

Mad Systems' advanced new technology creates AV++[®]



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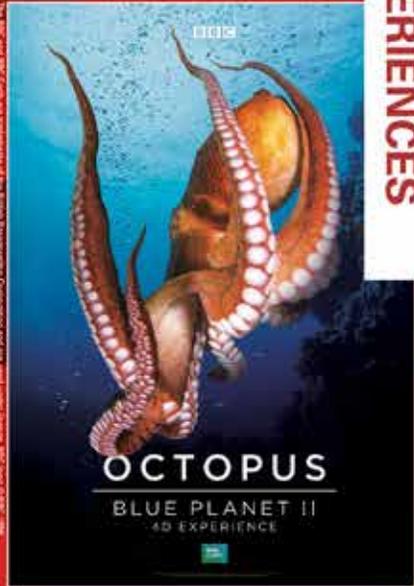
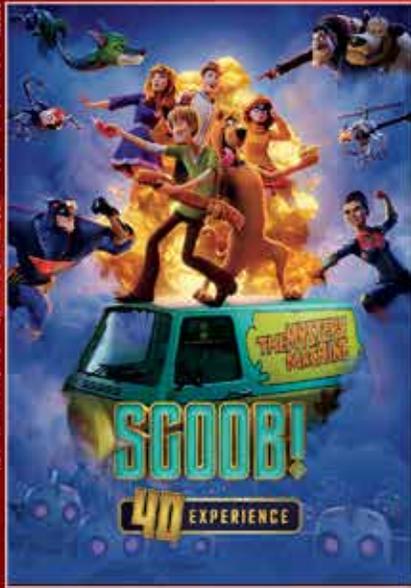
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COVER

Mad Systems' facial recognition technology is poised to revolutionize the theme park experience.

Photo courtesy of Mad Systems

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Smarter tech ushers in a lasting effect

**Joe Kleiman,
Senior Correspondent**



In the midst of the COVID pandemic, thousands of attractions around the world shifted their emphasis to technology-based mobile solutions for admissions and timed reservations, meal ordering, cashless transactions, and virtual queuing. This widespread implementation has shortened the amount of time it takes for the public to accept and anticipate digital solutions to what in the past have been human-based solutions.

Technology also plays a role in pandemic-era hygiene. In Long Beach, Aquarium of the Pacific's touchscreens were recently transformed to interactive touchless screens that recognize hand movement. At Disney California Adventure, guests can web-sling on an interactive dark ride with Spider-Man. The hand gestures used in the ride's gameplay also play another key factor: for a ride opened in the midst of a pandemic, there's no trigger for guest after guest to squeeze.

COVID accelerated deployment, but, in many places, the tech had already been implemented. When I booked a trip to Las Vegas – I did it all on my phone in a single app. I reserved the room, bought show tickets, and made dinner reservations all through the app. When we arrive in Vegas, we'll check in to our hotel with the app. The app will also act as our room key, and it will bring up QR codes to let us into the shows.

The resort is one of eleven in Vegas that use the same app. As we go through those properties, dine, shop, and visit their attractions, the app will allow us to charge expenses to our room. On the backend, it will also track our spending - an important application for any operator - and algorithms will make suggestions and provide discounts based on our experiences in real time.

Technology, though, is still just a tool. Creatives and dreamers continue to do what they always have - use it to take guests in new and unexpected directions. Where will they take it next?

Raised in San Diego on theme parks, zoos, and IMAX films, Joe has over two decades management experience in attractions, museums, and the performing arts. He has also extensively volunteered his time to zoos and animal rescue operations. Joe has been with InPark Magazine since 2011, becoming the publication's senior correspondent in 2021. Follow on twitter @themedreality.

Find voices that can help share stories for a global audience

**Martin Palicki,
Publisher**



I was at a performance this past summer of hit Broadway tunes. Unsurprisingly, there was an entire segment solely devoted to Disney musicals. It made me realize how much cultural capital this one organization holds, if not in most of the world, at least in the US.

This was reinforced as I experienced the new Harmonious and Enchantment shows at Walt Disney World for the resort's 50th anniversary. Each show relies heavily on the canon of Disney music that is recognized and enjoyed by so many around the world. People have strong emotional bonds to the music and the stories that they represent - as humans we are drawn to both story and music.

As an industry, we have a responsibility to tell a wide range of stories to audiences, so that more guests can find themselves reflected in what they see and hear. In addition to being the right thing to do, widening an audience base is also smart business sense. In the case of Harmonious, I think it is particularly wise for Disney to present songs in the language of the culture presented in the story. "Arabian Nights" from *Aladdin* is sung in Arabic; "Reflection" from *Mulan* is presented in Mandarin, etc.

Even parks, attractions and museums that aren't tied to multi-billion dollar media empires are still culturally relevant and meaningful to people. The audience might be smaller, but no less important. Those stories still have the power to inspire, comfort and also offend.

As we are the creators of worlds, environments and stories that hold so much value in our culture, we must all work hard to reflect the breadth of experiences represented by our audiences.

As you reflect on your own park, venue or project, consider which narratives might be missing. Seek out voices that can help tell those stories and engage with audiences on a whole new level.

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



Judith Rubin, Editor

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. Follow on twitter @judithrubin



Jordan Zauha, News Editor

Jordan is a freelance writer and narrative designer in the themed entertainment industry. He is a member of the inaugural cohort of the Theatre MFA - Themed Experience program at the University of Central Florida, a NextGen member of the Themed Entertainment Association (TEA) and an associate member of the Themed Experience & Attractions Academic Society (TEAAS).



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Loving the challenges and meeting them

guest editorial

by Tricia Rodriguez,
CEO and Director of Marketing, Mad Systems

At Mad Systems, we are grateful for our industry community and for the opportunities and challenges that community has brought us. And we do love a challenge.

Looking back on the development of our company and its achievements, we credit our relationships - clients trusting us to take on big challenges. And we credit our team - the right people with the right attitude, empowering us to succeed and excel. We're called upon to meet very high expectations, and we always do.

An early milestone was The Augusta Canal Discovery Center at Enterprise Mill in Augusta, Georgia, that opened in 2003. Designer Chris Chadbourne of Christopher Chadbourne & Assoc. brought us onto the team. The project gave us a chance to show our ability to create custom interactives - and set the pace for Mad Systems to be different from other AV companies.

Another amazing early project was Landry's Downtown Aquarium in Houston, Texas. We were brought on by Cuningham Group to create an immersive sound environment. This allowed us to really dive into the audio side of things and develop a unique approach to creating randomized audio that doesn't become monotonous.

The venerated Griffith Observatory reopened in 2006 after an extensive upgrade, and we were honored to be part of it. We produced a series of object theaters using a combination of techniques - including Pepper's Ghost - that illustrated some key astronomy figures and events. We collaborated closely with the media team to produce the orreries in the museum and to synchronize the mechanical action with the video. Our work brought a new level of precision and accuracy to our electro-mechanical interactive development.

We contributed to three landmark projects with the Museum of Science and Industry in Chicago between 2006 and 2011: U-505 Submarine Exhibit, YOU! The Experience and Science Storms. All three received Thea Awards. Science Storms was a real trendsetter. We are very proud of the acoustic and audio solutions we provided in that tricky atrium space and of our role in creating this early example of simplified access and control by using notebooks and phones, with no need for a custom device. We worked with Evidence Design on this project.

Outside of specific projects, Mad Systems has helped establish some best practices such as creating user friendly system interfaces and remote support services, empowering venues to run and maintain sophisticated systems even with limited staff.



Mad Systems built the exhibits to the left in this image for the Griffith Observatory, some of which utilize a Pepper's Ghost effect to illustrate key astronomy related facts. All photos courtesy of Mad Systems



Mad Systems developed a solution that randomizes various audio files to create an ever-changing track of background sounds for Landry's Downtown Aquarium in Houston, Texas.

We were delighted to be part of the team for Crayola IDEAWorks, a pioneering step taken by Crayola in its LBE initiative, and an amazing collaboration with the Franklin Institute and Agency808. This exhibit, which opened in 2021, relies on our QuickSilver® system, which turns everything you thought you knew about AV on its head. The wireless system that runs Crayola IDEAWorks represents a huge breakthrough for traveling exhibitions and the attractions industry in general.

Speaking of turning things on their heads, Mad Systems has been granted multiple patents for its recognition-based media delivery and for the underlying recognition technology used to track visitors' locations, which is part of the LookingGlass Concierge system. The recognition technology, which includes facial recognition, can also tailor interactive exhibits to cater to a guest's needs or preferences, while LookingGlass Concierge aims to personalize visitor services and delivery systems. We're very excited about the potential to revolutionize the guest experience in theme parks, museums and attractions.

I think we have been able to stay fresh and innovative because of the capabilities of our team, the projects we have worked on and the expectations of what we can deliver. With a quality and R&D driven culture, innovation is natural to us. We have both a team that has been with us for a long time and a culture of curiosity. That has set the pace for who we are. We want to be the best and to do projects that are fun and unique.

Mad Systems is helping the industry to see beyond the black box. The industry has become accustomed to the traditional idea of an AV system where you keep adding black boxes to make new things happen. But it's the software within the boxes that has been



Mad Systems provided technology solutions for the Science Storms exhibit at the Museum of Science and Industry in Chicago.

running our systems for a long time now. We're getting away from thinking in terms of boxes and getting to the heart of things. That will empower creatives, integrators and operators to tell stories that are more engaging and transcendent in what they can do for the guest experience. The new generation is demanding no less. The technology is here, and it's ready to help create the best experiences ever for all of our audiences. •••

Dinos are back

With “Frostbite,” SimEx-Iwerks brings popular Dino Island series to the flying theater

by Joe Kleiman

The flying theater has become a hugely popular attraction genre in its own right since its introduction 20 years ago, taking passengers on virtual aerial adventures in leisure venues throughout the world. Flying theaters are custom motion simulator experiences that give the sensation of flight via a combination of specialty cinema and special effects - and allowing guests’ feet to dangle. SimEx-Iwerks, a pioneer in the field, is producing a new film, *Frostbite - Dino Island III* for its FlyRide® flying theaters that introduces a new ride dynamic and continues one of the company’s signature ridefilm storylines.

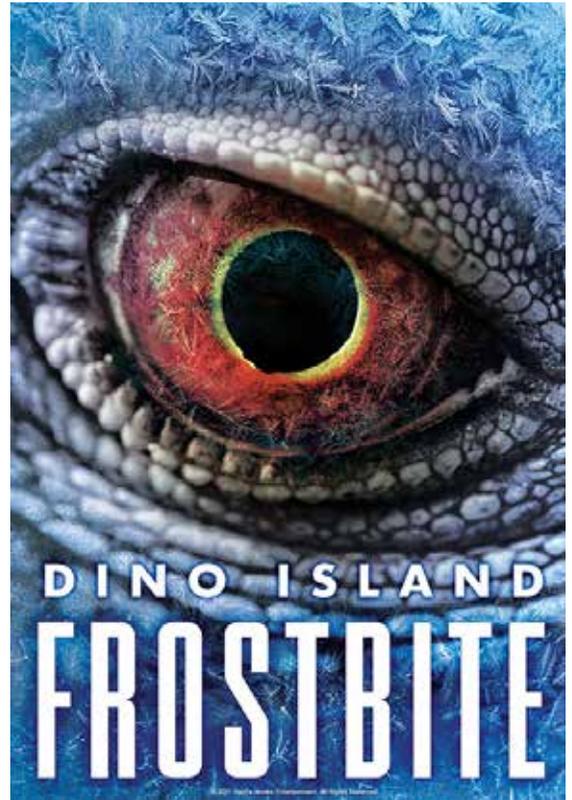
“In *Frostbite - Dino Island III*, guests explore a volcanic island where dinosaurs are frozen in ice caves,” says Mike Frueh, Senior Vice President, Licensing & Distribution at SimEx-Iwerks. “Their flying theater capsules are attached to a crane arm on an off-road electric vehicle. As they pass by the ice, they can see each dinosaur in detail, but then the volcano erupts, the ice melts, and as often happens on these kinds of ridefilms, havoc ensues.”

Frostbite - Dino Island III is the spiritual successor to the original *Dino Island* and *Dino Island 2*, the popularity and success of which, when they opened in the late 1990s, spurred a dramatic increase in the number of 3D and motion simulator theaters. “We’ve talked about making another *Dino Island* for over a decade,” says Frueh. “They’re among the most successful films we’ve produced. *Dino Island 2* pushed theaters into 3D. Likewise, we feel FlyRide® gives us new opportunities. This is not just flying over geographic landmarks. Rather, it’s an authentic, story-based experience.”

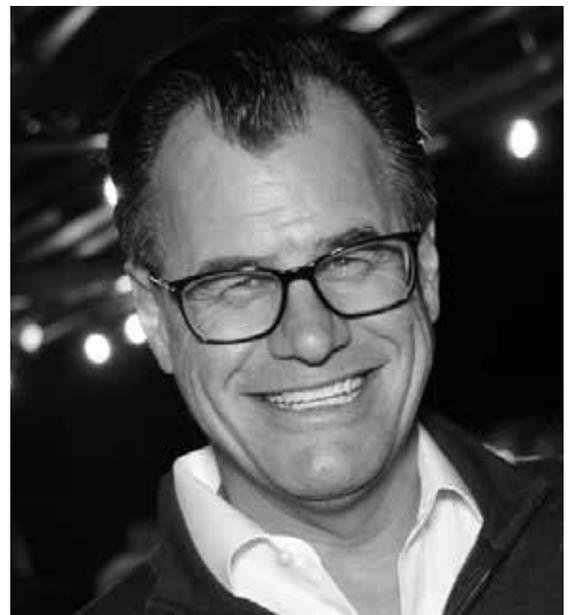
The company is building a new content library for flying theaters. “*Frostbite - Dino Island III* takes FlyRide® to the next level,” says Frueh. “It’s the start of creating a pipeline of unique shows for the system. Our goal is to build a large catalog of FlyRide® films, just as we did with our 4D Attractions and Motion Ride Theaters. Having great films available makes the decision to build a FlyRide more attractive to operators. Eventually, with unique content like *Frostbite - Dino Island III*, FlyRide® will become a global network of flying theaters.”

Richard Needham of SimEx-Iwerks is the creative producer on the project. Over the past few months in Toronto, he and his team created a virtual previz mockup of the experience using Epic Games’ Unreal Engine, mapping out the path of the ride and the direction the audience would face in each portion of the adventure. “We want this attraction to really showcase all the best attributes of flying theaters and 4D experiences,” says Needham, “from the ride dynamics to the environmental effects.”

The animation itself is being produced by animation firm Red Raion in high resolution at 60 frames per second. “We are extremely proud that SimEx-Iwerks has chosen Red Raion to produce the newest chapter of their



Frostbite - Dino Island III brings the popular dinosaur franchise to the FlyRide® flying theater. All photos courtesy of SimEx-Iwerks



Mike Frueh

successful *Dino Island* series,” says Valeria Rizzo, Business Development Director at Red Raion. “It’s not the first time we have worked together: our collaboration started several years ago when they chose our 5D movies for licensing, and we’ve also recently announced our partnership to provide them

with Red Raion’s growing catalog of licensed titles in fly format for their FlyRide® theaters.”

Once animation is complete, post-production and scoring will take place back in Toronto. The entire production cycle is expected to take another 12 months.

There are currently three operating FlyRide® theaters – at Agila Enchanted Kingdom in Laguna, Philippines; Beyond the Lens in Branson, Missouri; and Wilderness Resort in the Wisconsin Dells, Wisconsin. A third US location, Beyond the Lens in Pigeon Forge, Tennessee, is scheduled to open in 2022, and two new locations will open in China over the next two years. Branson and The Dells, both of which opened in 2020, supplemented their custom flying films over the holidays with SimEx-Iwerks’ attraction version of the Warner Bros. hit movie *The Polar Express*.

Frostbite - Dino Island III will offer a number of preshow options, from one that sets up the backstory to an educational one showcasing the various dinosaurs, appropriate for school groups. “The show will work as a standalone experience as well as a fantastic complement to dinosaur-themed special exhibits,” says Frueh. In order to make the film more accessible, SimEx-Iwerks will be offering it for a number of platforms in addition to FlyRide® – including 4D and motion ride theaters, along with flying theater systems from other companies. •••



The FlyRide® theater at the Wilderness Resort in the Wisconsin Dells.



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The Happy Wander

Alterface makes a quantum leap: The Wander

by Gene Jeffers

In his “Dictionary of Obscure Sorrows,” John Koenig coined the term “Werifesteria,” meaning to wander through the forest in search of new mysteries, adventures or discoveries. No map, no set path to follow. Only your instincts and interests driving you to choose this trail or that, to stop and ponder over something of interest, moment by moment building your own unique narrative for the day.

Imagine a future when designers and operators can offer that to guests, offer a seamless blend of online world and themed environment where guests roam effortlessly between the virtual and the real, each creating their own unique path through Arthurian legends or exploring discoveries in Louis Pasteur’s lab. Within such a magic forest of independent yet interlinked sensations and worlds, what dreams can be realized? What experiences will be possible? What stories can be created and treasured?

You don’t have to imagine any longer. That future is now. Well known for their SALTO™ show control system driving themed experiences worldwide, the mages of technology at Alterface have conjured The Wander, a smart and intuitive system for designing and activating comprehensive worlds within which visitors can play and explore at the same time.

Challenge accepted

“The venue-based attraction industry is always seeking new ways to give their guests deeper, richer experiences, from theme parks to museums and aquariums to branding centers. It has been asking for greater immersive capabilities, increased visitor personalization and connections to their visitors when not on site,” says Stéphane Bataille, CEO of Alterface. “We met with a number of designers and operators and discussed their hopes, their visions of the future and found they all had come to the same conclusion we had: that something was desperately needed



Photo courtesy of Alterface

to take venue-based attractions to the next step and beyond. We knew we had to develop the answer to their needs.”

The team’s evolving brief for The Wander soon became daunting: Build a system that would empower designers to intuitively design stories for multiple days of adventures and that could manage thousands of players at the same time. The user interface would have to be easy to master for a creative team familiar with classic design tools. It should be able to deploy story content on new or existing technology across a wide range of venues. The system must have the capability to power stations with a wide range of interactivity (live actors, physical puzzles, shooting on a screen, motion tracking, etc.). Activity logs of visitors, their special status, next adventures to discover, changes in their world since their last visit, history of their actions had to be maintained. Most important, it must “understand” the behavior of each visitor and improve their story as well as create additional content. In other words, create a highly compatible, totally flexible master storytelling engine.

“It was challenging,” admits Etienne Sainton, Head of Software Engineering and Product Manager at Alterface. “And now we have a system that ticks those boxes and more.”

An interactive storyteller

“This is a tool for every designer, a tool to empower creativity,” Battaille says. “We designed it as an open source product, compatible with existing and future show control systems, to ensure maximum flexibility for designers and operators. We designed it to go well beyond current software capabilities.”

Sainton emphasizes the uniqueness of the new system. “This is the first technology that ‘industrializes’ the creation of and manages the entire life of experiences, from design to implementation in a venue. The Wander is a software tool to create and activate stories in the mind of designers.” He notes a number of advances in communication and data management - such as 5G, AI processing and large-scale data management - have been essential for the creation of The Wander. “But it required more, much more than those improved technologies,” he says. “We studied concepts and techniques from the video game industry, which has had massive multiplayer online role-playing games for years. We had to offer designers and operators the means to adapt those approaches to physical environments.”

To accomplish this required addressing a myriad of physical/environmental limitations as well as developing standardized software layers and communication channels capable of managing an as-yet undefined range of interactive elements and ever-evolving content for each application. All while ensuring that the guest experience would be profitable for the operator.

“This had to be different, had to be more than what has already been done. Multiple activation and full-scale, LARP-styled interaction have already been created for themed venues or brand representation,” says Sainton. “Those attractions have to be manually written, played by actors who have to learn texts or clues. These complexities limit the scope of such adventures and

add significantly to the cost. We wanted to go beyond, to make it possible for designers to expand the worlds in which visitors explore and play, expand the interactions between players, expand the paths they can follow, the stories they can create. We wanted to increase the potential for guests to return again and again, continuing their story and growing with each new adventure and discovery.”

“We knew we had to offer a wide range of services to designers and clients, large or small,” Battaille adds. “Initial, small-scale applications will help establish proof of concept. But The Wander is completely scalable up to an entire theme park hosting thousands of visitors daily.” Barely “out of the box,” The Wander already is inspiring the industry to think of exciting applications for this new system.

“The Wander, as a concept and now as a product, is an interactive storyteller, a story engine,” Sainton says. “It is already changing the way designers and fabricators approach installations. It will alter the way guests experience an attraction, whether exploring Tut’s tomb as an archaeologist or fighting a battle against an alien enemy as a star soldier.”

Implementation with Storyland and Ubisoft

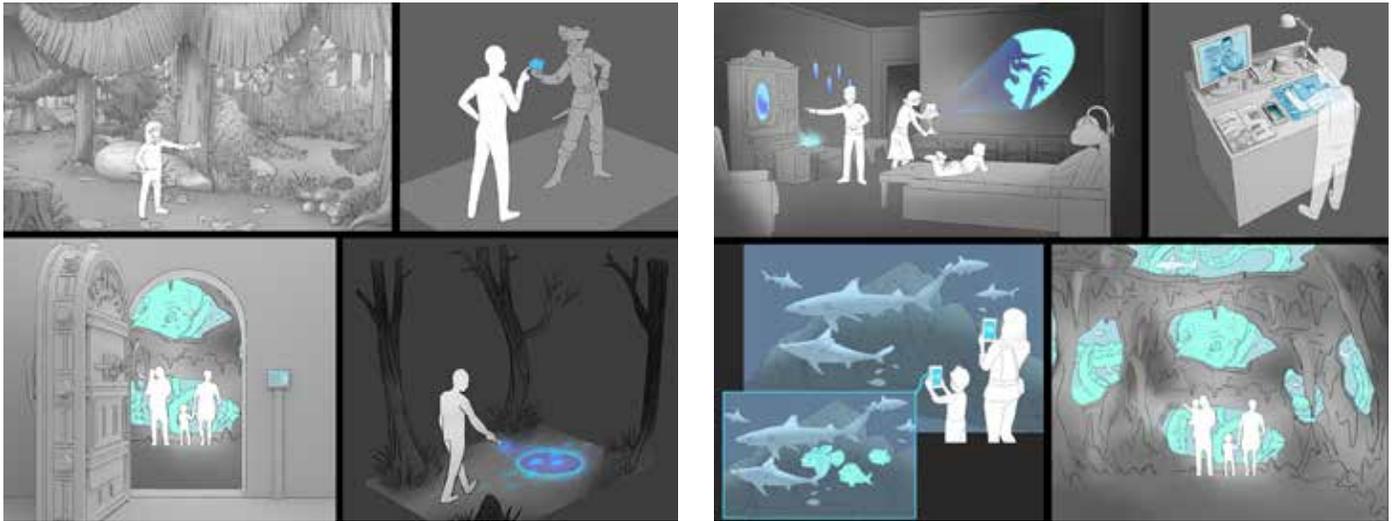
A number of discussions are underway to apply The Wander’s potential in a range of environments, from theme parks to FECs, from a small family zoo to a motorsport facility. “Each customer will be provided with a unique package tailored to their needs,” says Battaille. “This is an entirely new product, one that is incredibly flexible. We want to inspire designers, motivate operators. We want them to think about possibilities and create new experiences for guests. This is happening now!”

“We’d begun a conversation with Alterface at a conference,” says Ben Thompson, Storyland Studios Chief of Strategy and Head of International. “They had a new software package that would take venue-based, immersive experiences to entirely new levels. Would Storyland be interested in partnering up to create a concept?”

The answer was yes, of course.

“Here at Storyland we’ve been looking closely at the gaming market for some time, and sooner rather than later, how it will permeate the theme park world,” says Thompson. What has been missing thus far was the technology to make that happen. “We immediately saw that this new software engine from Alterface had the capability to efficiently enable the online gaming experience within a themed environment and that it could seamlessly integrate that experience with a virtual game itself,” Thompson says.

As the two companies discussed the potential of The Wander and what stories/IP to which it might be applied, it became clear that Ubisoft would be the ideal IP partner to approach. “The settings within Ubisoft’s game worlds are a perfect tapestry for physical world creation - whether historic, real-life, city-based, under the ocean, or on a different planet. For Storyland, it’s an



Artist renderings of possible scenes and interactive elements for The Wander.
Image courtesy of Storyland Studios and Ubisoft

incredibly exciting sandbox to play in,” Thompson says. It did not take long for the design firm and the gaming giant to agree on a partnership.

“Working together, Ubisoft and Storyland will be creating themed environments you can play. All thanks to Alterface, who developed this amazing technology and, equally important, made the introductions,” says Thompson. “After all, this is an industry based on relationships!”

In creating The Wander, Alterface has now made it possible for guests to explore a themed environment in a “Werfesterian” way, each guest creating a story that grows and becomes far greater than the sum of its parts.

“That is what we hope for, that creation of rich, fluid experiences within which guests can wander, immerse themselves, find new paths, create stories and be a part of a larger whole,” says Battaille with a smile. “We are just beginning to understand how far The Wander will take people into that magical blend of the virtual and the real. The opportunity for designers and clients to offer attractions in this new way is limited only by their imaginations. Three years ago when we first began to think about

what has now become The Wander, we wondered if we were crazy. Today, we see this is exactly what the attractions industry has been seeking for some time now. If they try it, if they test it, we know they will see even more potential for The Wander than we have imagined.”

Two showcases for The Wander in November 2021:
1) “Entertainment and Technologies to enhance Live Experience” seminar at the Belgian Pavilion at Expo 2020 Dubai, as part of Wallonia-Brussels week, Nov 6-12, including Stephane Battaille of Alterface as a presenter; 2) Alterface exhibit at the IAAPA Expo in Orlando (booth 2051), Nov 16-19 - contact in advance to set up an appointment. Visit alterface.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) are looking forward to traveling again and spending more post-COVID time with their two daughters, son-in-law and three grandchildren.



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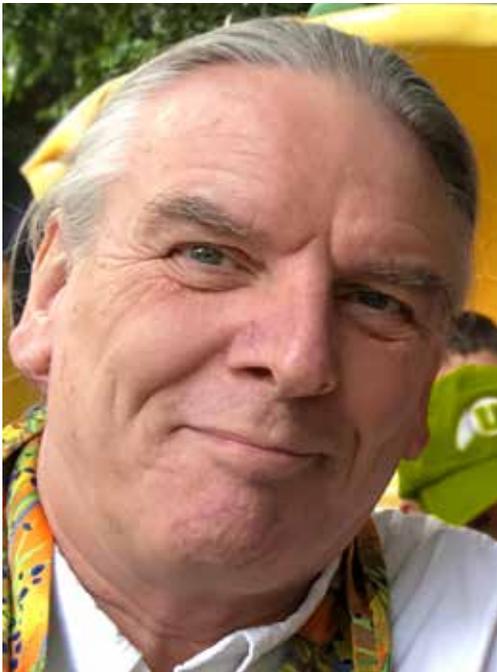
Leveraging the

Mad Systems' advanced new technology creates AV++®

by Michael Oliver

The personalized guest experience

“Facial Recognition can be used to personalize and improve the guest experience by a considerable factor, with a wide range of possible applications in the world of theme parks and attractions,” says Maris Ensing, Founder and Creative Technology Consultant of the AV company Mad Systems Inc., based in Orange, California. “You can make sure that people can’t lose their kids; you can make sure that they can find their friends; you can make sure that even if the kids do wander away they can’t leave the park. The benefits extend from security to point-of-sale, to retail, to food and beverage - to everything else that you might want to involve, including the exciting creative potential to produce personalized, immersive experiences on the cutting edge of enhanced reality, while at the same time not affecting visitor’s privacy.”



Maris Ensing

We spoke with Ensing not long after Mad Systems had garnered its second United States patent in less than a year, with a third patent that was granted and published on October 26th. In its official language, the first patent (#10,484,818) “covered systems and methods for providing location information about registered users based on facial recognition.” One of the possible things that can be done based on this technology is called LookingGlass Concierge, which “uses a secure (and private) form of facial recognition to help provide better customer service, and to make the stay of visitors to theme parks, museums and visitor centers even better.”

The second patent (#10,831,817) is titled ‘Systems and Methods for Generating Targeted Media Content’ and covers “the development of personalized media delivery and personalized interactive exhibits based on recognition technologies, including facial recognition, color recognition and license plate recognition with an option for correlation of cars, their drivers and their passengers, as well as transactions relating to the use of recognition systems.” This technology will enable public spaces to deliver media and implement exhibits, advertising and interactive solutions that match the interests, language preference, ADA needs or even purchasing habits of patrons in order to tailor people’s experiences.

Ensing also indicated that exploring this technology further has led to several more patents in the works, in the US, Europe, China, Australia and the Middle East.

Your face is your calling card

To understand how facial recognition technology can provide benefits to theme parks and their guests, it’s worth a moment to consider how this technology works in other settings - for example, walkthrough venues like museums. When a guest enters such a venue, he or she may want to register at a ticket window or perhaps self-register at a conveniently placed kiosk; in fact, the guest may have already registered online in advance from home. As part of this process, the guest provides a portrait or allows the system to capture an image, which will be translated into a series of encrypted vectors (no actual picture needs to be kept) and used for guest recognition as the guest moves through the venue. Other data elements can be included by the guest at this time: language preferences, specialized requirements due to hearing or vision issues, mobility issues (wheelchair bound, for example). All of these data points are stored and associated with the visitors’ encrypted equivalent of their pictures, enabling them to be recognized by the system as they proceed through the exhibits, addressed by name and have media and content delivered that are specifically tailored to the information, preferences and needs inputted in the registration process. Included

Right: Mad Systems facial recognition technologies can dramatically impact the guest theme park experience. *Photos courtesy of Mad Systems*

magic



Hello Jessica

Brandon is Here

Navigation

Show Times

Purchases

QuickPass

My Photos

Find My Party



Brandon



Serguei



Tricia

Find My Party

Friday March 15th, 20

Park Hours: 7am - 10:30pm

in this brief description are the basics of facial recognition: capturing a facial image - or the mathematical equivalent thereof - and attaching data points to the image, such that when the recognition system captures the facial image at any point at the venue, individual media is delivered to that guest.

How might this be applied to theme parks?

One of the issues for parks, big and small, would be whether a facial recognition system can be integrated into their pre-existing technologies. The answer is yes, provided that the pre-existing systems have the flexibility and allow for the level of control that are required to accomplish the client's goals. For example, if the client wants to be able to satisfy the language needs of a variety of guests, the system would need to have a server capable of shifting between audio tracks seamlessly while the presentation is running. As Ensing put it, "Provided the equipment is capable of providing the facilities that are required by the client, and provided that there is a command structure that allows us to activate those facilities, then we can use any system; we can integrate within an existing system and turn it into a system that is capable of being driven by recognition."

According to Ensing, the versatility, affordability and convenience of Mad's facial recognition system would far outperform competing, "non-facing" personalization technologies. "No badges or wristbands required, no batteries or charging systems, no need to collect and clean devices (particularly critical during the pandemic)," he says. And further, "unlike all of these other systems, you know when and for how long a visitor is actually looking at and near to an exhibit or display." Your face is your

calling card, your ticket, and the on-switch for personalized media delivery and a personalized experience.

Progressive deployment

Ensing outlined a template for gradually building up a system driven by facial recognition. For example, an operator may want to begin with a basic VIP line access function, maybe at an entry gate, a queue line or a parking lot. (Mad Systems proprietary license plate recognition technology allows for a guest to be associated with a license plate and its associated automobile.)

Another basic usage of such a system might be locating guests anywhere in the venue, such that people can easily locate family members or friends by consulting stations along the route to discover where they were last seen, for example, depending on how many cameras are deployed and where they are. (More cameras = more information.)

From here, a next step might be progressive wayfinding. Once the system knows the guest's destination, the guest can conveniently locate that destination by way of a digital signage system driven by facial recognition. (If the guest has indicated a language preference, the digital signage will, of course, appear in that language).

Timed tickets may be added to the system next, depending on the theme park's infrastructure - for example, the recognition system can alert the guest concerning how much time there is before a particular show begins, how long it will take the guest to arrive at the ticketed event and even warn them when they need to head there.



As a next step, retail might be integrated. By tracking guests' purchases, the operator can follow up with related offerings. Further, guests are not burdened with carrying purchases around the park; they can retrieve them at the end of the day, the recognition system having already associated the guest with the purchases. At restaurants, guests can be automatically recognized for their reservations, or the system can recognize where people are in a given restaurant and guide other members of the party there. These conveniences have the potential to increase per-cap spending.

Essentially, through personalized customer engagement and service, the technology promises the kinds of benefits every operator wants: longer (or shorter or even variable and controllable) dwell times, more repeat visits, increased per-cap spending, positive word-of-mouth. There are also potential savings in that fewer staff members might be required, for example, at entrance points, wayfinding locales and retail locations.

A different world

In today's industry where operational calendars have been curtailed and budgets and staff reduced, clients need to see a clear advantage in the re-investment choices they make. So, why invest in this new technology now? In addition to the likely return on investment, there are other reasons to consider. Yes, the technology, as Ensing put it, "is available; it is proven to work very well... it is where we are developmentally," but perhaps a more telling argument relates to where we are as a culture and where the theme park industry fits into that culture.

As Ensing points out, the world, and hence our market, has changed. While COVID-19 has accelerated a more widespread adoption of sophisticated technology, there is a fundamental change that pre-dates the pandemic: the manner in which we consume media and information. Consumers today can launch an application and tell the media providers what they will watch, listen to or play, rather than the other way around. Guests bring similar expectations with them to theme parks and attractions - they will base their leisure choices on these expectations.

Ensing's vision evolved watching young people (his grandkids) manipulating media, and it informed and influenced his work developing Mad Systems' facial recognition technologies and also the company's award-winning AV system, QuickSilver®. Working with QuickSilver® "makes you think about the possibilities that the new technology was offering." At the same time observing young consumers indicated what direction that technology would, or perhaps should, go and what its likely destination would be: personalized media delivery. This technology is not merely accepted by the young people now; it is their norm.

"They want the magic - they expect the magic. In fact, a lot of this, for them, isn't even 'magic' anymore - it's their daily reality," says Ensing. "Given the choice, 'I'll take the magic, thank you very much.'"

Where will creatives take this?

According to Ensing, "Creatives and designers must begin by accepting a basic premise: our new audience is not like our parents or our grandparents...our audience has changed; they expect a lot more. It begins by accepting that personalizing experiences really matters - and that one size does not fit all. I think that is a key ingredient for understanding why you want to use this kind of technology. Even beyond speaking about language differences and age differences, the point is that people should have the option to have tailored experiences.

"Once you are at the point of realizing that one size does not fit all, and you know that you want to have different experiences for different people, you might even want to consider having different versions for the same person, especially if your venue has multiple narratives or multiple conclusions available. With this technology, all of that suddenly becomes manageable."

AV integration and QuickSilver®

The facial recognition system developed by Mad Systems can be integrated into a variety of pre-existing systems, including Mad Systems' own sophisticated QuickSilver® AV system. [See "Mad Systems' Paradigm Shift," InPark issue #75.]

QuickSilver does not require facial recognition to operate; neither does facial recognition require QuickSilver - but the two together make for a dynamic pairing of cutting-edge technology that can be utilized by theme parks, just as it continues to be by museums, visitor centers and other venues. Nevertheless, the celebrated new Crayola IDEAworks traveling exhibit that premiered at the Franklin Institute in Philadelphia earlier this year relies on QuickSilver and basic RFID recognition technology; in fact, IDEAworks is seen by Ensing as something of a showcase for this unique approach to AV delivery that Mad characterizes as a "complete AV++® solution": a blend of AV and IT with the inherent capacity to update and modify ad infinitum. Mad Systems' oft-noted versatility is on full display here and lies at the heart of Mad Systems' latest technological advances.

The company's growing number of patents, its pioneering facial recognition and AV technology and its general success in multiple venues all tend to support Maris Ensing's contention: that Mad Systems has the tools, team and ingenuity to take theme parks and attractions to a new level. "We are trying to leverage technology in a different way, to create a different way to tell stories," says Ensing.

Call it science; call it technology; Ensing calls it "magic," and it is difficult to disagree with him. • • •



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.

Technology snapshot

DNP's new Smart Capture Photography System: modernizing selfies for the ultimate guest imaging experience

by David Paul Green

Meet DNP

DNP Imagingcomm America Corporation (DNP) is not a company that most people in the general public would be familiar with, but there is a good chance that if you have visited a theme park, amusement park, zoo, aquarium or sports arena you have seen or interacted with its products. The company is known for innovative photography products that engage guests and allow venue operators to extend their reach to become part of their guests' personal mementos and social media feeds.

Drew Temple, Technical Sales Manager for DNP, said, "If you're coming off the street, it's not a recognizable name brand, but DNP is the dominant provider of instant image capture photo printers, and we have continued to grow in that space."

Smart Capture is DNP's newest product designed for venues looking to leverage photo experiences. "Think about your favorite sporting event or favorite entertainment venue," Temple said. "People are already taking selfies and they're posting them on social media."

These social media posts seem to be replacing the photo print in some ways. "People aren't printing to their local Walmart or Shutterfly in order to see their photos like they used to in the 2000s," Temple said. "Instead, people are getting prints at events and during experiences. Think about going to see Santa, going to an event, going to a wedding: the concept of getting a photo print is so key and essential to that. With Smart Capture, we wanted to take that concept and look at different ways we can grow that technology. We wanted to leverage DNP's competencies and see how we could take our existing customer base and grow new business."

The Smart Capture Vision

"Our vision with Smart Capture," Temple continued, "is to create a more institutional setup that marketing and venue managers can utilize so that when the cameras are placed to capture something interesting - whether it's a beautiful overlook of the field, a team mascot, or something that's iconic - it allows everyone to get into the shot. The user would take their phone, scan a QR code or type in a 'text me a link.' When the link is delivered, their phone provides a live feed from the camera and they can pose themselves and take the photo. Then the photo is automatically delivered to their phone. What's exciting about this from a venue perspective is that the venue can actually create a custom overlay."



Photos can easily include logos and sponsorship messaging.
All photos courtesy of DNP

That custom overlay is the key to enhancing the relationship between a venue and its guests, putting the branding of the venue on every image, and thus increasing its social media presence through every guest share and re-share.

"For example," Temple said, "if I'm the venue marketing manager and I want to promote my brand plus a sponsor's brand, we can program the image that gets delivered to the user's phone to have a digital overlay with those brands included. When the user receives a great photo of them and their family, they'll want to share that experience, and those brands will be a part of it. They can easily put it up on Facebook, Instagram, Snapchat, email. We really made it very easy for people to share an experience and get pictures from angles they couldn't do with their phone, while providing marketing opportunities for our customers."

"The beauty for the venue," Temple continued, "is that it allows them to activate areas that they want to activate. So, if they want to put a camera by a certain area to drive traffic or they want to create additional promotional opportunities for their sponsorship partners, Smart Capture creates strong social currency. This gets people talking about their experience. It gets people posting on Facebook. And the value of that is very, very huge. We're very excited to see where that goes."

The Guest Experience

The Smart Capture experience is designed to be simple for the venue operator and the guest. A camera with a fixed, 25mm wide-

angle lens is installed in a selected location, plugged in, then pointed and focused. The guest scans a QR code, then stands in a designated area. The QR code turns on the Smart Capture camera and connects it to the guest's phone. "You can see live view on the screen, where you are," said Temple. "You can frame. There's a shutter button. You press that. There's a countdown - three, two, one - and then it takes a photo. Then the image goes straight to your device."

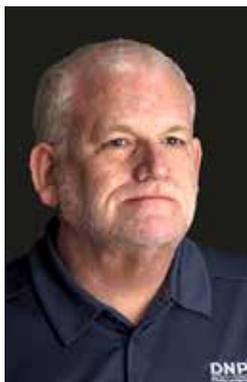
Technology & Installation

Smart Capture is based on DNP's proprietary technology. "It's a relatively easy installation," Temple said. "It looks like a traffic camera. The enclosure is designed to be weather-proof. So, if it's hot or cold, rainy, dusty, the camera itself is in that enclosure so you don't need to worry about it being damaged. The system also talks to its own network via a cellular connection. All we would need is an outlet to plug into. It's a very, very easy install."

The Smart Capture system requires guests have a mobile device with a camera and the ability to talk to the Internet.

"Two years ago if I were to say, 'Scan a QR code.' I probably would have had some people who'd be going 'Hmm?'" Temple said. However, because of the pandemic, consumers are now familiar with using QR codes to access menus, museum maps and other information.

Significantly, Smart Capture does not require an app. Temple said while apps have some advantages, they can also slow down adoption and increase friction in the process. People say, "I don't want to download an app, I don't want to have to provide personal information, I don't want to have to go and post something in the app store," Temple said, noting that the cloud-based system makes it easier for guests to interact with the system and benefits the operator: "If our software developers develop



Drew Temple, DNP

something, we can very easily go back to those cameras and make sure that they're running the latest software and providing the best experience."

As part of this "best experience," Smart Capture is designed to provide end-to-end data security: guests' images are not stored and no personal data is collected. At the end of each session, data and images are cleared. Temple noted the system also implements GPS geofencing technology to prevent someone from scanning a QR code in North Carolina and turning a camera on in Los Angeles. "The venue can control how far away from the camera you have to be to access the system. If someone has a print of that QR code in North Carolina and they scan it, they can't access the system."

Maintenance

Because the Smart Capture system is self-contained, it greatly simplifies maintenance. "If the system were to freeze," Temple said, "all you would do is unplug it and plug it back in. It uses a proprietary camera technology that we've developed, but it's rudimentary. There are no moving parts in our initial setup. It really is just point, verify focus, and then you're all set." Additionally, he noted there's a back-end administrative side that a marketing manager can log into to upload custom or promotional borders and a content management system that allows them to schedule different borders during different times of day or different days of the week.

Photography and COVID-19

With the onset of the COVID-19 pandemic, DNP examined how its products could be part of a safe return to public events and gatherings. "Traditional venues have photographers," Temple said. "They have people walking around taking photos. The beauty of Smart Capture, whether it's the marketing or the sharing, is that it's self-serve - there is no photographer. It's a safe experience, and so from a venue's perspective, it allows them to offer multiple photo experiences with the peace of mind that they don't need to worry about the guests and the photographer being too close. They can promote it as a safe experience." •••

David Paul Green is COO and President of lighting and media design firm Visual Terrain, Inc. He has over 35 years of experience in managing and delivering large and small development projects, including user experience design, creative and technical writing, theme parks, film, website producing, television and animation support, software development, information architecture, project management, public relations and photography. David's photography has been featured in 15 exhibits since 2009, and he has six images in the permanent collection of the California African American Museum. He is a frequent contributor to InPark.



Ideal photo locations include zoos, museums and attractions.



The Amph performance space at Little Island. Photo courtesy of Little Island

Lighting Little Island

LD Herrick Goldman applies a clean aesthetic at New York's unique island oasis

by *Elation Lighting*

An island oasis in the Hudson River west of Manhattan, Little Island @Pier55 is receiving praise as a unique arts area and green getaway from the hustle and bustle of urban life. Made up of 132 pot-shaped planters positioned above the water, the park's topography holds a lush landscape of rolling hills, walking paths and open lawns. Nestled among the island's more than 390 species of flowers, trees and shrubs are performance spaces outfitted with Elation Professional IP-rated automated luminaires.

Designed by Heatherwick Studio and landscape architecture firm MNLA, the 2.4-acre artificial island park, funded by the Diller-von Furstenberg Family Foundation, is a new public park with performing art as an integrated component. A 687-seat amphitheater with views across the Hudson, a smaller stage for 200 visitors, and an open plaza, are all designed to host a range of programming.

Providing tools, respecting aesthetics

Early in 2020, just before COVID-19 struck, Josh Weisberg of Navolo Audio-Video brought Herrick Goldman onboard the

project to help in designing and specifying the lighting systems. Goldman, Founder & Principal Designer at Evoke Collaborative was asked to provide a lighting design that met the demands of a client who placed extreme value on aesthetics. "Mr. Diller did not want anything to distract from the beauty of the project, so we paid very specific attention to keeping a very clean look," Goldman says. "My job was to not only navigate that but also provide the tools necessary to anyone performing in the amphitheater."

Goldman worked with Little Island Production Manager Kelsey Martinez and Audio & Lighting Supervisor Patrick Lachance to create both useful and visually pleasing looks with focus points, presets and palettes that incoming designers or park lighting technicians could have at their fingertips. All lighting for Little Island was supplied through WorldStage.

Finding the perfect plot

The amphitheater, nicknamed The Amph, sits at the western end of Little Island. The architects designed six masts into the park around the amphitheater, which has a thrust stage 35 feet wide

by 54 feet deep with audience on three sides and the Hudson River to the west. Wanting to find an ideal fit for the space and needing a rig that was IP65-rated to withstand the extremes of New York weather, the lighting plot and spec underwent several modifications. “We went through seven or eight different iterations,” Goldman explains, “starting with a more theatrical plot with acting areas. That led to the need for too many lighting fixtures however, which didn’t fit either the budget or the directive of a clean aesthetic.” Following discussions with the client about a ‘leaner and cleaner’ plot, a visit to the WorldStage shop in New York ensued in order to demo possible fixtures. There, Goldman auditioned several luminaires in Elation’s Paladin and Proteus series, eventually choosing the Paladin™, a hybrid LED wash/strobe/blinder with zoom, and Elation’s 50,000-lumen Proteus Maximus™ LED moving head.

Paladin

Goldman says that instead of putting up a load of PAR cans, which would have looked cluttered, he chose to mount eight Paladins on each mast. “With a three-quarter thrust stage, you have to light from every audience member’s point of view, not just one angle, so you need to cover 270 degrees. Once we mounted the Paladins and turned them on, we zoomed them wide and it covered the entire amphitheater, including the seats, in a giant wash of saturated colors. The throw distance and intensity was incredible,” he said, adding, “Even though you’ve spent a year specifying lights and you’ve been hands on with them

in the shop, until they are installed you’re always a bit unsure - but the Paladins worked out great.”

Maximus

Hung below the Paladin fixtures on each mast are a pair of Proteus Maximus LED moving heads to form a flexible setup that gives guest performers a host of options. “We can have somebody performing center stage and hit them with four Proteus to cover all the angles and still have 8 Proteus to decorate the stage with,” Goldman states. “We can put a gobo in and zoom out to cover the stage in texture, which really adds to the tonality of the scene. It’s really quite beautiful and everyone is very happy.” Throws from the masts range anywhere from 80 to 150 feet with all of the Proteus programmed to focus to any of 16 different areas.

White balance

The designer says one of the first things he does when he starts to create the on-stage look is to build what he refers to as a show white. “Because I’m not the end user and there are so many potential shows coming in there, even a fashion show or a film shoot for example, I want to give them a choice of daylight color, 5600K, 5200K, 4800K, all the way down to 2700K.” When he turned on the Paladins and used his light meter to try to achieve those values, the white balance for each of the light points across the board was excellent. “I knew the CRI would range anywhere from 72 to about 84, which is great for an LED wash, but when



Little Island is an urban oasis of art and performance space created in the Hudson River. Photo by Michael Grimm

it came down to the balance, I thought they might be a little green or a bit pink - but as we played with them, especially adding and subtracting the white LED chip, we got really great color. We were very close to the target each time which made my job much easier.” Then, he says, they turned to the Maximus. “We dialed up the CTO wheel on the Maximus and hit all of the white balance targets so easily that we barely had to dial in any other color to get there.”

The Glade

With nature and art its symbiotic elements, the island garden offers other smaller areas for even more intimate performances. The Glade, on the south side of Little Island, is a seating and sloped grass area that can accommodate 200. Here, eight Elation SixPar 200 IP™ PAR lights and a pair of Paladins provide simple color-changing illumination for the 16-ft wide stage. The Paladins, used for front light from about 60 feet, can zoom in to someone sitting on a stool or zoom wide enough to cover a band.

Little Island opened on May 21 to praise and applause from local New Yorkers and visitors alike. The new park hosts a range of diverse programming, the majority of it free, with a calendar that includes local artists, headliners, pop-up art experiences and genre-focused weeklong festivals. •••



The Glade
Photo by Michael Grimm

Hearing from the operator

Little Island recently completed its first season hosting a wide variety of performance art. We asked the team at Little Island for more insight into the project.

What was the inspiration for the park’s design?

Heatherwick Studio explored the idea of designing a new pier that could draw from the remaining wooden piles from Pier 54. MNLA’s landscape design was conceived as a leaf floating on water – a space that could be both visually surprising and inspiring for New York City.

The two firms combined architectural innovation with a captivating landscape to provide visitors with an oasis from urban life where they could play, relax, imagine and restore.

What needs was this project designed to serve?

We always wanted the park to be a place where people could gather in community. Because of the pandemic we had not anticipated that Little Island would be the location for so many emotional reunions. We have seen tears and embraces of family and friends who have not seen each other in a long time. There’s a lot of joy in that.

How was it determined what sort of performing art spaces to include in the project?

Pier 54 has had a long history with performance. It used to be the Dance Pier for Pride and it also hosted concerts back in the day. The idea was to bring the arts back to that same pier where it previously existed.

Tell us about the type of art featured in the first year.

We presented dance, music, spoken word, puppetry, mime, opera, circus and more. If you can name it, we probably hosted it in our first season.

Why did you decide to use professional theatrical lighting?

We chose equipment specifically to withstand weather and highlight the incredible breadth of artistic disciplines that we host.

What do you think makes the park ideal for performance art?

The beauty of the natural surrounding combined with the unique public aspect of the park make it a truly unique place to enjoy a performance. •

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Join us



"The Key to Dreams," Futuroscope's new show, features lighting, fountains, projection and special effects. Photo courtesy of Julien Panie / ECA2

Serving up dreams

Modulo Pi equipment is key to system of Futuroscope's new nighttime show "The Key to Dreams," created by ECA2

by Modulo Pi

Guests to Futuroscope park in Jaunay-Clan, France, can now enjoy "La Clé des Songes" ("The Key to Dreams"), a new nighttime show presented in the park's 5,000-seat water amphitheater, open since June 2021. Designed and produced by ECA2, the show provides the public with a dreamlike, immersive journey, delivered via state-of-the-art multimedia technologies including video projection, lasers, flames and water jets. The show system's 10 projectors are fed by Modulo Kinetic media servers by Modulo Pi.

Futuroscope is ranked as one of the top 20 theme parks in the EMEA region with some 2 million in annual attendance. "The Key to Dreams" was a significant reinvestment to bring a new guest experience to its water theater and the result of a nearly two-year collaboration between Futuroscope and ECA2, a world leader in the design and production of immersive multimedia spectacles.

The show blends animation and multimedia to create a multisensory experience. The brief for ECA2 was to reclaim the venue and conceive the new show, integrating new multimedia elements with the existing equipment already installed. In response to this challenge, ECA2 designed a new scenography around the vortex structure, a pre-existing element of 28 tons whose 157 facets form a 270 square meter projection surface.

To magnify the vortex, which was illuminated by five Christie LX1500 video projectors, ECA2 elected to enhance the existing system with the Modulo Kinetic media server solution. This consisted of one Modulo Kinetic Designer workstation added to the control room along with two Kinetic V-Node servers, each equipped with six outputs.

The team made use of dedicated tools available in the Modulo Kinetic software. Thanks to its virtual camera system and 3D

calibration of projectors, the media server allowed the creation of 3D mapping content to project onto the vortex, resulting in an animated fresco with shifting atmospheres throughout the show.

In addition to this projection surface the show includes 950 square meters of projection on water screens, and 450 square meters of projection on a net suspended 35 meters high. These projections are based on 5 x Barco projectors from 18,000 to 44,000 lumens, as well as Modulo Kinetic for the 3D mapping and media playback. The Modulo Kinetic LED mapping function also came into play for controlling a constellation of more than 300 lights illuminating the water's surface.

Synced with timecode, the 25-minute show is played twice every night in the grand outdoor space.

Modulo Pi's Modulo Player media servers are integrated into the systems of several other celebrated attractions at Futuroscope, including "The Time Machine" (honored in 2014 with a European Star Award and in 2015 with a Thea Award) and "The Extraordinary Journey" (Top European Attraction, Parksmania Awards 2017).

Founded in 2010, Modulo Pi offers a new generation of media servers designed to meet the needs of creatives, producers and technicians with innovative and reliable systems. Relying on



Modulo Pi's media servers help power "The Key of Dreams" imagery. Photo courtesy of Modulo Pi

20+ years' experience in the field of media servers of Founder & CEO Yannick Kohn, Modulo Pi helps create stunning visual experiences through its two system options, Modulo Player and Modulo Kinetic. Designed to meet the needs of any type of project, no matter the size or technical requirements, Modulo Pi systems have powered hundreds of productions in varied applications, including corporate events, theme parks, museums and touring. •••



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If you want to go far, go together

Improving your customer experience through collaboration

by Scott Harkless, Alcorn McBride

It would be hard to forget the first time I stepped through the doors of Alcorn McBride as a bright-eyed electronics engineer from the Midwest ready to shake things up and build cool stuff. It's not that I was completely ignorant about the importance of people in the equation of a successful company, but I didn't exactly see the world in the same way that I do now.

Back then, I was of the mindset that if you built a great product, people would just naturally buy it. The good news is that this is not a terrible philosophy for an engineer to live by. As it turns out, working hard to make great products is a crucial part of the equation. Naturally, I came to learn that there's a lot more to it than that over the course of several years diving deep into our industry and working alongside some great mentors. You can build the best product in the world, but whether it goes farther than your desk depends on people. Always.

Over time, I came to embrace a "customer-centric" philosophy. For a manufacturer, this is the practice of steering your company culture and product development based on the idea of creating the best experience for your customers. In hindsight, it all seems like common sense. Companies with a loyal following of customers tend to stay in business significantly longer than those that don't, and finding new customers is a very difficult, time-consuming, and expensive endeavor. Just ask any start-up company that's trying to break into an industry! All things being equal, I'm a very big fan of building long-term relationships with customers, getting to know them personally, seeing the world from their perspective, learning what problems they face, and helping to drive development at Alcorn McBride in a way that will provide them with tools to help them succeed.

This approach does come with interesting realizations and challenges as those relationships evolve, some of which might even seem a little counterintuitive. One that I think has been the most profound for me is the importance of partnerships and collaboration. To be clear, I don't just mean with your co-workers or even just your customers, but with other companies as well. Even those that might be considered competitors, as crazy as that may sound!



Scott Harkless (right) is joined by Adam Rosenberg, Martin Chaney and Jim Carstensen (L-R) in front of Alcorn McBride's old office in 2007. Photo courtesy of Alcorn McBride

Once you set foot in your customer's world and start to see things the way they do, you quickly realize that you and your organization cannot help them with everything. Not directly, anyway. Chances are that their needs are broad and that your organization has a specific area of expertise. While it's obvious how you can help them solve a portion of their puzzle, the nature of building strong relationships is incompatible with the idea of just drawing a line there and leaving them to fend for themselves. If you operate with a customer-centric mindset and your goal is to truly improve their experience, this means swallowing your pride and reaching out to others to join forces for the greater good. Only then can you play a stronger role in helping your customer solve the complete puzzle.

If we take a closer look at the technology behind a dark ride attraction, it's obvious to see where Alcorn McBride products fit in. We excel at sourcing the audiovisual show experiences throughout the attraction and serving as the glue that ties the attraction systems together to ensure they run together harmoniously. While I'm incredibly proud to say that we have a talented engineering team that could probably achieve just about anything, we don't try to do everything and I'm not ashamed of that. We geek out over motor controls and ladder logic, but we don't build ride vehicles or ride control systems. We have a deep understanding of digital video technology, but we do not make flat-panels, LED walls or projectors. We're well-versed in control systems and protocols, but we don't dabble in the world of motion control and animatronics. The challenge is that our customers need all of these things, so what do we do? We collaborate.

Finding the right companies to join forces with can be a tricky business, though. In many ways, entering a partnership is a lot like making a new friend or hiring a new employee; you can't just pick anyone. They must be a good fit or problems will quickly ensue. They need to bring some sort of product or skill to the table that complements your company's role, but you must also work well together in a long-term capacity. That requires shared values, mutual respect and trust.

Once you find the right fit, it's magical. Not only can you work together to fill the gaps in your customers' needs, but you can also start taking things a step further to make sure your companies' collaboration equals more than the sum of its parts. For example, you can both invest development resources to make your products work more seamlessly together, which is something your customer will greatly appreciate when it comes time to design systems that integrate well. You can also cross-promote each other's solutions in ways that are not possible individually. When core values overlap, odds are high that your partner's customer base is a good fit for your company, and vice versa. By buddying up, both companies have the opportunity to expand their customer base simply by welcoming each other into their worlds as allies. Both companies grow their business, and their customers have a more complete solution to help them succeed. It's a win for everybody involved.

For all the wonderful reasons I've mentioned, this type of collaboration has been at the heart of how Alcorn McBride has chosen to work with our customers for quite some time. What I'm super excited to share is that we've reached the point where these partnerships are growing into something bigger than we had ever imagined. For the first time, we're coming together with our closest colleagues to put on a series of events called the Attractions Technology Lab, which will include comprehensive technology showcases, educational sessions, and networking opportunities involving multiple partners and manufacturers.

In case it's not obvious, we see this as the next step toward improving our customers' experiences by offering them a place where they can go to see the big picture in action. We're hopeful that this will be a much better experience for them compared to the idea of meeting with companies individually and putting the pieces together themselves. It even allows us to explore other collaborative initiatives to serve the industry better, like the opportunity to get involved with college programs or clubs dedicated to themed entertainment engineering and technology. What better way to expand our collective of partners and customers than by persuading a few more bright-eyed engineers to dive into the industry that we all love.

If this message resonates with you, I hope you'll take a moment to reflect on the partnerships you and your organization embrace and the ways that you can collaborate to improve the experience of your customers. As the old saying goes, "If you want to go fast, go alone. If you want to go far, go together." •••

As Chief Innovation Officer at Alcorn McBride, Scott Harkless works closely with clients to determine their biggest areas of need and leads a talented team of problem solvers to create the products used in many of the world's most popular attractions. He draws upon his experience in product development, system commissioning, client training, marketing and sales to ensure that the products stamped with the Alcorn McBride logo exceed client expectations and offer value to the entire industry. Visit alcorn.com

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Inside TEAAS

An organization for themed entertainment academia

interview by Judith Rubin

The fourth annual Themed Experience and Attractions Academic Society (TEAAS) Academic Symposium will be held during the 2021 IAAPA Expo in Orlando. We spoke to three leading members and active educators in the field - Kathryn Woodcock (Professor, Ryerson University), Peter Weishar (Professor and Director of UCF Themed Experience Programs) and Lori Sipe (Associate Professor, San Diego State University) - to learn more about the organization and its activities.

Tell us about the TEAAS mission, leadership and accomplishments.

Kathryn Woodcock: TEAAS exists to bring together academic scholars from any discipline interested in any aspect of themed entertainment, experiences and attractions, including everything from the design and technology components to the operation and management of entire attractions, and facilitate their exposure to themed entertainment end users.

Peter Weishar: We formed the organization about five years ago. Our first meeting was at an IAAPA Expo in Orlando. We did not have a conference room or place to meet. Someone had a friend or associate at one of the show room floor booths that had a conference pod they let us use. We didn't realize it was a demo unit built for two people without the air conditioning hooked up. In that humble beginning, we planned our first Symposium and laid out the groundwork for the Journal. We have since had a great deal of support from other institutions that have made our lofty goals a reality.

Structurally, the TEAAS has four committees: Symposium, Journal Editorial Board, Communications, and Steering Committee. The membership is divided into full members who are academics and Associate Members who are graduate candidates and industry professionals.

KW: The Society has held several Symposia to share members' work and has established a Journal, the Journal of Themed Experience and Attractions Studies, for publication of peer-reviewed scholarly work.

Lori Sipe: Academia is traditionally a place where people get deep into their own areas of expertise, so associations with multiple disciplines are rare. In some ways, I think our vision is to mirror what the attractions industry does really well – synergize creative storytelling, production management, and operations. The first step, however, is to create a space and invite those researchers and teachers who want to bring a new perspective to customer engagement and immersive experiences.

How does TEAAS serve its members and share information?

PW: Academics need to disseminate and publish their work, learn about related work being done by others, and in many cases, connect with collaborators with shared interests and complementary expertise. Very few academics who are interested in themed experience and entertainment have colleagues in their institutions that share their interest. Some may even contend with universities that don't have an understanding of the importance and cultural impact of the field. The TEAAS helps make vital connections for like-minded academics.

Exposure also helps to build relationships that can lead to research funding, interdisciplinary collaboration, student field trips, industry guest speakers, sponsored course projects, and student internship and entry-level opportunities, all of which benefit the academic's teaching effectiveness and satisfaction.

KW: Industry exposure is more important than it seems. The first step of applied research is a literature search to establish a state of the art. Industry innovations in many cases would not show up in a conventional academic literature search. Industry invents and implements, but it is rare for someone in industry to publish a scholarly paper detailing their innovation. With the very nature of the industry, with illusion and artifice around every corner, it's not so easy for an academic to easily know what is already being used or done without direct exposure behind the scenes. Accessing industry events and venues is critical. However, many academics cannot attend conferences unless they are presenting. Our Symposium held on the final day of IAAPA Expo makes it possible to attend the Expo as well as the academic Symposium, see the industry's accomplishments, hear what is important to them, and meet manufacturers, suppliers, owners and operators.

For me, I'm most excited about the value of the Society for research collaboration and dissemination. For promotion and tenure, as well as securing and sustaining research grants, academics need to disseminate their work in a peer-reviewed scholarly medium. Industry presentations and press are not given the same credit.

The ultimate form that takes is our Journal. Conventional academic journals specialize in a specific field of scholarship, either in the abstract or with a wide range of industry applications. This makes it difficult for scholars in one field to find research from other fields and difficult for industry end users to locate potentially useful research that could be scattered

across hundreds of different journals. In addition, many journals either charge authors to publish or charge high fees to each reader. Our journal is hosted on an open-access basis, with no fees for either author or reader.

I've had peer reviewers at journals press for me to include some particular background information about theme parks, irrelevant to the point of the paper. Other reviewers or editors just find this application domain "not a fit" for their journal.

That said, the Society also provides a platform to talk about teaching. Among our active projects is compiling readings by our members and others that could be used in courses and sharing learning experiences. Many members also mentor students in extracurricular projects and competitions, and we can share about those as well.

How does the Society serve the themed entertainment industry?

LS: The modern consumer is seeking compelling and meaningful commercial experiences. Designing and innovating those experiences and attractions requires a multi-disciplinary team of creators and implementors. Our membership is passionate about inspiring the future leaders in this space.

I would add that our involvement and collaboration is critical for students who dream of being in this industry. It's also critical for us to get the word out to students who don't know about the possibilities that exist in the experience economy. I hope our association can be a catalyst for showcasing degree programs that provide this undergraduate exposure.

PW: Some academics, notably hospitality and tourism management or themed experience and entertainment, teach

in programs that have curriculum specific to industry. Others teach a relevant academic discipline with a curriculum that is not industry-specific, such as mechanical engineering or literature. Those scholars engage with themed entertainment through their scholarly research and creative activities like the TEAAS Journal and Symposium.

KW: Academics who can get strong industry connections to complement their scholarly expertise can contribute to training highly qualified personnel to meet the industry's future needs. In some cases, this will be graduates from curricular programs; in other cases, this will be students who have had the opportunity to have industry-literate supervision of graduate thesis projects that can be of real value for future industry innovation.

Who should get involved?

PW: We are an all-volunteer organization, and we welcome more. Dozens of academics and graduate candidates donate their time and expertise to make the TEAAS a success. Naming everyone who has helped make the TEAAS what it is would fill pages of your magazine! There are only three of us in this discussion, but it is a larger group effort that makes it work.

KW: Any academic with a research or teaching involvement related to themed entertainment will find like-minded academics in TEAAS. Graduate students or senior undergraduates looking for a graduate supervisor could not find a better place to see who is doing what and explore where their own future may be.

LS: We are just beginning to tap into the power of interdisciplinary approaches to research and teaching. As we evolve, I am excited about the potential for engineers, storytellers, designers, builders and managers in the experience economy to collaborate.



Group discussion during a poster session of the TEAAS Academic Symposium



Ady Millman speaking during the symposium
Photos courtesy of Peter Weishar

Are there resources, such as a directory of members or colleges?

PW: We have a website that we are very proud of (teaacademicsociety.org). The website contains a Member Directory with work emails and addresses of over 200 academics, researchers and graduate students in themed experience and entertainment as well as associate members from industry. In addition, we have a Directory of Programs with the most complete list of international academic programs in our field that we know of. The programs in the listing range from just a concentration of a handful of courses all the way to accredited graduate degrees. It is an excellent resource for potential students to find the right college or university for them. Of course, the website also has information on our Symposium, a link to the Journal, announcements, etc. Part of the core mission of TEAAS is to help make connections. The website serves the members of our community even if they can't make it to the annual Symposium.

Tell us more about the annual symposium taking place at the IAAPA Expo.

LS: The symposium will take place in Orlando on November 19, 2021, the last day of IAAPA Expo. Hosting this symposium during IAAPA Expo enables participating academics to enhance

their research, knowledge transfer, and exchange through access to over 1,000 exhibitors of products and services representing the state of the art of the attractions industry and opportunities for networking with some of the many thousands of industry operators, manufacturers and suppliers who attend IAAPA Expo. The schedule will also permit interested industry members to attend the TEAAS Academic Symposium program.

Friday's full day program will begin with a keynote from Carolina Cruz-Neira [See "Taking UCF students to the cutting edge of VR," InPark Magazine issue #85], a pioneer in the field of virtual reality, followed by research presentations, networking roundtables, and a poster-sharing session. This year we are proud to include academics from Fusion Studio for Entertainment and Engineering-Purdue University as part of our program.

KW: Since the Society is entirely volunteer-run, we have been able to defer implementing membership dues as a means to reach as many members as we can without cost barrier. The Journal is hosted by University of Central Florida and the Symposium venue is hosted by IAAPA. San Diego State University, UCF College of Arts and Humanities and Rosen College, and Purdue have contributed financial support for the 2021 Symposium and to underwrite the expenses of our website. •••

*Registration is still available by accessing
teaas_symposium2021.eventbrite.com*



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Expo 2020 Dubai opens

Photos from the highly anticipated world's fair

curated by Martin Palicki

Expo 2020 Dubai opened to the world on October 1, 2021. Delayed for one year due to the COVID-19 pandemic, the Expo hopes to attract millions to its elaborate theme and national pavilions during its six-month run. InPark will be reporting from the Expo in December, but for now, enjoy this photo journey through various pavilions and the opening celebration.



Interior view of Alif - The Mobility Pavilion
Photo courtesy of Expo 2020 Dubai



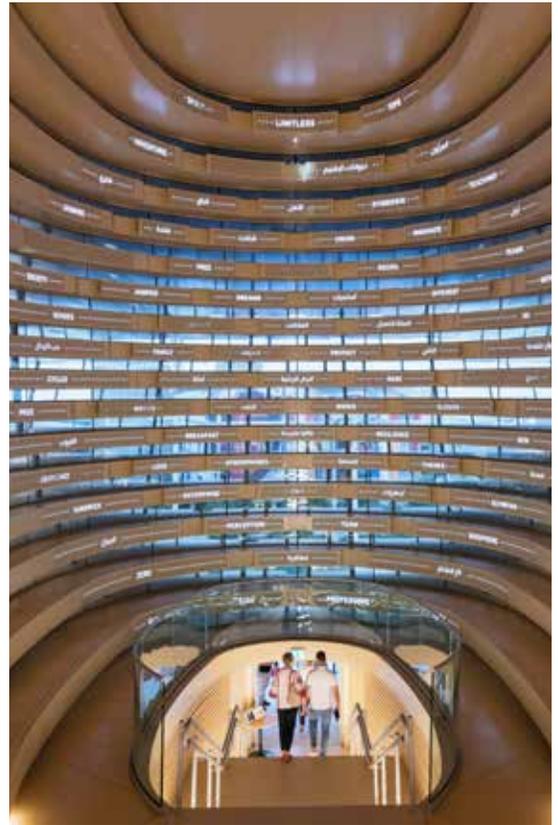
Interior of the United States of America Pavilion with visitors
Photo by David Jimenez / Expo 2020 Dubai



Eswatini National Day Collaborative Performance
Photo by Mahmoud Khaled / Expo 2020 Dubai



Visitors at the Japan Pavilion
 Photo courtesy of Expo 2020 Dubai



Visitors at the United Kingdom Pavilion
 Photo courtesy of Expo 2020 Dubai



Visitors at the Saudi Arabia Pavilion
 Photo courtesy of Expo 2020 Dubai



Sea of Consumption Hall at Terra - The Sustainability Pavilion
 Photo by Stuart Wilson / Expo 2020 Dubai

Long live the M!

Christie's M Series projectors are at the heart of many installations in theme parks and museums

by Judith Rubin

A new M to replace the old M

Christie's original M Series was a leap in the evolution of projection. First introduced in 2007, it became a top-selling line of projectors and lenses for Christie and a hugely successful 3DLP product within the industry. "The M Series packed a lot of features in a small package," says Larry Paul, Executive Director, Technology and Custom Solutions, Christie. "Features like the intelligent lens system and embedded Twist for blending and warping were unique at the time. That and its small size and weight made it popular and an AV game-changer. The M Series stands for reliability, ruggedness and innovation."

The original M Series projectors sit at the heart of many installations in theme parks, planetariums, museums, visitor centers and live events, and they're still used in the fleets of rental and staging production companies. Christie has worked to design its successor - one that would continue to deliver everything customers loved, but perform to a higher standard, incorporating the best of current technology while retaining the existing product footprint and the same lensing.

That successor, now officially launched, is the M 4K25 RGB - billed by Christie as their smallest, lightest, quietest all-in-one RGB pure laser projector. Within its petite, 92-pound frame, the reinvented M offers 25,000 lumens and 4K UHD resolution - boasting four times the resolution, double the brightness, and twice the color of the original M (greater than 96% of the Rec. 2020 color gamut as opposed to the previous, and much smaller, Rec. 709). It further boasts up to 50,000 hours of stable runtime, new TruLife+ electronics with electronic color convergence



The Christie M 4K25 RGB pure laser projector offers 25,000 lumens and 4K UHD resolution.

(ECC), an intelligent lens system (ILS1), and a field-replaceable light source. It is 3D capable and high-frame-rate capable all the way up to 480 frames per second (FPS) with a Christie Mirage upgrade (more on this below).

"We showed a sneak peek to an industry audience in Orlando and they were blown away by what they saw: this little, tiny projector making a giant, brilliantly colorful image on a wall - and by what they didn't hear: projector noise. This allows you to go into environments where you couldn't previously have had a projector."
- Larry Howard

The M 4K25 RGB takes the same much-loved ILS1 lenses and utilizes the same lens mount as Christie Crimson Series projectors and the former M and J Series, and it is compatible with existing system components and Christie's suite of software products. It has new qualities that make it likely to find its way into even more venues, indoor and outdoor settings, and guest experiences than before. It promises to make installation and maintenance a breeze, and get operators and creatives excited about new storytelling possibilities.

In this article we have focused on some of the more dramatic improvements from the old M to the new.

Re-M-vestment

Are you ready for 2022-2023? The conditions of the pandemic have added fuel to the fire of innovation and ramped up the digital sophistication of the public. And, according to the latest TEA/AECOM Theme Index, the cycle of recovery from the COVID-19 pandemic is already underway. The stages are identified as downturn (2020), bounce-back (2021) and the beginnings of real recovery (2022) followed by elevated guest expectations (2023).

Since reopening, parks, museums and attractions have had no shortage of returning guests eager to gather again for real-life, out-of-home experiences. Operators must do what they always do to remain competitive: reinvest. Given that today most operators are faced with having to do more with less, the new M



The M 4K25 RGB's integrated user interface with full-color LCD allows users to see input signal thumbnails and projector health at-a-glance.

presents itself as the right RGB laser projection workhorse at the right time.

It's a given that an attraction today will almost certainly be media-based or have a strong media component, whether an immersive or interactive walkthrough, an IP-based experience, a mixed-reality adventure, a dark ride, 4D theater or flying theater, a repurposed retail space, an outdoor spectacle, esports, etc. The new M Series is positioned to offer an immediate, state-of-the-art upgrade with the potential to do more in the future, as well as a means to leverage the transformative, compelling power of projection in spaces where it might not have been used before.

Upgrading the equipment confers benefits with or without a content upgrade. "This is an enabling technology that allows us to go beyond where we have been in the past, and it's completely backwards compatible," says Larry Howard, Senior Director of Entertainment Sales, Global Entertainment Development at Christie. "Most installs can remove the old projector and drop in the new. You can refresh the system and keep the existing content, color and brightness levels without having to rebalance. The additional brightness, color volume capability and other features will be there to tap into when you're ready for the next stage. Meanwhile, your content looks better, and your system runs more reliably. Six months after you set it up, it will still look the way it was intended and approved."

"With an unprecedented 50,000 hours of illumination performance and a field replaceable light source (if ever needed), we've gone way beyond the legacy of the M Series as an industry workhorse in terms of long life and durability," says Paul.

One of the reasons the original M Series was so successful was its adaptability to a range of locations. "You could put it wherever you needed to," says Paul. "Whether indoors or outdoors, it was this great-quality, 3D-capable, 120Hz-capable platform, utterly revolutionary in its time. Nothing else could do what it did. In designing the new RGB laser upgrade, we worked hard to reimagine all those things, and more - such as making it literally

so quiet that there's no need for a projection booth. At 46 decibels it's quieter than a household refrigerator."

"We showed a sneak peek to an industry audience in Orlando," says Howard, "and they were blown away by what they saw: this little, tiny projector making a giant, brilliantly colorful image on a wall - and by what they didn't hear: projector noise," says Howard. "This allows you to go into environments where you couldn't previously have had a projector."

With the advantages of size, weight, brightness and color gamut, Paul and Howard note that the M 4K25 RGB will also lend itself well to projection mapping, giving designers a new and nimbler package to work with on a larger scale.



Larry Howard, Senior Director of Entertainment Sales, Global Entertainment Development, Christie



Larry Paul, Executive Director, Technology and Custom Solutions, Christie

Going beyond: color, contrast, frame rate & more

Driven by art, business and the need to differentiate, themed entertainment has long been the proven incubator of trends and creativity in applied technology, storytelling and guest experience.

This core creativity manifests in products, design and content creation and makes them interdependent. Media producers, storytellers and operators will want to make the most of the M 4K25 RGB by producing content that leverages its display power and versatility, including high frame rates, a color gamut approaching full Rec. 2020, enhanced brightness, omni-directional orientation, and functionality in spaces large and small, indoors and outdoors.

“With an unprecedented 50,000 hours of illumination performance and a field-replaceable light source (if ever needed), we’ve gone way beyond the legacy of the M Series as an industry workhorse in terms of life and durability.”
- Larry Paul

The addition of the M 4K25 RGB ups the number of Christie RGB pure laser projectors boasting this capability (joining its larger family members including the Griffyn 4K32-RGB and D4K40-RGB) brings the impact of Rec. 2020 within reach of more operators and budgets. This color space expansion is one that “you have to see in order to see and once you’ve seen it you can’t unsee it,” as Paul and Howard frequently say. Enhanced color capability will soon be joined by ultra-high-contrast lens options in early 2022: four new lenses that offer >7000:1 contrast.

Finally, there’s frame rate, or “temporal resolution.” A Christie Mirage upgrade makes the new M projectors capable of running at 120 fps in 2D and 3D at full resolution, and up to 480 fps in HD resolution - and 480 fps is no fantasy. In fact, 480 fps has been utilized for years by a number of Christie clients, in attraction settings you may well have seen or experienced. “We have been providing 480 fps under NDA since 2014 to customers in simulation, visualization and theme parks and some other

specific applications,” says Howard. “The higher frame rate beyond 60 or even 120 fps is needed for realism and detail. It’s very important to the experience.”

Leveraging higher frame rate capabilities, Christie Mirage Pro gives the further ability to present multiple points of view simultaneously and enabling different experiences for different people. This was demonstrated as part of Christie’s exhibit at the 2019 IAAPA Expo, in which viewers, each looking through one of four windows, were delivered four unique images from one projector. Says Howard: “What we showed at IAAPA speaks to what you can do in a queue line or in the museum world, where making the most of limited space is so important.”

“Higher frame rates allow the brain to be engaged, to see and feel things more as they really are,” says Paul. “With video games today running at 120 fps or higher, 30 fps or even 60 fps may no longer be enough to compel today’s audiences with media. It is as much of a change to media production as the transition from silent movies to talkies, or black-and-white film to color. Effectively what we are seeing is a new storytelling medium, already on the way to becoming mainstream in attractions and gaming.”

In other words, higher frame rates are part of content creation evolution and there’s a good case to be made that temporal resolution is more critical to the end result than pixel resolution, especially in media-based attractions and experiences. High-frame-rate production is an already active creative space. Moreover, a good portion of today’s audience is already attuned to and expecting it.

“It’s all absolutely available now to the media production workflow, playback and display,” says Howard. “It’s a matter of teaching the entire chain what’s available and how to utilize it.”

“You have to up your content creation game, but it’s worth it,” says Paul. “Higher temporal resolution is not just pixels on a grid, it’s how many pixels per moment. The human eye is exceedingly good at seeing content at higher frame rates, which make things more natural, immersive and engaging.”

The M 4K25 RGB promises to help more of the industry move forward in this direction. •••



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Eliminating the queue, simplifying the process

Semnox Solutions teams with The Experience Ticket.com

by Joe Kleiman

A few years ago, I was interviewing the general manager of a major regional theme park when they were undergoing a major effort to synch their box office and food & beverage software through a specially-written program. “I hope this works,” he told me. “Up until now, we’ve gone through a number of owners. Each owner wants to institute its own software and we’ve never been able to integrate it with what we already have. We have close to a dozen different software systems, from box to food to photo and none of them communicate together. Everything has to be reconciled by our accountants, which is a lengthy process.”

Over the years, the needs of theme park operators have changed. With greater emphasis on season pass holders, festivals, enhanced dining options, virtual queues, festivals and the expansion from parks into resorts, there’s a need to streamline the process, improving both the guest and operations experience. Semnox Systems, through its Tixera division, has devised such a solution. Now, in partnership with The Experience Ticket.com (TET), they plan to revolutionize the park experience altogether.

Semnox - Tixera

Semnox is best known for its product suite for family entertainment centers, centered around the Parafait group of integrated ticketing and cashless solutions. Semnox systems oversee almost all front-of-house operations, including ticketing, games redemption, RFID cards for games and attractions, reservations, digital signage and food ordering. Corresponding

services are offered for back-of-house, such as inventory and stock control, along with kitchen ordering systems.

Recently, Semnox created its new Tixera division to offer similar services on a larger scale to theme parks and waterparks. The Tixera system is comprised of thirteen main components:

- Entry ticketing and access control
- Deducting systems for cashless transactions
- Online ticketing
- Self-service ticketing kiosks
- Locker management
- Numerous systems for cashless transaction management
- Food & beverage sales
- Retail and merchandise sales
- Inventory and recipe management
- Digital signage
- Loyalty program management (360 CRM)
- Annual and season pass management
- Maintenance tracking and reports

Recently, Tixera added an app called BizInsights to assist with reporting. According to Ashish KS, Parks Division Head for Semnox: “We had several clients speak to us about the challenge of staying on top of what’s happening at the venue when they are on the move. There is no time to do a detailed analysis, they just want some quick views. That’s why we created BizInsights - it’s a dashboard app because it gives you a quick summary of what stakeholders need to know. This includes sales, operations, attractions and sales trends.”



They sought to add a virtual queue component to Tixera as well, which led to TET. According to Ashish KS, “Our vision is to offer our clients a platform that has all the features integrated. We wanted to have a virtual queue system built in-house, but when we went over the solution that TET offered it seemed the next step in queuing solutions. It was a perfect fit.”

The Experience Ticket.com (TET)

About five years ago, park and attraction operator/designer Kees Albers was looking for a reservation system for his Unlimited Snow indoor snow parks. “There are inherent constraints on the number of people who can use the attractions at an indoor facility as well as limited space for queuing,” explains Albers. “Then I learned about The Experience Ticket.com.”

Based in The Netherlands, The Experience Ticket.com, as its founder Peter Rødbro explains, “is essentially a reservation system.” Albers was impressed with TET and ended up investing in the company. Soon after, Rødbro and Albers began discussing ways to apply TET’s technology to other types of LBE venues, including theme parks and waterparks.

Rødbro and Albers are very adamant in pointing out that within the park environment, TET is not a virtual key system. Rather, the guest and their party plan out their days in advance - choosing which rides and attractions they want to experience. Typically, a guest using the system is able to experience a minimum of seven major attractions each day with plenty of together time in-between the rides and attractions.

A simple solution

Under the new partnership, Tixera and TET work together as joint IT suppliers, offering a comprehensive package and custom webpage to the client. To support this, the partners have implemented a simple solution where both systems remain independent but communicate together via Application Programming Interface, or API.

When an online ticket purchase or reservation is made via Tixera’s interface, the guest is given a confirmation code to access the TET online portal for ride reservations, allowing the guest to schedule their entire visit before even leaving home. As Albers points out, “Coming out of COVID, many operators began instituting reservations to attend the parks. This actually makes it easier for us since people are now used to reserving in advance.” To access their reserved attractions and shows at the park, guests can either use QR codes on their phone or RFID wristbands provided by the facility.

Advantages for guests

To the guest, the combined systems are never seen, as they appear to be a single system branded to the park. The TET software is able to determine the popularity of each attraction and route different parties to different parts of the park at the same time of day. Through crowd management and scheduled entry, crowding and queue lengths are reduced drastically. If a guest wants to revisit an attraction or visit one that was not on the itinerary, they

can request it be added via their mobile phone, at which point TET will modify their plan.

If the reservation is not available, they can join a standby line, which, according to Rødbro and Albers, averages only 20% the wait of a standby line paired with a typical virtual queue. Albers points out another advantage: “In some virtual queue systems, the virtual line bypasses the preshow, while the standby guests experience it. Because backed-up lines are not an issue, everyone can experience the preshow with the system, which often gives important backstory for an attraction.

“Sometimes when a family goes to a park,” continues Albers, “the queues are endless. Parents are not willing to wait two hours in a queue with their children. If the visit is preplanned, they know they will experience what they want. There’s no disappointment.”

Advantages for operators

Park owners receive their own advantages from the system. According to Albers, “Having a system like this is as much a marketing advantage as it is an operational advantage.” The system is adaptable. If a ride is down for the day, the park can change guest agendas to reflect the closure and suggest other attractions nearby. Because the system’s algorithm routes different parties to different parts of the park at the same time, the dispersed crowds allow for an increased park capacity of 15-20%.

As Semnox and TET have learned through their current installs, when the guest experience is improved and queues are eliminated or drastically reduced, guests tend to spend more money on ancillary expenses such as souvenirs, games and food.

Pass holders and other venues

The biggest growth factor in the international theme park market has been with membership and pass programs. While Tixera is able to manage sales and loyalty programs for this sector, TET adds another element in keeping track of which rides each pass holder prefers. This simplifies the reservation process each time a guest decides to revisit a park.

TET is also working on integrating the TapeMyDay off- and on-ride photo/video components to tie in with the reservation system and Tixera’s cash-free purchase system. This new level of integration will be the standard for the Miko’s World IP snow parks currently in development by Albers’ Unlimited Snow. Even beyond snow parks and theme parks, the combined Tixera/TET system is designed to meet the needs of waterparks, standalone attractions and even museums. Albers points out that the system can be used for reserving access to a museum’s most popular galleries or special exhibitions.

That theme park manager I interviewed years ago shared an observation: “If we get everything to work together, my staff will be happier and will be more productive.” The Tixera/TET partnership has the ability to do this by simplifying and integrating its solutions and to dramatically improve the guest experience as well. •••

Continental success

European parks grow within and outside their borders

by Jordan Zauha

The pandemic disrupted normal business cycles, but four major players in Europe - Puy du Fou, Futuroscope, Efteling and Merlin Entertainments - opened new attractions, broke ground on international projects and even opened new theme parks.

Puy du Fou

It was only in 2020 that Puy du Fou represented a single theme park enterprise. As 2021 begins to wind down, it is an international theme park operator working toward its third park. The crown jewel of Puy du Fou's recent additions is its second theme park in Europe - Puy du Fou España - which opened March 27, 2021, making Puy du Fou an international enterprise in theme parks along with its live spectaculars which already delights guests beyond the French border. Celebrating and recalling pivotal moments from the nation's history, Puy du Fou España represents a massive €183 million (nearly \$214 million) investment delivering its signature storytelling to a Spanish audience. Just 40 minutes from Madrid, the park makes its home in Toledo, targeting the nearly 3.5 million visitors that step within the city each year.

Despite the challenges brought by the pandemic and nationwide restrictions, Puy du Fou forged ahead on three projects that were in development, expanding its French venue with additional hotel rooms (Le Grand Siècle), a conference center (Le Théâtre Molière) and an all-new nighttime spectacular (Les Noces de Feu), totaling €62 million (\$72.5 million) across all three investments.



El Sueño de Toledo at Puy du Fou España
Photo courtesy of Puy du Fou

Even as the company begins to eye its third theme park in Shanghai with the Puy du Fou Asia project, preceded by its SAGA show concept premiering in the city, the themed entertainment creator and operator still promises to invest in the European market, specifically by supporting its Puy du Fou España park with another €242 million (approximately \$283 million) over the years approaching 2028. It has also extended its contract until 2026 with Efteling Park (The Netherlands) on its live stunt show Raveleijn, a collaboration to enhance the staple show that began in 2013.

Futuroscope

With its contemporary artistic aesthetic and architecture, Futuroscope has brought entertainment innovation to France since its opening in 1987. Begun as a display of specialty cinema pavilions, over the decades Futuroscope has expanded its offerings by adding amusement and theme park attractions to its property. This direction continues to motivate the changes Futuroscope made through 2020-2021 and into the future.

Before the pandemic began, Futuroscope was developing its family roller coaster - Objectif Mars (Destination Mars) - originally planned for a late March 2020 opening. After closing due to health restrictions and regulations, the park opened the coaster upon reopening its facilities on June 13, 2020, ensuring returning guests an all-new experience as part of its reopening.

Looking to the future, a shareholders' agreement was unanimously approved for an investment plan over the ten-year span between 2020 and 2030, with a majority of this investment to be spent before 2025. The goal of the investment aims to bring more attractions and a wider variety of experiences that will allow Futuroscope to rise as a holiday spot including overnight accommodations for visitors.

Part of this capital will go toward a 76-room space-themed hotel to accompany the park, aiming for an early 2022 opening. A second, eco-friendly family lodge resort will open the year after. Continuing to diversify the park's offerings, Futuroscope will round out the first half of the decade-long improvements with a themed indoor waterpark, Aquascope. With two new hotels, a waterpark, and the addition of three major attractions within its current park, Futuroscope continues to diversify beyond its original premise and aims to become a top resort destination in Europe, covering an area of 22 hectares (2.3 million square feet) and projecting an increase of attendance to 2.5 million visitors per year.

With these plans, Futuroscope has set aside €60 million (about \$70 million) for the three major attractions it promises and another €104 million (\$121.5 million) which encapsulates its two hotels and indoor waterpark. The property is positioned as an economic engine for the region through job creation, construction needs and other ancillary developments.

Efteling

Efteling Park cultivated new inclusive and culturally relevant additions throughout the 2020 and 2021 seasons. The beloved Dutch theme park was entertaining folks back in 1952 before Disneyland's creation and has a strong regional following.

Investing over €2.8 million (\$3.2 million), Efteling adapted its former Adventure Maze and Monsieur Cannibale attractions into a themed area entirely dedicated to stories of Sindbad the Sailor from "Tales of the Thousand and One Nights." Efteling chose to collaborate with Richard van Leeuwen from the University of Amsterdam. Van Leeuwen specializes in Islamic Studies and worked with Efteling to bring a positive, inclusive and educational approach to the storytelling of this area for guests to enjoy.

Appealing to an even wider variety of visitors, especially the young, the theme park replaced its Polka Marina Pirates Carousel with Nest! - an inclusive playscape designed for children with a variety of abilities and echoing the themes of other attractions within the park.

Beyond rides and attractions, Efteling showcases its commitment to storytelling in its new eatery opening this winter, located adjacent to its new Max & Moritz family coaster. This coaster was nearly complete before lockdown restrictions throughout Europe occurred and opened in June 2020, just one month after the park reopened to the public. Bäckerei Krümel will offer both indoor seating for 125 guests and outside seating that spills into the square with 50 seats.

Ensuring even more experiences for visitors in the future, the Dutch Council of State fully approved a decade long framework for the park's growth and development plan, collectively known as Wereld van de Efteling 2030 (World of Efteling 2030).

Merlin Entertainments

Second only to Walt Disney Attractions in terms of global attendance to its venues, UK-based operator Merlin Entertainments continues to be a major player, not only in its home region, but the world. The company not only continued to open new attractions during the pandemic, but also has promised new offerings, attractions, expansions and investments around its properties in Europe and the Middle East, Asia-Pacific and North America. Merlin's variety of venue size and locations continues to drive tourism in more regional markets and creating jobs and work for those local communities it aims to entertain.

Already enjoyed by guests during this past summer holiday, LEGOLAND Windsor Resort opened the new LEGO MYTHICA: World of Mythical Creatures themed land, representing the largest single investment for the resort after its initial opening 25 years ago.

Peppa Pig, the hit children's television character and show, takes center stage for many of the expansions and investments by Merlin. This includes a Peppa Pig World of Play indoor play center at the Westfield Mall of The Netherlands. The 1,500



Concept art for the new Sindbad attractions at Efteling.
Image courtesy of Efteling

square meter (over 16,000 square feet) play area epitomizes Merlin's ability to craft family entertainment experiences across a broad range of venues, offerings and audience sizes, from small children's play centers to large-scale resorts, which Peppa Pig will boast in China.

Merlin Entertainments' famous Madame Tussauds attraction will find a new home in Budapest next year, bringing its lifelike museum of celebrities.

Currently Europe is home to three LEGOLAND Resorts (not including the newly opened LEGOLAND waterpark at Gardaland): LEGOLAND Billund in Denmark, LEGOLAND Windsor in the United Kingdom and LEGOLAND Deutschland, the newest European LEGOLAND park, which opened in Germany in 2002. Merlin has publicly announced interest in adding a fourth European LEGOLAND park to its portfolio, focusing particularly in the Benelux region. They noted the area of Gooselies, Belgium, as being of particular interest during site studies.

Outside Europe, Merlin continues to expand its established properties while also developing new parks and resorts at major cities around the world. As previously mentioned, Merlin just broke ground this summer on their first standalone Peppa Pig Resort in Meishan, China, which will include a Peppa Pig theme park and a hotel themed to the beloved children's series. Merlin will also position their SEA LIFE aquarium right next to the park.

Peppa Pig will also be making big waves in the United States where a Peppa Pig theme park will open right next to the LEGOLAND Florida Resort, expanding the options for family fun on their Winter Haven, Florida, property in February 2022.

Four more LEGOLAND properties will call Asia home: Korea, scheduled to open in 2022; LEGOLAND Sichuan set for a 2023 opening; Shanghai, where a 2019 agreement greenlit the nearly \$550 million project, scheduled to open in 2024; and Shenzhen, a \$1.08 billion project which broke ground this summer.

As for its smaller attractions, Merlin will open a Madame Tussauds attraction in Dubai this October, continuing its dynamic strategy of both premier large-scale attractions and recognizable small-scale attractions. •••

IAAPA time!

Patrick Haller leads the IAAPA marketing team

interview by Martin Palicki

IAAPA announced Patrick Haller has joined the organization as vice president of global marketing, communications, and membership. He will lead the association's global marketing, communications, and membership strategy and plan implementation. Haller brings more than 15 years of association marketing and communications experience to his new role. He has previously served with the National Business Aviation Association, the American Institute of Architects and the Aircraft Owners and Pilots Association.



Patrick Haller
Photo courtesy of IAAPA

Tell us about your background and what led you to IAAPA.

The opportunity to join the IAAPA team was too great to pass up! I've spent the bulk of my career helping organizations grow by communicating the value of membership. I believe in the work associations do, helping members navigate difficult circumstances - as we've all experienced in the past 18 months - helping companies operate more effectively, and helping individuals grow in their career.

With your experience in associations, tell us how you think the role of associations is evolving, particularly in light of the pandemic.

Associations at the core exist to advocate on behalf of the industry. I don't think that element of our role changes, but I do think how we achieve positive outcomes for the industry requires more member engagement than in the past. I also believe that associations have a responsibility to help members navigate information overload to identify best practices in safety and operational efficiencies. Associations are also a place where members can learn from each other and face the biggest challenges of the time. Whether those are health and safety related, staffing issues, implementing new technologies, or navigating difficult supply chains, members can and should learn and grow from the knowledge of one another.

What tips do you have for members wanting to get the most out of their IAAPA membership?

To get the most out of your membership, get connected! Make sure all your staff has access to the website resources and get the most important industry and association updates from the IAAPA News Daily e-newsletter. Participate in regional opportunities for networking and education as your schedule allows, and if you have the passion to help further the industry, consider joining a volunteer committee in your area of expertise.

IAAPA offers so many opportunities to learn and connect through the entire year!

What will drive your role with IAAPA?

I'm thrilled to be working with a great team of experts to market and communicate the global IAAPA brand on behalf of our members. We look to increase awareness of IAAPA's mission and resources to all members so they can benefit from the depth of knowledge that exists in the industry on important topics like safety, operational efficiency, innovation and sustainability. We're also working to ensure that we tailor our benefits, products and services regionally so that no matter where our members are located, they find benefits that are relevant to their needs.

What are you looking forward to most about the upcoming IAAPA Expo in Orlando?

IAAPA Expo is the premier event for the global attractions industry. I look forward to not only attending but being a part of the Expo.

In September, we successfully hosted IAAPA Expo Europe, and with it, the return of large, in-person events. Our team developed and executed a comprehensive plan that included new protocols aimed at ensuring everyone was safe during the Expo. That helped make us even more excited for IAAPA Expo - we knew we could adapt and still deliver the quality events IAAPA is known for and deliver meaningful experiences for attendees and exhibitors.

On a personal level, it was great to work alongside the IAAPA team and meet my colleagues from the IAAPA EMEA office. I also enjoyed beginning to get to know many of our members, and I look forward to meeting more colleagues and members in-person in November.

Give us a preview of what attendees can look forward to at this year's Expo.

IAAPA Expo has always been the place where the global attractions industry looks ahead and shares new innovations and new ideas. We are excited to have many exhibitors host press conferences from the trade show floor. These announcements add to the excitement of the event, but also are significant examples of how the industry is constantly evolving, adapting - and surprising us!

We have more than 90 education sessions taking place throughout the week, with topics covering all areas of the industry. While some sessions were originally in place for IAAPA Expo 2019, we also have many key sessions addressing issues we dealt with through the pandemic and how we can continue to recover, adapt and move forward.

We've also added "EDUTalks" - mini sessions that will take place right on the trade show floor. These sessions are short and address key issues in our industry in a casual setting and are designed to help connect attendees as they explore the trade show floor.

The return of IAAPA Expo traditions is just as important. Richard Zimmerman, President and CEO of Cedar Fair Entertainment Company, will be the keynote speaker at the GM and Owners' Breakfast. The Lunch and Learn will feature Josh

D'Amaro, Chairman, Disney Parks, Experiences and Products, and the creative team behind "The Amazing Adventures of Spider-Man" attraction at Universal's Islands of Adventure make up this year's Legends Panel.

Finally, we are excited to once again host our charity events supporting Give Kids The World Village. The golf tournament and Fun Run are beloved traditions, and we know the Village needs our support more than ever. Both events are fun and leave a lasting impression on all who take part.

How do you see the role of in-person and virtual events in today's industry?

The attractions industry is an in-person industry designed to bring people together for shared experiences. In-person events hosted by IAAPA exist for the same reason. We look to bring together the newest and most innovative ideas on our show floors and in our education to help the industry move forward and grow.

Virtual events have a place in that overall strategy by helping to extend the reach of information when face-to-face isn't possible. Nothing can replace the excitement and energy of seeing a new attraction for the first time. That said, new technologies in virtual reality continue to blur the lines of the real and virtual spaces and I think this trend will continue to expand. •••

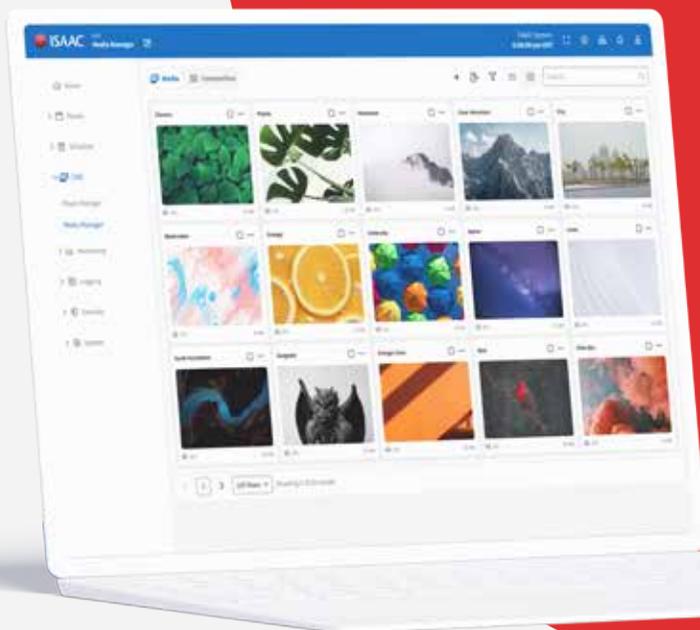
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Mitikah in Mexico City, Mexico
All images courtesy of Stantec

The mall of the future: less retail, more content

For the mall to survive, it will need to embrace nontraditional uses and “messy vitality.” Here’s how to do it.

by Daniel Aizenman

Malls are important, they’re some of the most visited places in our communities, frequented by billions of people around the world every year. To survive, however, they need to become places that are about much more than retail transactions. Honestly, malls are in decline.

Hundreds of American malls shuttered after the 2007-09 recession. And retail researchers estimate 25% of America’s roughly 1,000 remaining large malls will close over the next 3 to 5 years.

What happened?

Malls rely on department stores and hero retail tenants as anchors that draw people and support hundreds of other retail tenants nearby. These anchor tenants didn’t anticipate how online shopping would compete with their mall presence. In many

cases, they didn’t adjust to omnichannel or improve the physical customer experience to remain essential and competitive. Late to adjust to a new online shopping reality, they saw a decline in the customer experience, traffic, and sales.

Right now, the industry is in turmoil.

The pandemic, which closed malls temporarily and pushed consumers to eCommerce and overnight delivery, has accelerated the downward trend for retail malls. What we thought would happen over the next 5 or 10 years is happening now.

The once stalwart retailers that were formerly reliable anchor tenants are now entering bankruptcy. UBS researchers say that 9% of the 80,000 retail stores in the US will shutter across the country by 2026. They predict eCommerce sales will rise to 27% of the total retail sales by then, up from 18% today. Bad news for

retailers signals bad news for struggling malls. It will eventually drive significant openings in mall real estate.

Why malls still matter

But malls are highly public environments. For communities that don't have urban or historic downtowns, they function as a heart and central gathering place. They're the closest thing to a public forum, a place to see and be seen. When the mall starts to decline, these cities and towns lose a gathering space—and businesses and jobs, too.

But malls are not completely going away. They have a lot going for them. They're well located and still suited to provide incredible experiences. In fact, the decline of the traditional mall represents an opportunity.

Opportunity to shift

Many of the malls that remain have lost their anchor tenants and hundreds of surrounding lessees.

This may sound bleak. But it's also a chance for mall owners to refresh and redevelop. Freed from leases, in the extreme case, they can "demall," taking out a department store or anchor tenant. This unlocks all kinds of possibilities for serious redevelopment.

Phenomenal candidates for redevelopment

Malls have a lot going for them as places with assets and infrastructure, sometimes even public-transport access. They are semi-independent properties in the sense that they have their own infrastructure including access to water, power, and lots of parking. Malls are often well located, frequently at the intersection of well-traveled highways.

Mall reuse—now is the time

It's a tumultuous time. Whomever falls asleep at the wheel will lose out. The mall owners that are taking initiative will win in the long run. Some owners want to simply demolish and begin again.

Because of its all-weather access, the indoor mall itself as a sort of a conglomerate of stores and an enclosed environment with a food court (reborn as a food hall) will continue to be a relevant model. But it won't look the same. The model for redevelopment will depend on what the local market can support.

Content and messy vitality

When it comes to the future of malls, content is king. Content refers to the look and feel of the space but also what happens there. Content comes in the form of art, patterning, people, places, information, entertainment, culture, video events, data, sound, hospitality, and texture.



Potsdamer Platz Arkaden in Berlin, Germany



Fox Valley Mall in Aurora, Illinois

As Robert Venturi said, “I am for messy vitality over obvious unity.” This messy vitality characterizes places where life happens. To succeed, malls need to become places that are messy, engaging, and vital.

If it's not about retail, what's it about?

So, the war is over. Overnight delivery won, and physical retail is no longer about the distribution of goods. The physical store is about building brand equity—it's a place where brands make a personal connection with the consumer. So, the mall itself needs to build brand equity—a memorable connection with the consumer that communicates quality.

Our design work for malls and retail outlets has shifted to focus on storytelling, interweaving elements that emotionally connect people to place. There are new ground rules for malls to create vitality.

Three crucial attributes for malls

1. **Content is the new anchor.** Bringing in content is a critical solution. It's about fulfilling people's needs in multiple ways beyond the usual goods and services. This can be expressed in everything from design to events. Content should be sustainable, promote wellness, inspire, and ultimately add value to people's lives.
2. **Experience is the brand.** There's nothing worse than a sea of sameness throughout a 2-million-square-foot environment. It's deadly for the imagination. It doesn't engage. So, it's critical that tomorrow's malls offer visitors a series of experiences—a journey from one side of the mall to the other.
3. **Food, beverage, and entertainment are the magnets.** Food and beverage services are critical for malls. Malls that don't invest in creating an extraordinary food presence and entertainment are going to die. They'll need to devote upwards of 30% of their leasable area to food and entertainment, which is a huge lease strategy shift.

Repurposing and mini cities

Repurposing anchor spaces in malls as gyms or for healthcare clinics is possible and many will do fine. But we're also seeing a trend emerging for temporary uses within vacated anchor spaces—think pop-up events, exhibits, or seasonal retail.

But there are other solutions that are completely new uses for the space that may require us to tear down the anchor tenant or big box and rebuild. Sometimes it's not feasible to redo an existing box.

We will see entertainment, coworking, hotels, offices, even residential—any use that draws people inside—in the mall. Mall redevelopments are primed to solve a lot of the residential needs of cities. After all, there's a lot of land devoted to many of these malls, and all the infrastructure is in place. By varying the uses and bringing in people, you're creating little cities. To hit critical mass, they need to feature uses like grocery stores, another anchor that can pull more people into these places.

Malls have been among our most popular public environments for decades, connecting with millions of people every year. Malls that can add value to our lives will be the places we want to be associated with, the places we come to and stay awhile because they're about more than completing a transaction. Rather than lamenting the demise of what was the retail mall, we're invigorated by the opportunity to reimagine what they could be—essential, vital, and engaging places once more. •••



Daniel Aizenman is Senior Principal, Buildings for Stantec, where he brings his creative vision to the visitor experience for resorts, retail, mixed-use development, healthcare facilities, sports and entertainment, urban districts and corporate offices.



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“ I am happy with the way the system is operational at Fantasy Island. It gives me immense confidence to introduce innovative concepts and ideas in the park and in future projects. Semnox is always one step ahead in terms of technologies and their support. ”

- Edward Mellors, Owner - Mellor's Group (Fantasy Island), Uk

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Twists and turns

Sohret Pakis of Polin Waterparks talks about the new Stingray attraction and the industry

interview by Martin Palicki

As the attractions industry begins to resume in-person events and trade shows, InPark turned to Sohret Pakis, Polin Waterparks' Director of Marketing & Communications for more information on how the company is doing and what things they will be presenting at WWA, IAAPA and other industry events.

Are you seeing strong recovery in the waterpark sector?

It's been a challenging time for everyone in the industry. But we're very optimistic, and we see recovery. We have been keeping busy with our clients around the globe and continue to develop new slides and technologies, even throughout the recent tough times.

Some waterparks did comparatively well even in 2020 - they had the good fortune to be able to open in time to capture peak season. But I think another reason our industry will resurge quickly is that waterparks naturally place high priority on hygiene and clean operations, so they were already in a good position to address the concerns that come with a pandemic.

Waterparks have a higher profile nowadays, with developers and operators recognizing their value and versatility more and more. They can take the form of leisure destinations with unique features, combining spa luxury with family fun. They can be

differentiators and brand-builders for hotels and integrated resorts. As second or third gates for theme park complexes, waterparks add variety and motivate guests to stay longer. They also integrate well with malls, aquariums, marine parks and zoos. And then there's the trend toward developing indoor waterparks or adding a substantial indoor component to a waterpark in order to extend the season. Bringing the waterpark indoors also expands the potential site locations.

Another benefit is that the capital outlay and time to ROI are generally less than that of a theme park.

Water is just a universal theme and attraction in all parts of the world - and water experiences are our specialty.

Tell us about Polin's new Stingray attraction and how parks can make it their own.

We are pleased and proud to announce the new Stingray dueling waterslides. The Stingray is a high-capacity, customizable attraction in a small footprint that promises to become an instant icon in any venue. It has four different tube slides weaving in and out of the same structure and interacting with one another in unique ways. The enclosed flumes culminate in two gigantic bowls before guests race to the end. The two bowls contain



An artist's rendering of Polin's new Stingray attraction, featuring four slide paths. All photos courtesy of Polin



Sohret Pakis

two unique paths in each - one that is larger, faster and more exhilarating and one that is smaller, dynamic and entertaining.

The different ride experiences are impacted by the guests' choice of lane and the combination of rider weights, making the ride quite repeatable. The bowl experiences at the end of the ride are set up in a mirror fashion so one side looks like the other and riders will appear as though they are coasting along the stingray's back.

We designed it to look like a giant stingray you would find in the ocean, but the Stingray can be themed in any way the client would like. We think it's really important for parks to have a wide variety of rides to choose from, and what better way to make those rides stand out than with a dramatic theme and decoration? Even though the design was inspired by a stingray, it doesn't have to be ocean- or animal-themed. Our in-house fiberglass studios can create any theme to fit in with any waterpark - and this is well demonstrated in the many different ways that our King Cobra has been themed over the years. In many ways Stingray is very much in line with the King Cobra attraction, which has been celebrated many times through the years. We think operators will embrace Stingray with the same kind of enthusiasm.

The introduction of King Cobra marked a turning point for Polin. What has made it such an outstanding success for the company?

King Cobra was one of our first iconic signature slides when it debuted in 2010. The design was patented and, with installations around the world, has won awards consistently year after year, including a first-place European Star Award in 2020. It successfully brings together a dual racing tube slide in a compact package with intricate theming that attracts a lot of attention.

King Cobra demonstrates how a water attraction can be a popular visual spectacle and unique storytelling element for a park as well as a great ride.

Polin: A history of innovation

Polin Waterparks is proud to be recognized as one of the few research and development (R&D) centers in Turkey and the first firm to receive certification as an official R&D center in its sector. Here are some highlights of Polin's R&D innovation over the past 15 years:

2006: L-RTM technology, a new way to create waterslides

2007: Translucent RTM technology, allowing light to shine into waterslide tubes

2008: Natural Lights and Special Patterns, different translucent panels and patterns built into the slide

2010: King Cobra, a highly themed waterslide experience

2012: Magic Sphere, Spheres & Space Shuttle, new components for hybrid waterslides

2013: Next Generation water-play structures

2014: Slide'n Roll technology, music systems for waterslides using the slide as a speaker

2015: New art options for waterslide design

2016: Game Technologies division, merging gaming with waterplay experiences.

2017: Splash VR, a virtual-reality experience for waterpark guests that does not impact the structure of existing waterslides

2018: Glassy, a fully transparent, composite waterslide.

2019: Time Rider, a themed, multi-path slide tower giving riders different experiences every time

2021: New Stingray attraction and UTEXTURE technology •

While we initially designed King Cobra with a snake theme, it's incredibly versatile in terms of the look it can have via custom theming. In the past decade since it was first introduced it has been themed as various cartoon characters, as other animals and even a sailing ship. At Texas Water World, it became "Cobradillo" with an armadillo theme.

I think these elements (visually distinctive, racing, thrilling) are things that King Cobra also shares with Stingray and will also make this new slide popular for waterparks.

Tell us more about Stingray’s potential for customization and integrated technology.

It is designed to be built for both indoor and outdoor waterparks. It can be built with our “Natural Light Effects” which allows light to stream into the tube through translucent colored stripes and our “Special Pattern Effects” which allows different patterns and designs on the surface of the slide. For example, it could be designed to look like granite, as though riders were sliding through a channel carved out of a mountain.

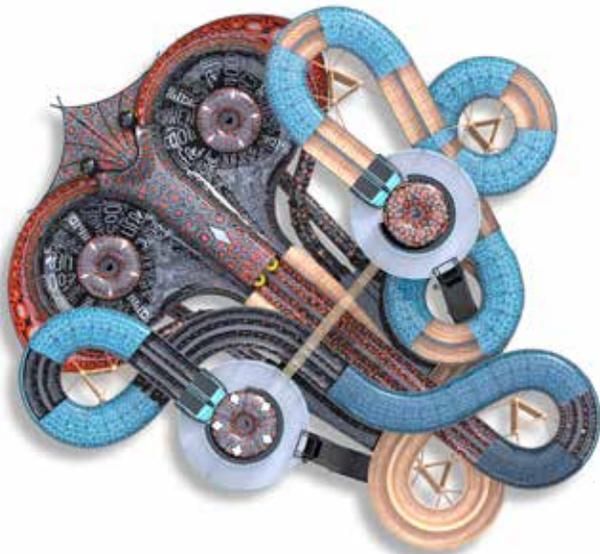
Stingray also comes with a suite of special effects. Guests will hear the sound of the Stingray’s wings flying through water as they spin inside the huge inner bowl. In the outer bowl, which is more enclosed, guests will explore the dark and mysterious ocean with a sound and light show. This contrast in special effects further sets the experience of the two paths apart.

Finally, it can also be outfitted with our VR applications, allowing guests to enjoy a completely new themed ride experience every time.

We’re looking forward to seeing how operators and designers make it their own.

Do you think more waterparks should be integrating theming and storytelling?

It is certainly a trend that has been accelerating in recent years, and Polin has been a leader in bringing themed attractions into the waterpark space. For a long time, with only a few exceptions, waterparks were mostly a collection of fiberglass and concrete structures with very little attention paid to the theme or story of a park. That is no longer the case, and as competition increases, theming is a distinctive way to differentiate one park or attraction from another. I’m particularly proud of our work on Land of Legends in Antalya, Turkey, which really did a wonderful job of



Stingray incorporates four slides into one structure, allowing for different ride experiences in one small footprint.



Stingray is modeled after the sea creature that bears its name, though other themes can easily be applied.

blending that theme park environment with a waterpark. [see “Turkish Splash,” InPark Magazine issue #64, 2016]

For our part, we invest heavily in R&D and in developing new technologies [see sidebar: A History of Innovation] that elevate and differentiate the slide experience for guests. I’m amazed by the creativity our team brings to projects and their willingness to explore new concepts and ideas. I think that is reflected in our catalogue of products and our variety of projects.

What other technology is Polin working on?

Part of what helped us make such a visually appealing attraction like Stingray is our new UTEXTURE technology that allows theming and designs to be created directly in the material as the slide is being made. As you know, Polin was instrumental in developing the LRTM (Light Resin Transfer Molding) process of waterslide construction and we have continually added ways to improve the slide experience for guests.

UTEXTURE allows park owners and designers to essentially create any kind of design and embed it in the slide. The images can be seen on the inside and outside of the slide. It could look like wood, honeycomb, graffiti, brick, just about anything.

How does the UTEXTURE process work?

UTEXTURE is based on the new generation VARTM (Vacuum Assisted Resin Transfer Molding) production technique. However, UTEXTURE can be applied to any composite manufacturing process, such as hand lay-up or RTM.

In addition to the unlimited theming possibilities, UTEXTURE is durable against UV and pool chemicals and features a glossy finish.

Will you be bringing samples to IAAPA Expo in 2021?

Yes, Polin will be exhibiting at the IAAPA Expo in Orlando in November 2021. We will have a model of Stingray and samples of the UTEXTURE technology. We are happy to share more information to attendees during the show. To set up a meeting or to arrange a virtual demonstration email polin@polin.com.tr. •••

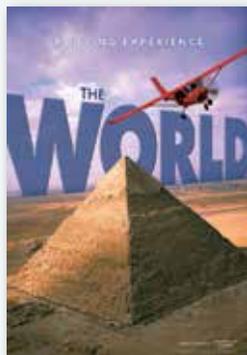
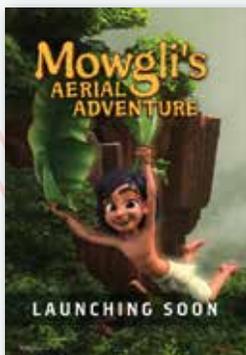
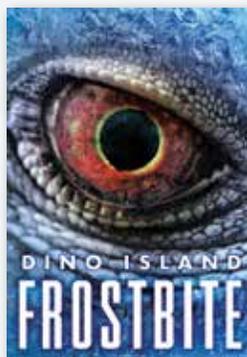
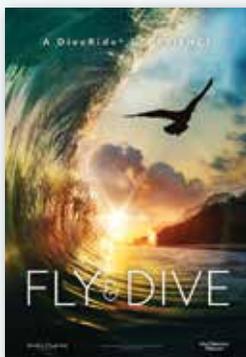
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