club; go to a local arena and push some flight cases. A lot of the contacts we establish in the business are through that and you kind of trace your own future that way. Learn from the ground up, take some of the jobs people don't want to take and learn from it. It will

give you an appreciation for what people are doing. Go and get that practical experience and see if you have the passion for it. Understand you're going to be doing it for a long time, so you have to enjoy what you do. In essence, make sure you have a real passion and drive for what you do. The rest kind of comes naturally.

Why is TEA important to you and your career?

I think it's a great organization and we are trying to create a great network of people not only in the US but worldwide. It comes down to connections. I do a roundtable every two months with peers and we talk about it. I have a colleague who used to work with me at Disney and now is at Compagnie des Alpes. He does the same job as me, he just does it differently. It doesn't mean one of us is right or wrong. The idea of roundtables is for people to listen and learn from experiences and apply when you can. The roundtables are really about information sharing.

Themed entertainment is about so much more than just theme parks and TEA recognizes that. I was touched to see theatrical scenic painter Karen Trott be selected as a TEA Master this year also. Theater is really where we come from, and it's part of what we do.

What do you want your legacy to be?

For me it's about team effort and I try the best I can with my team and this award really is for my team, because they are making it happen. I do my best to keep the team together and focused.

I impart on my team to do very regular shop visits. I try and have a very collaborative experience with our vendors. We bring the creative intent, but they often help us execute it. I send my team frequently to their shops so we can see the process and progression. At the beginning I help my team negotiate contracts and then I see it through to onsite.

Honestly, I miss that middle bit of the collaborative experience. The connections with people in those workshops is what I miss most because it's tangible.

But that's part of what you're passing on to the next generation, right?

Yes of course. It was tough for me to give up, but there comes a point where you have to have faith in your team, because if you've done your job right, you need to guide them and then let them fly!

I'm very honored to get this recognition and really quite surprised. I have passion and I love what we do as a team. I'm extremely proud of the product and company I work for and proud of being an Imagineer. I'm also proud of where I came from and how I got to this point. And I wouldn't change a thing. •

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