



inpark MAGAZINE

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ON THE COVER

SeaWorld Yas Island opened in Abu Dhabi in May 2023. InPark’s Joe Kleiman was on hand for the grand opening. Explore the park through our special section, starting on...

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Will Saudi succeed?

Martin Palicki,
Publisher

Attending the Saudi Entertainment and Attractions Expo this spring in Riyadh it was clear that the industry is invested in the Kingdom of Saudi Arabia (KSA). The trade show floor was full of vendors ready to help build the entertainment business in KSA. Additionally, the aisles were bustling with buyers – reportedly mostly from KSA – looking to advance their developments.

The money is there to back it up. Crown Prince Mohammed bin Salman’s Vision 2030 is an ambitious plan to wean the country off its dependence on oil revenues and diversify its economy. If that sounds familiar, it’s the same strategy the United Arab Emirates (UAE) employed several decades ago to some level of success.

There are three pillars to the Vision 2030 plan: A vibrant society, a thriving economy, and an ambitious nation. While tourism is only one stated part of Vision 2030, many of the identified projects focus on creating an entertainment and cultural identity for the country and as such rely on our industry to help create, plan and execute many of the components.

Importantly, many of the projects have financial backing. KSA’s Public Investment Fund (PIF) is infusing Vision 2030 with capital. According to their own website, the PIF was started in 1971 to help support “companies of foundational importance to the Saudi economy.” In 2015 PIF was “reborn” to help drive implementation of Vision 2030. The Crown Prince chairs PIF’s board so alignment with his Vision 2030 is essentially guaranteed.

Though PIF invests in projects and companies around the world, it is primarily recognized for its support on five giga-projects within KSA:

NEOM: Focused on creating a city of the future, NEOM is perhaps best known for its all-encompassing urban concept called The Line.

Red Sea: The concept here is luxury and the archipelago along the Red Sea will soon be home to high end resorts and facilities.

Qiddiya: Perhaps most obviously aligned with the themed entertainment industry, Qiddiya will have theme parks (Six Flags is already under construction) and waterparks as well as sports and cultural venues.

Roshn: With a goal of increasing Saudi home ownership levels to 70%, Roshn is targeting the residential real estate space.

Diriyah: Drawing from the region’s historical importance, Diriyah blends cultural and historical destinations within a tourism landscape.

It’s an aggressive portfolio. It’s highly likely not all of it will be built, and certainly not by 2030. But it’s already in the works; shovels are moving sand and dirt, and as evidenced at the SEA Expo, they have already turned to our industry for help.

Will it be successful? The answer from attendees at the SEA Expo varied. It’s natural to draw comparisons to the UAE. While Dubai and Abu Dhabi have successfully put themselves on the global tourism map, many of the themed entertainment projects have not yet found a strong, consistent audience. Perhaps KSA will pay attention to how the UAE market unfolded and make adjustments. Ultimately, it seems unlikely that the Crown Prince will let whatever does get built falter. Even the name “giga project” seems to indicate a concept of “too big to fail.”

Other adjustments might be required in order to really embrace the tourism market. The country’s reputation in regards to human rights and openness to women, queer people and general public dissent are off-putting to some visitors. Additionally, it might be hard to lure international guests to luxury tourism destinations that don’t have alcohol.

It’s important to remember in both the UAE and KSA that this is a long game. The mature markets in North America and Europe took decades to grow. While there may be bumps along the road, developers in the Middle East made the smart decision to involve the industry at early stages in planning, drawing upon the themed entertainment community’s extensive brain trust. I look at the success at Expo 2020 Dubai as one example of big risk and big reward. I think we all hope the same story continues to unfold throughout the region.



Joe Kleiman, Senior Correspondent

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



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.



The 2023 Saudi Entertainment and Attractions Expo was held in Riyadh at the end of May. All photos by Martin Palicki



Michael Thiesen (Lagotronics), AbdAllah Saad (Top Notch) and Scott Ault (Railton Entertainment Design) gather at a TEA-sponsored lunch.



The scale of KSA's ambitions for the entertainment industry were laid out during opening remarks at the expo.



The trade show floor at SEA 2023 was busy and full with both vendors and buyers.



Saudi Entertainment Ventures (SEVEN) was created by the Public Investment Fund (PIF) to help develop the entertainment industry in Saudi Arabia. SEVEN had a large presence at the Expo.



Yael Coifman (LDP) leads a panel on empowering women in the entertainment and amusement industry in the region.

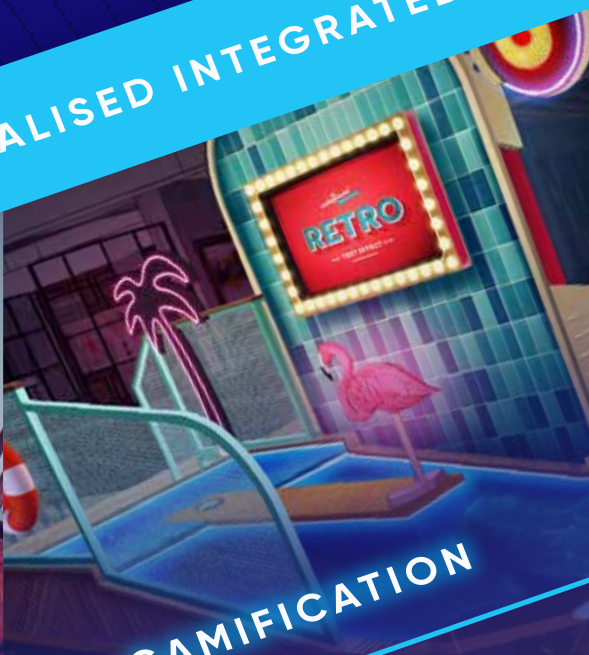
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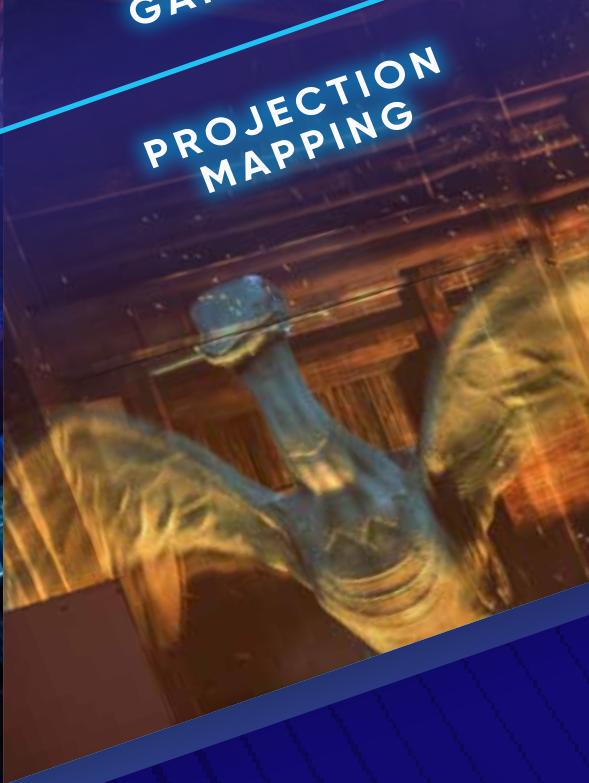
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A slice of InfoComm

by Martin Palicki

The annual InfoComm conference and trade show took place June 10-16, 2023, with the trade show running June 14-16 at the Orange County Convention Center in Orlando, Florida. The show alternates between Orlando and Las Vegas. The show was last held in Orlando during the fall of 2021, after the pandemic caused the cancellation of the 2020 show and delayed the 2021 event from its typical June dates. Looking back, it was very much still a time of recovery for the industry. The 2022 show in Las Vegas felt closer to pre-pandemic energy, with busier trade show aisles and the return of mega-sized booth displays. This year many attendees proclaimed that the industry “was back” and the crowds on the show floor reflected that sentiment.

In addition to education tracks and networking events the show floor hosted several specialty exhibits. First, an interactive display, created by Moment Factory in partnership with Nanolumens, tracked visitors as they walked past a large LED screen, impacting the art being displayed. Creative lighting and comfortable seating areas completed the space.

In another corner, InfoComm set up an eSports gaming area, outfitted with high-tech AV equipment and announcers providing commentary on the game play.

Perhaps the most popular special booth was a partnership between InfoComm and the Pet Alliance of Greater Orlando. Half a dozen playful puppies romped around the Press Paws Playground, delighting show attendees with their antics and providing a cute and cuddly respite from the digital deluge that is InfoComm. Hopefully, some were adopted. The takeaway was clear: every trade show needs puppies.

With over 36,000 visitors and 700 vendors it's nearly impossible to see everything at InfoComm. We met with a select group of vendors to learn more about their offerings for the visitor attractions market.

7thSense

Concealed in a dark fabric-draped booth, 7thSense's new Reactive Projection Mapping impressed attendees. The system uses motion capture technology to triangulate an object in real time. Projectors then map images on the object and follow it around the space. The effect is a projection-mapped object that can move freely and maintain perfect images on the surface.



The Interactive Experience area featured a relaxation area and art installation courtesy of Moment Factory and Nanolumens.

Applications could include projection mapping an animatronic character or ride vehicle, both of which tend to vary from initial programmed movements over time. Reactive Projection Mapping automatically adjusts for every movement.

Barco

Barco officially launched their new G50 projector, the latest in their popular G series. At 6-8k lumens it's one of the most energy efficient projectors on the market, with 18 lumens/watt. It utilizes the same lenses from the G series, can be lifted by one person, and is ideal for museum applications.

Also shipping this month is the UDM projector, now available in a 30k lumen option. The 4k laser 3DLP projector is one of the smallest for that many lumens. It requires only two people to lift and is perfect for projection mapping and special events. It also is energy efficient and received an EcoScore of A, an internal ranking of sustainability audited by Ernst & Young.

Blackwire Designs

Blackwire is a value-add wholesale distributor. They don't make hardware, but they do write software and provide tech support for their clients. For example, a museum might need robust Wi-Fi coverage, so Blackwire offers a heatmap service that gives the integrators a roadmap for where they need to install equipment. It makes installation easier and gives the client confidence in what they are purchasing.

They also offer unboxing, firmware updating and equipment preparation services. They then ship the reboxed equipment to the site (along with a box of snacks) for the installers to complete the job.

Christie

Christie showcased the Griffyn 4K50-RGB, their flagship RGB pure laser projector, achieving 98% of the Rec. 2020 color space. It's one of the smallest 50k lumen projectors on the market and is ideal for themed entertainment applications. Christie's LiteLOC system easily controls power to the projector to keep a steady brightness level for the life of the light source. The light source is also fully replaceable. Typically, they are rated at maximum brightness for 25,000 hours to 50% brightness (meaning, after 25,000 hours of use at maximum brightness it will have dimmed by 50%). By setting the brightness at less than maximum, the life can be further extended.

Christie also has released new accessories for their GS Series projector line including a new 0.37-0.4:1 ultra short-throw lens and a redesigned rigging cage that accommodates the lens. The Christie Intelligent Camera can be used with select Christie 1DLP® projectors, and accounts for different colored surfaces, automatically adjusting the color output based on the projection surface color. It can also automatically color match up to three projectors in a horizontal array when used with Christie's Mystique Lite software.

On the LED front, Christie MicroTiles LED are now available in a .75mm pitch, which allows for better resolution at closer viewing distances. All MicroTiles LED use the same chassis system, so it's easy to combine different pitches based on the distance to the viewer, creating a more cost-efficient LED wall.

Just Add Power

Just Add Power's MaxColor 4K60 Series 2 transmitter and receiver now come with a fiber port for super long distance. While traditional copper wiring makes sense for distances less than 330 feet, fiber can extend that up to several miles, making the product ideal for a theme park.

The company also showcased the Wall Plate Transmitter, which came out last year. It's a plug and play port for control of digital screens. Users simply plug into the outlet and the display automatically switches to their laptop screen. When unplugged, the display quickly returns to its default program. The small outlet unit doesn't get hot even when used for long periods.

Finally, Just Add Power's Warp Engine and Tiling Transmitter systems provide functionality for digital displays, such as in a museum. The tiler allows multiple feeds to be displayed on one large screen, which is better for energy consumption. Warp Engine allows a feed to be displayed in a certain orientation on a screen, even if the screen is moved or is positioned non-traditionally, such as on an angle.

Legrand | AV

Legrand | AV's Chief line is the company's mounting and storage solution, frequently used for mounting digital displays or protecting them in kiosks (think wayfinding stations).

Their Da-Lite SightLine product connects a projector screen to a cable system (rather than fabric) allowing it to raise and lower quickly. The advantage to cable is its flexibility. Because the cable attaches to the screen and comes in rolls, there is no need to spec an exact amount of fabric needed for the precise distance needed for the screen. SightLine is ideal for art displays and museum exhibits.

Finally, Legrand | AV's Middle Atlantic brand is a line of user-friendly equipment racks. There are a variety of sizes and types of racks available for just about any application.

LynTec

Fresh off their acquisition by Chauvet lighting, LynTec recently released updated switching sets and sequencing relay panels for audio, video and lighting control systems. Through a redesign process that included swapping out to different relays, they actually lowered the price by 25-30%.

Matrox Video

Matrox Video says their ConvertIP is the first standards-based encoder/decoder for projection and immersive experiences. They partnered with Panasonic during ISE 2023 to create just such an attraction, where the walls and floors were covered in projections of various artworks. The transmitter and receiver can handle both compressed and uncompressed content and comes in 1G, 10G and 25G options.

Powersoft

Powersoft showed the Unica cloud-based amplifier platform first revealed at ISE 2023. The name has two meanings. First it means one, because the one product covers many applications. Second, it means unique, because Powersoft believes the product will stand out in the industry thanks to unique features.

Unica is designed to reduce points of failure and its cloud-based technology provides a safe, consistent user experience. The amplifier's configuration is stored on a flash card, so that if anything needs to be replaced, the flash card can be quickly transferred to get the system back up and running. Additionally, integrators can easily configure and deploy the system.

Smart Monkeys

Being released in July is the newest member of the ISAAC show control and content delivery platform family, the Foundation (100 series). 25-times smaller than the Prelude 210 series, Foundation is industrial grade and comes with nearly everything ISAAC is known for. It was created for customers that don't need the full range of features of ISAAC's larger siblings but want something small and compact.

ISAAC continues to interface with new industry partners, including Nanolumens (which will start shipping ISAAC Foundations with their LED products), Vertex and ETC...with many more in the works. •••

Visiting Licensing Expo 2023

by Martin Palicki

Licensing Expo, a partnership between Informa's Global Licensing Group and industry association Licensing International, returned to Las Vegas June 13-15, 2023. The event brought together brand owners, retailers, manufacturers, developers and more for the annual gathering. InPark attended last year when the show's theme was Location Based Entertainment (LBE). This year, the show focused on fashion, though many major brands continue to pursue the LBE market.

Supporting that trend, Licensing International announced initial findings from their 2022 benchmarking study. In the world of licensing, LBE still is only a small portion of the \$340 billion market – but it's growing. Last year the segment saw a 67% increase over 2021 and is an area the association has marked as prime for more growth.

Hasbro's vice president of Location Based Entertainment Matt Proulx agrees. "It's been an evolution where the industry now understands the power of experiences for a brand," says Proulx. "There are so many examples of how LBE experiences forge emotional connections with fans and helps to further the brand."

Backing that up is Hasbro's own LBE strategy. In addition to their 2023 plans outlined in InPark, Hasbro is celebrating milestone anniversaries itself and for several of its heritage brands this year and next. 2023 marks Hasbro's 100th anniversary and 40 years of My Little Pony. Looking ahead to 2024, Dungeons & Dragons turns 50, Transformers will celebrate its 40th and Peppa Pig turns 20. Expect more announcements for those IPs soon.

Already, Hasbro City, the much-anticipated Hasbro-themed Family Entertainment Center in Latin America, opened its doors to the public on June 23. Hasbro City's extensive entertainment offering includes attractions such as MONOPOLY The Ride, a suspended roller coaster where the passenger can control the speed; Power Rangers Battle, a state-of-the-art "bumper cars" track with 360-degree turns; Zipp's Royal Flight, and more.

Crayola is another industry leader with ambitious LBE global growth plans. The company has expanded their LBE portfolio with scalable models for different markets around the world.



Crayola's booth at Licensing Expo 2023 in Las Vegas

"Crayola continues to connect color and creativity cross-generationally with kids, parents, and educators," said Crayola's Global Head of Location Based Entertainment Jonathan Linn. "And what better way to further our color and creativity connection than through shared meaningful experiences." The company will announce more of their plans in the pages of InPark and through their own channels just before IAAPA Expo in November.

What brands like Crayola, Hasbro, Peanuts and Rovio (Angry Birds) already understand and have been putting into practice for years is that LBE experiences are no longer just about supporting sales of product. They are valuable entities on their own, not only for the connections they create between consumers and brands, but as revenue generators in their own right.

Of course, one can't have a conference in Vegas and not have some fun! Licensing Expo's opening night party took place at Mandalay Bay's Daylight beach club and featured Ja Rule performing live. An open bar and small bites helped create a comfortable environment for networking.

As the licensing community really starts to dig deep into the LBE space, the attractions industry designers, suppliers and consultants are ready to share their expertise and help create partnerships that move the market forward. As evidence of the long-term potential that exists, Licensing International recently added Bay Laurel Advisor's George Wade to its board, the first LBE professional to be in that role. And, as always, InPark will be there to cover collaborations and report on market conditions.

Licensing Expo returns to Vegas May 21-23, 2024. The European extension of the show, Brand Licensing Europe, takes place in London October 4-6, 2023. •••



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TEA SATE is going to Kansas City!

interview by Judith Rubin

SATE is the experience design conference series created by the Themed Entertainment Association (TEA). In 2023, the annual North American SATE takes place in Kansas City, Missouri, Oct 11-14, (Wed-Sat) hosted at Union Station Kansas City. The SATE acronym stands for Story + Architecture + Technology = Experience.

The conference theme is “Origins and Influencers - the people, places, and ideas that shaped an industry.” As is customary, the TEA Masters presentation will also be part of the program. Every year, TEA selects several individuals to be honored as “masters of their craft,” shedding light on the many, many disciplines that come together to realize projects within the industry.

Registration is open, with earlybird rates through August 31. TEA has reserved a block of rooms at The Westin Kansas City at Crown Center. TEA welcomes inquiries about sponsorship. Visit www.teaconnect.org for more information.

InPark editor Judith Rubin posed some questions to the SATE co-chairs, Shannon Martin of Color Reflections Las Vegas, Gregory Senner of Scenario and Garrick Hansen of EXP. Shannon is a Vice President on the TEA International Board of Directors and has co-chaired SATE twice before: Las Vegas 2022 and Seattle 2019. Gregory is President of the TEA Eastern North America Division and co-chaired with Shannon in 2022. Garrick also sits on the TEA International Board; this is his first time as a SATE co-chair.

Why Kansas City?

Greg: Kansas City holds many little-known origin stories to our industry. Although it is widely known that 2023 is the celebration of Disney 100, many do not know that a century ago, in August 1923, Walt Disney closed his first animation company in KC (Laugh-O-Gram Studio) to move to Los Angeles.

Kansas City has a great legacy of entertainment and boasts a fantastic arts and culture scene. It is also considered the location of the first RD&E development (Retail, Dining & Entertainment; Country Club Plaza).



SATE attendees will have the opportunity to try out Worlds of Fun's newest roller coaster, Zambezi Zinger. Photo courtesy Worlds of Fun

Tell us about the host venue and how you're making the most of the setting.

Garrick: Union Station Kansas City opened as a major transportation hub in 1914. In 1917 it peaked at nearly 80 thousand trains traveling through it for young soldiers leaving the Midwest for WWI, later inspiring the location of the nearby National WWI Memorial and Museum. In 1945, 678,000 travelers passed through the station – a new record. By 1973, it was down to six trains a day and 32,000 annual passengers.

In 1996, voters approved a tax to restore the historic building, and, in November 1999, Union Station Kansas City reopened as a mixed-use venue with shops, restaurants, theaters, exhibit spaces and Science City while continuing to serve rail passengers with four trains a day. Today, it is one of the best such facilities in the US and hosts a wide variety of special events, large and small - from the NFL Draft to TEA Explores (2018).

Greg: Picking a venue for an event like SATE requires a lot of consideration. In the case of SATE KC, it came down to a venue that embodies the heritage of the city, and the cornerstones of what SATE is, Storytelling, Architecture, Technology and Experience. Union Station Kansas City is a venue that celebrates all of these.

The SATE experience usually includes a taste of local attractions. What have you got planned for this year?

Shannon: We may yet have other surprises, but these are the extras we can confirm as of now: Wednesday afternoon (Oct 11) will include a hard hat tour of the restoration of Walt Disney's first company, Laugh-O-Gram Studio. This restoration is made possible by the nonprofit organization, Thank You Walt Disney, based locally in KCMO. Thursday night (Oct 12) includes



Shannon Martin



Garrick Hanson



Greg Senner

optional attendance to an NFL game between the Kansas City Chiefs and Denver Broncos. Friday night (Oct 13) Cedar Fair has generously sponsored a private event at their local KC park, Worlds of Fun. The park is celebrating its 50th anniversary this year and the return of one their most iconic rides, The Zambezi Zinger.

Garrick: All the activities outside the core conference are designed to not only deliver an experience to the individual, but also offer a chance to share that experience with the other participants. We hope that people take full advantage of the offerings - including and beyond the traditional welcome reception, which will be amazing at the historic Union Station. The hard hat tour of Walt Disney’s first animation studio will be powerful and should spark conversation well past the conference itself. Attending a nationally broadcast NFL game helps expand our conversations to include the “fan experience.” Our evening at Worlds of Fun will be VIP the whole way and is slated to be the perfect reward for those staying through Friday night.

Tell us about your collaboration as co-chairs.

Shannon: The three of us are about as close friends as can be, and I believe the chemistry shows. SATE is a lot of work and being in a team that can be this mutually supportive and still feel comfortable to challenge one another really promotes the very best in what we do. I love working with these two!

As the resident expert on SATE, I lead the effort to guide the process and coordinate logistics with TEA staff.

Greg: In my second time working on the event, I have taken on a lot of the planning and coordination with the venues, sponsors and local offerings. As a native of KC, I have the local knowledge and the passion for the city.

Garrick: I am leading the team’s effort to develop and expand the Saturday student agenda, following in the footsteps of past SATEs. We have been involved in a lot of great conversations with students, industry professionals, and professionals outside of our industry, on what can be done to better guide people just starting out or making lateral moves within our community.

Shannon does an amazing job of not only holding up her end of the work, but also putting up with – I mean coaching – Greg

and me through the process. Greg and I, on the other hand, have a lot of experience working together on projects both inside and outside the industry. The two of us had been talking about producing SATE North America for some time and have been heavily involved in TEA Eastern North America events for a number of years, always working towards that goal. Greg joined the team last year, and I was excited to jump at the opportunity to help this year.

We all come from very different corners of the industry, but at the end of the day we have a shared passion for the TEA and are willing to put the hours in to make SATE successful.

What keeps people coming back to SATE, year after year?

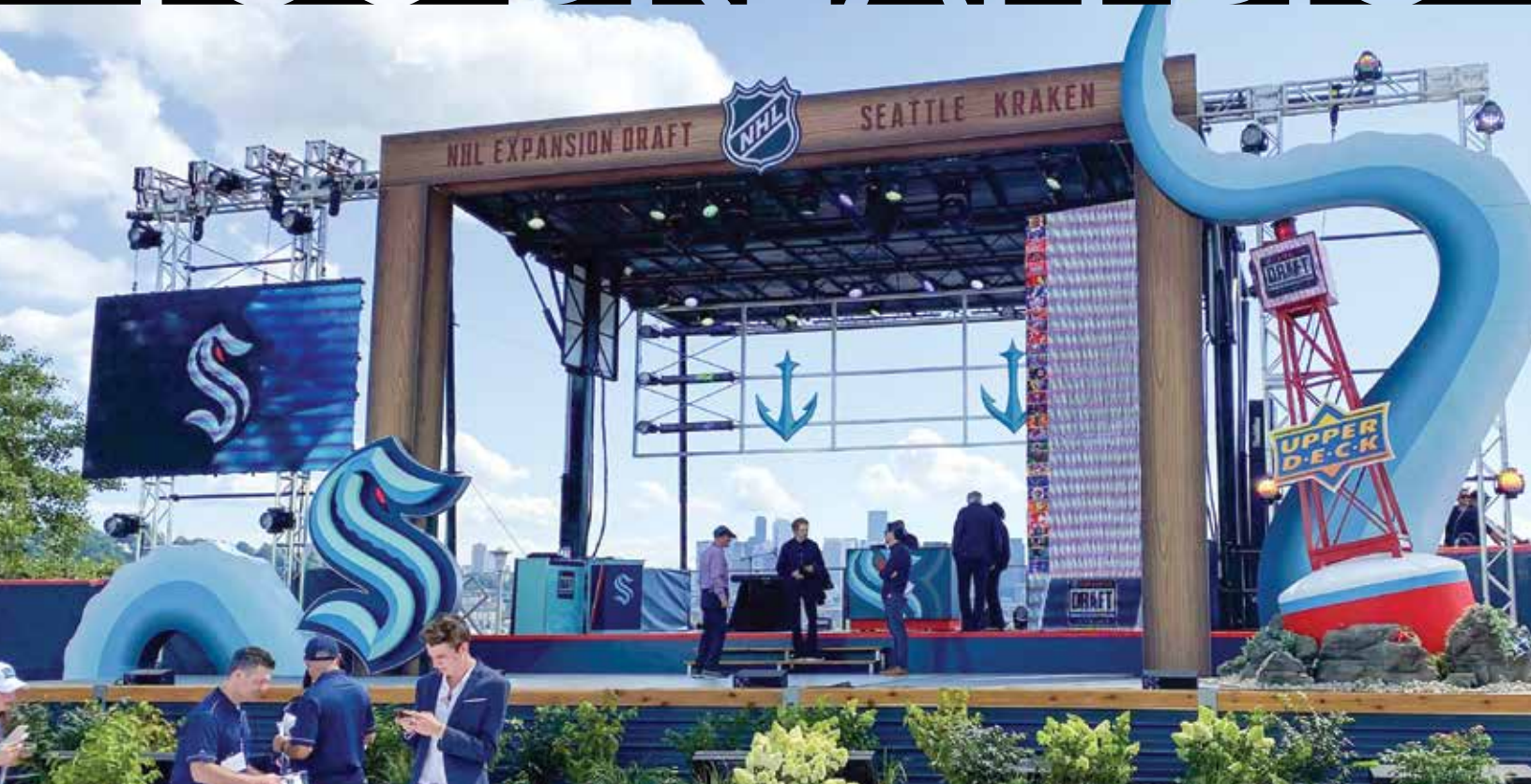
Garrick: To me, SATE has always felt inspiring and full of possibilities. The program is open, the schedule flexible, the location is always different. If there is something new and exciting you want to share with our community this is the best platform to make that happen. Kansas City is an undervalued gem, a location often overlooked by our community despite its foundation in establishing the industry we enjoy today. No two SATEs are ever the same and we can’t wait to show you what makes this SATE unique.

Greg: There has never been a better year or venue to celebrate the cornerstones of SATE in combination with the past, present, and future of the industry. We have an unmatched slate of content and activities that will have SATE 2023 setting the bar for years to come.

Shannon: I’ve always said to anyone I talk to about these types of events or the TEA in general, you get out of it what you put in! One of the great things about SATE is you can learn what’s of interest to those you do business with. You can further those discussions and gain insight on major industry topics. This is your chance to get inspired and motivated. And of course, my favorite - Networking! Networking! Networking! Don’t forget those business cards! Finally, don’t forget to follow up with people you have met after SATE.

Don’t forget to use these hash tags: #SATENorthAmerica #SATENA2023 #ThemedEntertainmentAssociation. There is also a great social media tool kit available at teacconnect.org for all our attendees, sponsors, and speakers. •••

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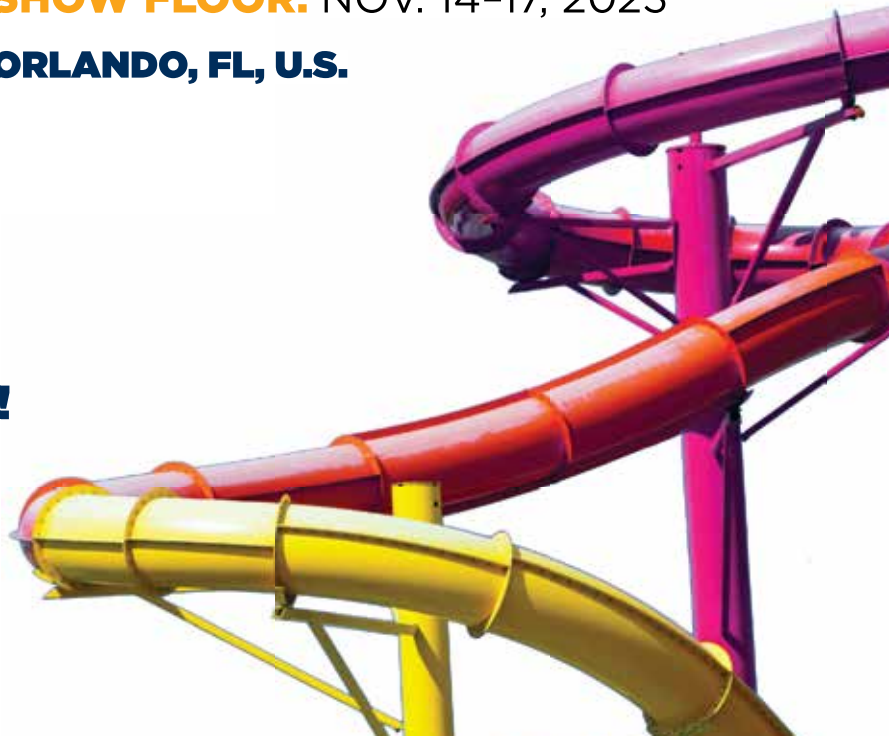
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The building blocks of experience

Attractions by UNIT9 uses the tools of immersion to make lasting connections with guests

by Gene Jeffers

Brands, attractions, theme parks, museums, visitor centers - all clamor for attention, attendance and allegiance. How can brands and venues cut through the chatter and effectively relay their stories? Garry Williams, Business Director at Attractions by UNIT9, explains that it's all about using every opportunity and available tool to make connections.

Building blocks

“To compete and stay competitive within this chaotic environment, you have to build lasting relationships with your guests,” says Williams. “The best way to do this is by using leading-edge technologies as building blocks to create narrative-based experiential journeys that recruit and retain a community of loyal followers and fans.”

Combining strategy, storytelling, high innovation and premier craftsmanship with limitless creative thinking, the Attractions by UNIT9 team helps brands and institutions reimagine what is possible when inviting existing and new audiences to take that journey. It can be virtual, physical, or - often most effective of all - a hybrid journey, propelling guests from pre-visit, off-site engagement and recruitment through to an immersive physical location and then beyond to a personalized post-visit experience. The secret lies in the effective partnering of content with technology, individual with community, initial engagement with follow-up.

The building blocks Williams refers to are based on a spectrum of engagement, from consumptive to participatory. “People want

Above: “The Continental Experience” for John Wick 3 Courtesy UNIT9 and Lionsgate

different things from their experiences; some might be passive, others more outgoing. Some may be new fans, others long term superfans. The idea is to connect with as many people as possible, and to do it on their terms.”

Employing the right combination of technologies for each client is essential for success. “We always begin with the client’s objectives. What story are they trying to tell? What type of guest or fan are they trying to reach? Do they wish to drive attendance, create a must-visit destination, or turn guests into lifelong fans? Perhaps all three?” says Williams. “A well-designed visitor journey generates deeper, longer-lasting relationships between guest and host, reaches into homes and permeates lives. It is a pathway to community, and being a part of a community is a pillar of loyalty.”

Drive personal connection from the start

Journeys can, and for greatest effect, should, begin before guests attend a physical venue. “Smartphones - those tools in everyone’s pocket - are key to unlocking that initial connection,” says Williams. “Bespoke apps are portals through which you invite them to hear your message, to peek into and engage with your storyworld.” Apps can introduce a storyline, product or service, offer information, teach skills, provide challenges and give users opportunities to more fully enter your universe.

Looking to extend the pre-theme park experience while driving attendance to PortAventura World (Spain), LaLiga Entertainment worked with COPA90 and UNIT9 to create The Beat Challenge, an original, immersive experience that reimagined football fan engagement and set the precedent for an entirely new generation of park experiences. While the full experience - a hybrid gaming activation that uses digital overlays to bring PortAventura World to life - is only unlocked in-park, visitors could access a teaser session to test their skills and whet their appetite, bringing the window of venue-guest connection forward and building excitement for their visit.

Encourage active participation

The visitor experience can transition from content consumption to a more active, participatory role once at a destination. Guided and challenged by 200-foot-tall AR footballers, The Beat Challenge players reach new levels of immersion once they enter the PortAventura World gates, unlocking different football-themed games in each area of the park the more they explore.

To maximize their personal connection to the experience, users are able to create their own unique avatars and become characters within their storyworld, allowing them to connect with other visitors, share their experiences and facilitate the formation of communities and social networks,* bonding themselves more closely to the PortAventura universe.

During their journeys as avatars, visitors are encouraged to collect items of value, whether through skill or simple participation. Tokens, weapons, gear, outerwear, all manner of elements can be



Garry Williams

collected, tagged and tracked to a specific avatar. Prompts can encourage deeper explorations and promote visits to physical venues, showing how both digital and real-world elements can be used in collaboration to drive a more immersive in-park experience where the guest becomes the hero.

UNIT9’s “The Continental Experience” activation used a similar method by pulling fans into the world of movie character John Wick, making them an integral part of the experience by giving them freedom to explore an exact replica of the assassin’s famous safe haven built inside One Hanson Place, the shooting location for the films.

“This activation was all about blending realities to extend the John Wick universe beyond the screen and bring it to life around the fans, allowing them to feel like they really are a part of it.” says Williams. Details matter when recreating familiar storyworlds, and this one-of-a-kind immersive event included seven interactive stations and wall-to-wall engaging experiences, each drawing fans deeper into Wick world. Guests checked in at the front desk, collected gold coins, and learned if they were “excommunicado” for the evening. Details included bulletproof suit jacket fittings, immersive theater actors, a ballet performance, special swag, and an exclusive gallery of John Wick fan art.

Offer physical Immersion for all

For standalone attractions, emerging tools offer new possibilities for placing guests within ever more immersive environments. Projection mapping, touch screens, 360 vistas, surround sound, motion bases, animatronics, props, aroma dispensing, VR and AR experiences, haptic devices and more can all be integrated to provide unmatched multisensorial experiences. One of the most

*Having a relationship with an avatar: Pros and Cons, in Psychology Today, Dec. 20, 2022. www.psychologytoday.com/us/blog/society-50/202212/having-a-relationship-with-an-avatar-pros-and-cons

exciting and important benefits of these increasingly powerful technologies, Williams notes, is the ability to ensure that everyone, regardless of capabilities, can now participate in and enjoy these facilities more fully.

Highly themed environments, including museum exhibitions, can be augmented with in-phone apps, offering thematic wayfinding, informational assistance, games and more depending on visitor preference. To mark its centennial celebration, the Smithsonian's National Museum of Asian Art (NMAA) launched Anyang: China's Ancient City of Kings, a special exhibition featuring bronzes, jades, and other Shang Dynasty artifacts from the birthplace of Chinese archeology. UNIT9 collaborated with the museum's team to incorporate three immersive and interactive experiences for different types of onsite visitors, as well as make the exhibitions accessible virtually.

Hidden Dragons AR, a mobile WebAR (web-based augmented reality) scavenger hunt, took museum patrons on a journey through the NMAA's two buildings. It challenged players to find six ancient dragons hidden on virtual replicas of bronze artifacts from the museum's collection. The hunt enhanced the visitor experience and connected the Anyang exhibition (both literally and thematically) with the Ancient China galleries.

For those wishing to engage on a slightly less involved scale within the exhibition, Life in the City: An Anyang Neighborhood offered an interactive kiosk with a touchscreen and a wall-

mounted display that explored daily life in Anyang. A simple and intuitive app on the screen allowed visitors to easily navigate the neighborhood and feed content relevant to the features and topics selected on the map to the wall display.

And to complete the trio of experiences, The Anyang Underground provided an immersive multi-screen video installation that served as a digestible introduction to (and end point of) the overall exhibition. Multiple screens told a single narrative of the first excavations at the Anyang dig site in the late 1920s and early 1930s, and featured archival photos, footage, drawings, and documents. Speakers were placed in the gallery to truly immerse visitors in the world of Anyang.

For patrons who couldn't make it to the physical exhibit, the museum is also launching The Anyang Underground 360, an immersive, accessible WebGL (web graphics library) translation of the physical installations on the NMAA website. "The success of these interconnected projects ultimately hinged on the close bond and partnership formed between our team at UNIT9, and our clients at the Smithsonian's National Museum of Asian Art... Together we produced work that we could never have imagined independently," says Shelley Adamson, Creative Director, UNIT9.

Keep the connection alive

One of the most critical components of the audience journey – and yet often forgotten – is the follow-up. Smartphone and



"The Beat Challenge" AR gaming experience Image courtesy of UNIT9, Copa90, PortAventuraWorld and La Liga Entertainment

computer apps offer a wide range of opportunities for post-visit acknowledgement, connection, feedback and encouragement for repeat visitations. For instance, a gamified digital companion at a venue could still provide content for fans post-visit, from leaderboard results to extra items for their avatar, discounts on merchandise, or the chance to win tokens to spend on their next visit.

Incorporating rich, shareable content for users to relive their experience post-visit is also key. UNIT9's mixed reality activation for Meta during their Rugby World Cup tour around France last year culminated with users unlocking exclusive AR filters to commemorate their day and showcase their fandom, allowing them to share their experience with friends and family at home.

Welcoming the guest home and treating them as treasured members of the family helps retain that connection, builds a stronger community and will ultimately keep them coming back to visit again. "While projects might use some or all of the building blocks on this spectrum to bring their world to life, the story and experience should remain king; the technology is just the vehicle," says Williams. "The client's goals, target audience, story, definition of success and a hundred other factors go into developing a great 360 guest experience."

Only when those issues are understood and addressed can the team turn its talents to building the ideal audience journey block

by block, mapping an integrated universe for each client. "We live in a world where leading-edge, transformative technologies can do amazing things," Williams says. "But it is the purpose and care and passion put into assembling a complete narrative-based experience that creates amazing results." •••

Attractions by UNIT9 creates visitor-centric projects that reset sensorial expectations within museums, cultural institutions, architecture, retail, theme parks and other location-based entertainment venues. Supercharged by the transformative power of technology, the experiences they realize transcend the physical and digital worlds to drive attendance, make places famous and turn guests into lifelong fans. More at: www.UNIT9.com/attractions



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

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Creating magic through interactivity

Alterface blends storytelling and technology for dark ride attractions

by Gene Jeffers

Today's attractions that combine story with themed environments and interactive technologies would have once been seen as magic and sorcery. People interacting with props and media from a distance with a mere push of a finger or flick of the wrist was the stuff of legends and mythology: Merlin and his staff, Pinocchio coming to life, Fangshi wonder-workers and Aladdin's Genie; our cultures and stories are filled with magical tales. In hearing them, haven't we all secretly wanted that ability to have such powers? Interactive attractions can empower us all and continue to expand the capacity to offer increasing levels of "magic."

Looking back to what has been credited as the first interactive dark ride, El Paso at Bobbejaanland Park in Belgium, opened in 1988. Boasting Tex-Mex theming and walking-speed cars on rails, El Paso features light emitting, hand-held devices fashioned to resemble Colt .45 pistols. Riders aim at targets and hits trigger a variety of animatronics as the cars roll through themed corral, bar room, dancehall, and bank robbery scenes. Still in operation today, El Paso has remained true to its origins, offering a unique "forward to the past" interactive experience. A Mack Rides and

Spaceleisure project, El Paso helped pave the way for today's explosion of interactive, immersive dark rides and attractions.

Leading the way

"Interactive attractions have come a long way since El Paso opened the door," says Stéphane Bataille, CEO of Alterface, today one of the leading technology developers in the field. "From targeting systems to conveyance, from media presentation to effects and scoring, there are so many new and emerging technologies available for creating what can seem like magic." He should know. Located about an hour south of Bobbejaanland, the interactive specialists at Alterface and their scenic and ride partners have created a wide range of dark ride and other interactive attractions around the world. Their design and engineering teams customize interactivity to specific storylines and formats to fit client and visitor preferences. They assemble bespoke shooting devices, gameplay approaches, a range of detection alternatives and an all-encompassing show control software into seamless and cohesive attractions. These interactive attractions engage visitors and invite them to become active players in a story.

GAME STYLES

Alterface offers multiple interactive game styles to suit every client's story.



Point & Shoot at targets and score points (*Ani-Mayhem, Warner Bros. World*).



Drag & Drop by "grasping" an element and moving it to a new location (*Benno's Great Race, Ferrari World*).



Collect unique targets; the more collected, the more points scored (*The Smurfs' Adventure, Plopsa Station Antwerp*).



4D Shooter versions add dimension to the mix, creating new challenges (*Maus au Chocolat, Phantasialand*).



Paint layers colors on the viewing surfaces (*Believe It or Not, Ripley's Orlando*).

Casting the Spell

Story and gameplay are at the heart of every successful interactive attraction. "How well the game dynamics mesh with a compelling tale is key," says Bataille. "The pre-show buildup, the integration of critical elements, the dressing of the set, all follow. For the players, you must keep it simple and seamlessly align everything. The technology must remain invisible behind the story, behind the gameplay."

From *Sesame Street: Street Mission* (PortAventura World, Spain) to *Volkanu, Quest for the Golden Idol* (Lost Island, US) to the *Investiture of Gods* (Qingdao Oriental Movie Metropolis, China) to *Basilisk* (Legendia, Poland), Alterface technologies have given guests of all ages "magic" powers and hours of play and enjoyment.

Making it happen

The "simple" task of moving people through a ride is not so simple when conceiving a rich, interactive experience. It has grown exponentially in variety and complexity. Options range from tracked, single-path to multiple tracked paths, to trackless paths - and finally, Alterface's innovative Erratic ride approach. With Erratic technology, instead of a single linear story-path or sets of story-paths, the content and path will change depending on the players' actions, making each visit a unique experience. *Popcorn Revenge* (Walibi Belgium) is an Erratic ride. The technology has been honored with multiple awards.

Player devices have come a long way since that first interactive ride. They can be swivel-mounted or hand-held and tethered to the passenger vehicle or entirely portable. The devices do not have to be gun-shaped, but they must be intuitive and easy to use. For greatest effect, they must be designed to integrate perfectly within the storyline and theme of the attraction, whether resembling an antique firearm or a space ray gun, a magic wand or a firehose.

Creating the magic

The unique proprietary technologies developed by Alterface make it possible to design environments in which players can interact with almost anything: physical scenery, animatronics, video mapping, fog screens, and - most challenging of all - video content. An Alterface system works with multiple video sources, with multiple points of view, and with very wide and curved screens.

Fully engaging players requires a well-planned and programmed show. These sophisticated attractions call for leading edge show control systems that are capable of managing all of an attraction's elements: video, audio, lights, vehicle motion, animatronics, fire, wind, smoke, water and more effects. "Alterface's own Salto™ show control system ensures that everything happens on cue in response to the players' actions," says Bataille. "This is a challenge, as you don't know exactly how each player will react and impact the sequence of events."



Above: The Erratic ride system in use at Popcorn Revenge at Walibi Belgium.
 Below: Kids use a magic wand at The Smurfs' Adventure at Plopsa Station Antwerp. *All photos courtesy of Alterface*

Proper and immediate feedback in real time is important for any successful interactive experience. Players must know if their actions took effect. They receive awards through feedback or the triggering of a new target. Devices vibrate or light when triggered, displayed scores change with a hit, some kind of effect - wind, sound, lights, new screen, car moves - is launched.

The Wander

To expand interactive engagement to the next level, Alterface developed The Wander, a software-based solution that activates virtual/physical hybrid adventures within themed environments. Thousands of visitors can play at a time with multiple days of content dynamically adjusted to their actions. Players can interact with live actors, solve physical puzzles, and affect other players' adventures anywhere in the venue.

Whether applied to existing or newly created worlds, The Wander can deliver always evolving personalized stories to each player. The software suite contains dedicated tools for every step of the product life: creative design; technical design; implementation and installation; operation; and maintenance and supervision. "The Wander is a quantum leap for the world of interactivity," Bataille says. "It sets the stage for more immersive worlds and future innovations."

For more than 20 years, Alterface has focused its unique combination of technical and creative talents on creating that

perfect balance between technology and emotions, delivering solutions to what were once impossible interactive challenges. In the end, these environments exist to spirit people away from their daily routines and into a time and place where they can experience the world in a new way. "You want players to feel they are inside an environment that responds to their actions - inside a living environment," says Bataille. "You encourage them to come back again and again by giving them extraordinary powers and bringing their adventures and stories to life."

Interactivity has indeed come a long way since El Paso first opened its doors, and at Alterface they plan on taking it much, much further. •••





Bruce Vaughn (left) and Barbara Bouza pose with members of The Electric Mayhem Band. Since 2019, The Muppets Studio has been a part of Walt Disney Imagineering. All photos courtesy of Walt Disney Imagineering. ©Disney

Idea man

Bruce Vaughn is back as CCO at Walt Disney Imagineering

interview by Joe Kleiman

We were delighted to have the opportunity to speak at length with Bruce Vaughn on the occasion of his return to Walt Disney Imagineering as chief creative officer.

Unlike many creative executives in the industry, Vaughn did not “grow up in the parks,” nor did he start out in theater. With a literature degree and the desire to be a filmmaker, he started out in the visual effects industry as a producer and cameraman for Bran Ferren’s company, Associates & Ferren, gaining experience in motion pictures, stadium and arena concerts, theatrical productions, museum exhibition, and even industrial design. This foundation would serve him in all his future endeavors.

Vaughn began a 22-year stint with Imagineering when, in 1993, Ferren sold his firm Associates & Ferren to Disney. After leaving Imagineering in 2016, Bruce became CEO of VR experience company Dreamscape and then VP, Experiential Creative Product, with Airbnb. In March 2023, Vaughn was recruited to return to his CCO role at Imagineering. Vaughn’s return follows other recent leadership changes at Disney, including Barbara Bouza having become president of Imagineering in December 2021 and, in November 2022, Bob Iger’s return as CEO of The Walt Disney Company.

Vaughn was also a Professor in Art and Process of Experience Design at the UCLA School of Theater, Film and Television, a post he held from 2004 to 2021.

You're back at Imagineering. Congratulations. How does it feel?

Fantastic, incredible, and very special. I didn't know exactly what to expect after seven years away, but I'm very honored to have the opportunity to be back.

Let's talk about early influences. What got the young Bruce really motivated?

A few things come to mind. I had an aunt who was a photographer, and she got me addicted to photography at a very young age. She had beautiful Nikon cameras. That really opened up the world of art to me. My mother was a nurse and my father was a lawyer, and while they had a great appreciation of art and artists, it wasn't really part of my life until my aunt came around. She was sort of an Auntie Mame type, British and very elegant.

The defining moment for me was when I was around 12 and Star Wars came out. My friends wanted to be Luke Skywalker or Darth Vader or Princess Leia, but I wanted to understand more about George Lucas. I began to discover magazines such as American Cinematographer, and to explore the world of creating and bringing stories to life through the visual medium of film.

Also, my father was sort of obsessed with museums and in particular the Smithsonian. One of our favorite places was the National Air and Space Museum, where I saw To Fly! [MacGillivray Freeman's pioneering giant screen film, released in 1976.] That made a huge impression on me as a kid. I was just blown away.

I come from a strong narrative background. I was an English literature major. I was obsessed with all sorts of storytellers: John Steinbeck, Ernest Hemingway, Gabriel Garcia Marquez ... I love any sort of author who can just bring you into their world.

How did Bran Ferren influence you?

Bran was my first mentor who wasn't part of my family. How it happened was almost random. We lived in Sag Harbor near East Hampton, New York, and Bran had a full visual effects facility nearby. They had just started ramping up to film Star Trek V. I went over for a tour, and it ended up defining my career.

Bran taught me that the real goal in life should be to align your career with your passion. That was a really important lesson for me. I did continue on to a brief stint at law school, but it lasted only a few months. Bran's words were in my head. I thought, "What am I doing? I don't want to be a lawyer. I want to be a filmmaker or tell stories through visual mediums." And when I called him back, he said, "You're smarter than I thought you were. I thought you were going to last a year there." He



Bruce Vaughn (second from right), James Cameron, Joe Rohde and Tom Staggs examine an early scale model of Pandora – The World of Avatar. ©Disney

welcomed me back to his company and honestly, that's what really launched me into this career of immersive storytelling.

It wasn't until you joined Disney that you first experienced a Disney theme park. Tell us about your learning curve.

Really, it's kind of a tradition. The early Imagineers like John Hench — who helped create the original Disneyland — all had these great stories about their own very steep learning curves. They would say, "I didn't know anything about theme parks, but Walt threw you in and next thing you know you're designing restaurants." And the generation before mine has awe-inspiring stories of the things they were thrown into when building EPCOT and Tokyo Disneyland. But they learned so much.

The thing that I found so attractive about Imagineering was that its roots are in filmmaking. That was Walt's first medium, and many of the original Imagineers were filmmakers. I had the great advantage of being brought in as a writer under creative leader Tom Fitzgerald. I immediately learned the brilliance of the talent at Imagineering. I didn't know what to expect, and it really blew my mind.

There was some sort of film element to most of the things we were doing, so I kind of felt that one foot was on safe ground, planted in something I understood. At the same time there were these other dimensions that were a bit of theater, and some that were completely unique, like moving floors and being sprayed with water and other effects.

John Hench and Tom Fitzgerald helped me bridge the gaps between the creative disciplines very quickly. John would talk about how the landscaping under your feet helps with the cross dissolve as you move from the hub to Adventureland, and how the texture changes, and even how the foliage is used. To think that you can do that with architecture and landscape and in the dimensional world — and not just through the lens of a camera — became super compelling to me. It really opened my eyes when John would say things like, "Wherever you travel, think about the streets. Think about how the buildings reveal each other and what's interesting and what's not."

Being mentored in the field like that is extremely valuable. I always encourage our more seasoned people to push the people who are less experienced, give them a chance. I had these unbelievable mentors — Marty Sklar was another one — and I found it incredibly exciting.

Besides film, what are some other influences on themed design?

Creating physical spaces and creating VR spaces are very similar, and it has been fascinating to apply the lessons of one to the other. As a young Imagineer, I was very much into King's Quest and those older video games. In many games you have agency, which means you can wander anywhere. But you really did have to direct the users' focus and movement - because you couldn't

build out worlds as rich as you can now in digital media. You had to find ways to draw people's eyes where you wanted them. In the best-designed games, there would be something to help draw the user through. For instance, of a million doors, one would have a red doorknob.

Focal points are also how we guide people through themed environments. It is the art of distraction, with a bit of magic in it. And throughout the decades, illusionists and magicians have been part of the talent at Imagineering. We don't want to take away all of your agency because that's what makes it fun, but we make sure that you're getting the best experience and following a narrative thread of some sort.

When you do it right, on any platform, it's about the memory. We learned at Dreamscape to create memories by stimulating all your senses — through vibrating floors, the wind, the mist, all the effects. This can deliver a more powerful experience than a typical film.

Where do you see VR and AR going?

Obviously, you run into throughput issues with VR. But so much is changing. It is an interesting medium for connecting people in unique ways. What really intrigues me is AR. We have the ability to overlay onto a world, without the need to completely encapsulate it, allowing guests to walk or move through real, dimensional environments — particularly when the environments are purposefully built to interact with the virtual overlay. It allows for all sorts of interesting storytelling and customizable layers of experience.

I think AR is inevitable. People carry their devices with them everywhere, and it is already becoming part of every experience. Built into glasses, AR is going to increase our capabilities and we would be remiss not to explore that.

Between your stints at Disney, you were with Dreamscape and Airbnb. What is the common thread between them?

It is the immersion into worlds.

In the case of Dreamscape, it was fantasy worlds, very close to what we were doing at Disney, but with a smaller footprint. Through redirected walking and some other techniques, Dreamscape VR experiences give the impression that you're in massive spaces and exploring on multiple levels even though you never leave one level. It is a compelling medium.

Airbnb might seem like an outlier, but actually it's very connected. A big thing for Brian Chesky, the CEO and cofounder, is human connection. Obviously the pandemic really blew that up for people. We didn't realize that we took for granted the idea that we could actually get together and have fun in a shared space.

And as much as we, as experiential designers, go into these fantasy artificial worlds, we're also obsessed with the real world.

As most designers do, I travel and just love to discover places, and that's where you get a lot of inspiration. I really want to figure out how I can unlock the best way to experience a place with authenticity. How to do that is something Bran talked about. Then at Airbnb, you get into the stories because you'll have hosts. If you have a great host, it just brings so much more to the experience of being in that place.

At what point do you consider whether to apply already existing Disney IP or create entirely new IP for an attraction?

There are a lot of things we consider when we're beginning to think about exactly what story or what world or what characters will be in a project. And given we're a global company, there's cultural things we want to think about. We need to know our audience and what is going to resonate with them. Walt knew to lean into the classic fairy tales that were part of the fabric of childhood, but he also explored other stories – of the past and future, of adventures in deep space and under the sea, and beyond. The thing that has changed over the course of my career is the amount of IP that we can consider when developing a new experience, and whether it is the best fit for what we're trying to accomplish.

For our guests, they want to see those characters. They want to be in those places. But there are other stories, real life stories. So, we always try to make sure we've looked at the edges of ideas and then narrow in on what we feel is going to really deliver the most compelling thing for the guest.

We often try to find the best idea, which might sometimes be something that is a little more perhaps just iconic or has some sort of nostalgic kind of feel, or when we're thinking about future things, we look at aspirational things in the real world.

You've said you like to shake things up, keep your staff on their toes, which makes them more productive. Tell us about that.

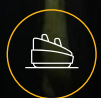
It's sort of a balance. You want people to gain expertise and there is some repetition in that. They're going to continue to do something, but you're always looking for people to evolve and hone their skills. The main thing that I've seen in my career at Imagineering and outside has been leveraging technology. This was very core to Walt Disney as well. He was a master at leveraging technology and one of my other heroes, George Lucas, did the same - just think of what he did to create Industrial Light & Magic, a firm that is now used by so many studios, not just Disney, because they're so cutting-edge and high



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quality. Similarly, Walt endlessly brought in technical innovations to further immerse people into stories. And this also comes from my Bran Ferren days. So I had this exposure throughout my life.

The thing I always encourage in all of our Imagineers is to improve the process of bringing an idea from the initial kernel to its final product. I encourage adopting, playing with, and experimenting with new ways to go about it and technology is usually the most powerful tool.

What current and emerging technologies are you excited about?

Drones fascinate me a lot, and we've begun to use those at our parks in Paris and other places. I think that we're just scratching the surface with what can be done with them. Our nighttime spectaculars are a huge win, but spectaculars don't always need to be done at nighttime. The thing I also love about our business, where we're putting people into physical environments, immersive worlds, is that there are all these dimensions, including above you. We mostly do it in a way that gathers people in one place, focused on one spot. I think with some of these new technologies, like drones, you can begin to think differently about how you deliver those kinds of shows and how you can spread it out or pepper these kinds of experiences throughout a day.

I'm excited about where advanced technology could take us. Some of us get resistant to new technology as we get older, but when you're in a dynamic place where there's a broad spectrum of people in various phases of their careers from just beginning to incredibly seasoned, I love this idea of reverse mentoring. Wisdom is being passed down from those who have the most experience, but they're also learning from people bringing in new ideas and ways of doing things. I learned that from my students at UCLA when I was a professor there, and I hired many of them as interns many years ago, because they would come in and literally, with the new digital tools and other things, revolutionize how we could go about developing projects or demonstrating projects or getting prototypes up fast.

The faster you can evolve an idea, the better its state. I think AR is going to do this and AI could take us in that direction as well. I think then we can move faster without compromising the process. That's the kind of thing I mean when I say you want to be disruptive and keep people fresh.

How do you and Barbara Bouza collaborate?

When I first met Barbara, I realized we're two halves of one brain. That's how we need to function as leaders, and we do. Her architectural background is different from mine. I'm from more of a story background.

We'll do joint meetings where we want the two parts of the brain there — Barbara from a deeper business and architecture side, and me, from a creative design, story, theater, and movie background. Barbara has massive experience in delivering

complex projects that serve the public, like stadiums, hospitals, and community gathering places. And so that half of the brain is super important, because the project has to come up from the ground and deliver in function and be maintainable.

What impact does Bob Iger's mandate about returning control of the company to the creatives have on Imagineering?

That's the Imagineering culture I know. You've got to keep creativity and innovation in a leading role. Of course, a designer spends a lot of time understanding the business as well, because ultimately this has got to function as a business. The various operators around the world are our partners, and they know what works in their part of the world and with their guests.

It's important that the creative side and the business side stay in balance with one another. The creative process is very fragile. I think that's what Bob Iger is being most clear about: we need to be respectful of the talents and appreciate one another's strengths and let everybody be at the table together to help create. Our product is ultimately a creative product that also turns into really good business because it makes people happy.

Why is now the perfect time to return to Imagineering?

Around the world, we're all coming out of our COVID caves, from the darkness into the light. If you look at the performance of our parks, it's clear people have been yearning for them. There's the pent-up need to gather and do things together, in safe, reassuring environments. There's probably no better time to be an Imagineer than right now, because we're the folks who create exactly those types of experiences. We're seeing huge popularity around the world. We're seeing growth, we're seeing the brand and the various franchises that Disney stands for resonate around the world.

Returning after seven years brought home to me how unique this organization is. You have an idea and then you say, "Okay, well, how are we going to get this done?" At Imagineering, we have the resources to make things happen — and Imagineers will find a way to do it.

At the end of the day, this is all for the guests, not for us as designers. We're serving the guests here. And we want them to come in and get what they are expecting and what they want in ways that are unexpected. •••



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Inside the “magic box”

SeaWorld® Yas Island, Abu Dhabi brings the Marine Life Theme Park indoors

by Joe Kleiman

On Abu Dhabi's Yas Island sits a giant building, or, more accurately, a “magic box.” While its exterior and entranceway appear unassuming, once inside, the magic is unleashed and a next generation Marine Life Theme Park unfolds across multiple stories and multiple realms. Throughout its many layers, the first international SeaWorld park, SeaWorld® Yas Island, Abu Dhabi, showcases new innovations in technology, animal care, storytelling, and education, inspiring both regional and international guests - with programming designed specially to convey the importance of marine life and conservation to young Emiratis.

Through sliding glass doors, one enters the five-story entrance atrium, where waterfalls simulate an Arabian wadi - a dry valley that becomes kinetic with gushing creeks and waterfalls during the rainy season, nourishing the desert. This is one of many regional tie-ins. “There are connections to Abu

Dhabi everywhere throughout the park,” says Mitchell Magill, SeaWorld's Corporate Director, Entertainment Experiences – Global Theme Park Development. “We follow the path of water as it makes its way from the desert through a wadi and onto a port in Abu Dhabi - from here we set out into the One Ocean and all its shores beyond.”

Multiple paths of discovery

An escalator takes guests up through the wadi past waterfalls, where halfway up, they take a right turn, to a second set of escalators. The vertical structure naturally creates opportunities for discovery and exploration throughout the park, in a plan laid out by PGAV Destinations. This is supplemented by each themed realm having multiple levels to explore. Animal habitats can be viewed from ground level, overhead observation areas, or through underwater tunnels.

Above: The entrance to SeaWorld Yas Island invites guests into a new interpretation of the SeaWorld experience. All photos by Joe Kleiman



Media is integrated throughout the park, on giant screens and thematic elements like this globe.

At the top of the second set of escalators, guests enter the Abu Dhabi Ocean realm, which acts as the park's entrance plaza and local connection to our One Ocean wrapped into one. The area features a number of touch pools, an element that SeaWorld used very successfully some years earlier at Explorer's Reef, the reimagined entrance to their San Diego park. The Abu Dhabi Ocean entrance design evokes the historic waterfront of Abu Dhabi from two centuries ago, showcasing the nation's heritage and relationship with the ocean.

A legacy of SeaWorld's North American parks was reinterpreted and resurrected for SeaWorld Abu Dhabi. "We are paying homage to SeaWorld's heritage with our pearl diving shows," Magill explains, "But here, we're also paying homage to Abu Dhabi's century's old maritime traditions. One is an original fable of a fisherman who encounters a mermaid, and through his experiences discovers treasures far more precious beneath the surface of the Arabian Gulf. The other is a pearl diving demonstration, showcasing traditional Abu Dhabi techniques."

A central hub like no other

A glass tunnel through a trumpet shaped aquarium leads to the park's central hub – One Ocean. Throughout the day, different shows and immersive media showcase the relationship between all living things and the world ocean on a 360-degree screen,

measuring 49 feet high and 722 feet long. "It was a pleasure to be there on-location for the production," says Robert Yordi, the park's Zoological VP/General Curator. "Howard and Michelle Hall were involved in the filming. They had this huge, nine-camera rig that they were filming with around the world. And, as you can tell, the result is just inspiring."

The park is designed to inspire young people in several ways, including the interactive S·E·A Guardians game. Using RFID cards, guests can undertake touchscreen challenges within each of the realms that delve deeper into topics presented. Completing all the challenges activates physical props throughout the park, such as the lighthouse in the sea lion habitat. The S·E·A Guardian characters operate a number of research bases and vessels throughout the park and their presence in all the realms create a cohesive storyline throughout the park. Each of the realms also features its own characters and unique storylines to immerse guests further into the One Ocean story.

Shrinking the small folk

From One Ocean, portals lead to each of the themed realms. "All of the realms also connect to other realms, except for MicroOcean, our realm for younger guests," says Magill. "We wouldn't want parents losing their children out a back door, so there's only one way in and out." In MicroOcean younger guests and their families travel through two portals. One shrinks them to the size of a starfish, the other, a plankton. There are interactives, characters, physical play experiences, and rides that entertain with purpose, including one of the park's two roller coasters.

Tropics in the desert

The Tropical Ocean realm features a giant dolphin lagoon. A dolphin presentation takes place in the amphitheater on the far end of the realm, with the barrier between the presentation area and the lagoon invisible to guests, creating a seemingly endless landscape. Surrounding the grandstand are animal exhibits, including rays, and a huge walkthrough aviary. Beneath the realm, past the dolphin viewing tunnels, sits Manta, a custom triple launch coaster from Intamin. The multi-inversion track stretches around the exterior of the building, reversing direction in front of the park's entrance. Throughout the layout are multiple physical sets, creating the illusion of rapidly swimming between underwater rock formations and through shipwrecks.

Linking presentation with habitat

Rocky Point is where guests will find California sea lions and harbor seals. The area is based on the Oregon, USA coast and there is a second animal presentation area, where a presentation similar to those of SeaWorld's American parks takes place — it's folksy, with a conservation message that animals change us. "The set is based on Oregon's famous sea lion caves," says Yordi. "Right now, we just have sea lions, but we'll be adding other animals, including birds and otters." In addition to a giant LED screen giving the illusion of looking out at the open sea, a scrim drops during the show, revealing the sea lions in the adjacent habitat swimming behind the set.

North and South

There are two polar areas at the park – entered through the Armillary, where a twelve-projector fulldome display overhead tells the story of exploration and the distinct differences of the north and south poles. One realm, Antarctica, is not yet open. Here, guests will walk through an open habitat with penguins on both sides. It will be similar to the attraction of the same name at SeaWorld Orlando, but the unique venue allowed some tweaks. “In Orlando’s Antarctica, we have to gradually change the temperature as you approach the exhibit area, because you’re coming in from the Florida heat,” shares Magill. “Here, we’ve already been walking through an air-conditioned building, so it’s much less of a temperature change.” Heat and humidity vary throughout the building - higher in the tropics, lower in the polar regions.

The polar region is home to the Hypersphere 360, a Double-Dome Immersive Media Ride newly developed through a collaboration of ATTRACTION! and Intamin. The ride takes place inside a full LED sphere, transporting guests through the world’s ocean, hosted by the S·E·A Guardians mascot V·E·R·N·E, an AUV (Autonomous Underwater Vehicle).

The Arctic realm is home to puffins, walruses and otters. The five walruses come from parks in Japan and Canada and guests can get up close with them via a separate-charge SeaWorld Expedition. Other expeditions including a kayak ride on the tropical lagoon, and a submarine ride for up to four guests inside the world’s largest aquarium tank will be coming soon

Exploring the deep

The elaborate Endless Ocean realm conjures the futuristic, natural world adventure and exploration spirit of Jules Verne (His influence is found in numerous other areas of the park as well). It’s here that guests can explore Seabase 4 (a reference to this being the fourth SeaWorld park in the current roster, one of many “easter eggs” hidden through the park for diehard SeaWorld fans). The centerpiece is a six-story, 6.6 million-gallon habitat that’s home to over 68,000 animals. Once inside Seabase 4, guests peer out into the ocean through a giant circular window called the Oculus. Elsewhere, a six-story window called Endless Vista allows guests to view the entire aquarium from top to bottom. Having visited aquariums and marine life parks throughout the world, in this writer’s eyes, the Endless Ocean aquarium is worth the price of admission alone. The S·E·A exploration motif carries throughout the park, with seabase modules visible throughout the Endless Ocean habitats, painted to appear weathered through time, an Antarctic research base, and an Arctic research ship in their respective realms.

Taking behind-the-scenes up front

Beneath the One Ocean sphere sits one of the stewardship gems of SeaWorld Abu Dhabi – the Animal Care Center. Here, the fanciful environs found elsewhere in the park give way to the reality of a marine life park operation. Based in part on the Animal Care Center at Busch Gardens Tampa Bay and SeaWorld’s stateside Inside Look events, park guests are able to

witness examinations, surgeries, and lab tests all firsthand and, in many cases, interact with the professionals on the other side of the glass. “Nothing is hidden, everything is open to the guests,” says Magill.

“This was very important for Miral,” adds Yordi. “The UAE is very concerned about protecting the environment and fighting climate change. We work very closely with Abu Dhabi’s Environment Agency, which makes the government decisions regarding animals in our care. Razan Khalifa Al Mubarak, head of the Environment Agency, is also the current President of the IUCN [an international body which, among other things, assesses the status of threatened and endangered species worldwide]. That gives you an idea of how dedicated they are.”

Another area of the building is hermetically sealed from the park – with separate visitor and staff entrances. Yas SeaWorld Research & Rescue is similar to the animal care center, in that it features fully visible surgery and clinical suites, recovery pools for dugongs and dolphins, and research labs. The facility is based around four principles – research, rescue, rehab, and return. School groups from throughout the UAE will take tours of both the Research & Rescue Center and the park itself, with the goal of inspiring the next generation of Emiratis to pursue careers in science, animal care, veterinary medicine, and conservation.

“We’ve put a lot of thought and research into this facility,” says Yordi, who started in the industry as an animal keeper at Marineland of the Pacific in Los Angeles, in 1984. “From our innovative lighting to our transparency with medical treatments, we’re planning on sharing these innovations with zoos and aquariums around the world to improve habitat design and animal welfare everywhere.” •••



Aquarium windows are designed to draw guests into the marine environment they contain.

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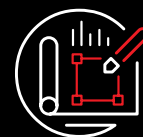
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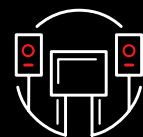
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The ocean connects us all

Miral enlists PGAV Destinations to design SeaWorld® Yas Island

by Joe Kleiman

When Miral opened SeaWorld® Yas Island, Abu Dhabi, in May 2023, the stakes were high. It was the first international SeaWorld park, the first new SeaWorld park in 35 years, and the first SeaWorld park to be completely indoors. In order to achieve so many firsts – while also creating an experience that to guests encompassed the essence of SeaWorld – Miral engaged PGAV Destinations as the Creative Consultant (CC) and animal habitat designer for the park.

The extensive, international portfolio of PGAV Destinations includes all the SeaWorld properties as well as many leading zoos and aquariums around the world. The design studio's involvement on SeaWorld Abu Dhabi spanned a full decade (2013-2023), from initial meetings to opening day.

SeaWorld Abu Dhabi draws its audience into “One Ocean,” with the guest journey starting and concluding at the Abu Dhabi

realm. Traditional Arabic motifs can be found throughout the realm, interfacing with the natural formations of nature. “We are all connected to the ocean. The ocean connects us all,” says Carol Breeze, Lead Designer, Story Experience at PGAV Destinations. “That’s the story we imagined together – with SeaWorld and Miral. We tell this story that conveys the heart of SeaWorld and is rooted in the maritime history of Abu Dhabi.”

For this article, InPark spoke to Breeze, and PGAV Destinations Vice Presidents Al Cross and Mike Linenbroker. Cross and Linenbroker served as Co-Directors for Creative and Design on the park, including animal habitats.

Rising tide

In 2013 PGAV Destinations began top-level conversations with John Linn, SeaWorld Vice President of Global Theme Park Development; and Glenn Davidson, Miral Director of



Arabian Gulf recreates a contemporary fishing village typical of the region. *Image courtesy Miral*



Theme Parks Development. “Miral is super smart,” says Cross. “They knew they were partnering with one of the world’s great international equities.”

PGAV Destinations began the design process that year with site selection studies and layouts. “We also led a team – composed of experts from Miral and SeaWorld and third-party consultants – through visioning workshops that matured into the master plan and the basic guest journey narrative,” says Cross. In parallel, the team selected the local executive architect – AECOM Middle East. “With the exception of a few times where PGAV Destinations worked directly with SeaWorld on animal habitats, we were always together working on the project – meaning Miral, SeaWorld, PGAV Destinations, AECOM and any primary consultants necessary at any particular time,” Cross adds.

PGAV Destinations went on to fully design the park and animal habitats and provide a high-level concept for the entertainment that would be continued by executive producer Thinkwell Group.

A vertical, indoor SeaWorld: multiple levels and layers

Designing a two-million square-foot (183,000 square meter) SeaWorld park inside a five-story building naturally drove many of the creative choices – and opened the way to innovation. The existing outdoor SeaWorld parks could serve as a model only to a certain extent. “We leveraged that freedom to the greatest extent possible,” said Linenbroker.

“It’s a very complicated building,” adds Breeze. “We think through each step the guest takes and consider their emotional journey. Challenges in the design are thought through on multiple levels and adjusted with the optimal guest experience in mind.”

The design process required a close analysis of the brand identity. “We had very robust conversations,” Cross says. “Animals have always been a differentiating factor for SeaWorld, but beyond that, what makes the guest experience different from most other parks?”

“The most important and difficult challenge on the project was to capture the essence of SeaWorld inside a building,” says Linenbroker. The average visit length is 5-6 hours, and the guest flow is all indoors, via winding pathways, stairs, elevators, and escalators, with transitions between realms often taking place on multiple levels. The park is also fully accessible for people of determination (the UAE term for the differently abled). “The experience had to be more concise and compact than an outdoor park. It encompasses signature SeaWorld features, interacting in a single structure.”

Linenbroker also pointed out that “the earlier parks were conceived before underwater viewing became the expectation.”

But here, expansive overhead and underwater viewing galleries were designed from the start, and most habitats are multi-species dynamic environments. Together it all provides deep immersion for guests and resplendent living spaces for the animals. “The primary benefits of an all-indoor SeaWorld are guest and animal comfort,” says Cross. “Other parks in this region are going to adapt to this approach. It’s a no-brainer.”

“It was a tricky line to walk, to provide that calm, park-like experience from one attraction to another, yet compress the experience, with some moments and beats lighter than others,” said Linenbroker.

All of the realms are self-contained. “For the most part, realms don’t reveal their themes at the portal; they have a deliberate pathway to reinforce the story,” says Linenbroker. For example, the pathway through the tropical village is intentionally curved to create a reveal of the dolphin lagoon as guests reach its far end. A self-contained realm can break away from the general design tropes, as does MicroOcean, with its bold colors and dynamic lighting patterns. “This is a place for kids to play and is designed to reinforce the idea that small things have a big impact,” says Linenbroker. “Guests ‘shrink’ and enter the world of important microscopic characters such as plankton and krill.”

The flow of a theme park typically leads to a central feature some distance beyond the gates. But here, the adventure begins at once, as Abu Dhabi Ocean extends to the very entrance of the park. “You enter the building and are first introduced to water at the wadi as you take the escalator through waterfalls to the seaside Abu Dhabi village,” says Cross. Within feet of the turnstile, underneath a mangrove forest, guests encounter touch pools. From there, at each turn, the experience expands and unfolds. Abu Dhabi Ocean features sea snakes and a dugong, and a pearl diving show, all of which play important roles in the Abu Dhabi story.

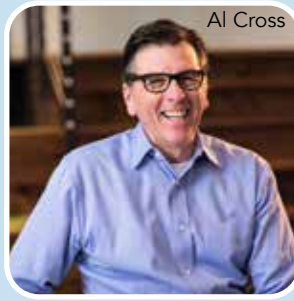
The park also features two major rides. Manta is a manta ray-themed, triple-launch roller coaster from Intamin that winds around the building exterior. Hypersphere 360° – a media-based ride from ATTRAKTION! and Intamin – is a 360-degree, spherical simulator found adjacent to the walrus habitat in the Arctic realm. “We wanted to tell a story that started in the Arctic and transported guests around the world,” says Breeze. “The point of origin matters because the Arctic has a primary role in how nutrients flow around the entire ocean – revealing how important the Arctic is to each one of us.”

Other rides are found in the MicroOcean realm. “We were responsible for selecting the types of rides for the park,” says Linenbroker. “Zamperla was the successful bidder on MicroOcean. PGAV Destinations did the track layout on the Eel Racer coaster that zooms around the land. There are UV elements on the coaster cars. We shine UV light cannons on them

OPPOSITE (clockwise, from top): Krill Dude entertains guests and educates them on the importance of all sealife. Flamingo point is home to the park’s pinkest residents. Interactivity is a key element of attractions throughout the park. *Images courtesy Miral.*



Carol Breeze



Al Cross



Mike Linenbroker

to create a glow-in-the-dark effect.” Deft integration continues with the upcharge experience spaces, such as that for the walrus encounter, which feels like an extension of the existing habitat. “These were part of the program right from the outset, as SeaWorld has continued to connect their guests to the animals in wonderfully creative ways.”

Guiding the narrative with state-of-the-art tools and techniques

The team continued to innovate by making the most of technologies and tools to achieve the design vision while also achieving a safe and healthy environment for the animals.

Custom full-spectrum LED lighting adheres to animal health criteria provided by Dr. Jeff Keaffaber, SeaWorld Corporate Director of Environmental Design. According to Cross, “Throughout the entire park are 14,000 luminaires, including habitat lighting. Finding a manufacturer to supply that much lighting subject to these uniquely demanding specifications was a challenging exercise for the team! Ellis Don (the project’s management consultant) and their lighting design team deserve the lion’s share of the credit for that success,” says Cross.

“The overhead fixtures are custom designed to provide virtually the entire spectrum, including UVA and UVB, which is 100% related to animal health,” adds Linenbroker. “The lighting also cycles to more closely render day/night and season-to-season changes so that the animals’ biological rhythms are maintained as close to their natural habitat as possible.”

The team also employed wall design, ceiling design, and lighting design in each realm. Linenbroker says, “Each realm approached the ceilings differently – partly as style and atmosphere, and partly for incorporating lights. Each also has a unique lighting and color palette.”

To impart the botanical garden ambiance that SeaWorld is famous for, custom-fabricated trees, plants and murals supplement live animal habitats, extending the vista. “The murals are critical to imparting a sense of place,” says Cross. “The LED backlighting technology is similar to what’s used on billboards. However, the big step here was the scale, as there are almost two kilometers of perimeter murals. Then, of course, came the need to digitally ‘paint’ them. That was challenging.”

Techniques were used to extend habitats. Inside the Endless Ocean aquarium, projected whales and other large sea creatures virtually swim through the water to create an endless view beyond the animals in the habitat. In the realm’s sea cave, an eel habitat has a window behind the display that peers into the large ocean habitat, creating a three-dimensional effect similar to a multiplane camera in animation.

“We developed the voice of SeaWorld Abu Dhabi, which guides guests through the One Ocean story and includes the hosts, animal experts, and educators,” shares Breeze. “We took S·E·A Collective [a brand created and owned by SeaWorld Parks & Entertainment prior to incorporation into SeaWorld Abu Dhabi] and developed it into the much more substantial S·E·A Guardians storyline in order to tell compelling ocean stories from beyond the boundaries of the park. The S·E·A Guardian Game is integrated into each of the realms. Guests play the game based on their interests – Science, Exploration, or Adventure.”

The S·E·A Guardians also operate fictional “research stations” as part of their storyline, which can be found throughout the various realms, the most prominent of them being the sea base in Endless Ocean.

Endless Ocean, endless innovation

“Our goal was to create the best aquarium,” says Cross. “It happened to become the biggest along the way.”

PGAV Destinations leads from a wealth of experience and success in zoological projects, and is no stranger to very, very large aquariums. According to Linenbroker, “This is more of an art than a science. Every zoo client is different, and no two exhibits are alike.” The Endless Ocean aquarium at SeaWorld Abu Dhabi has many unique characteristics that will likely prove influential in the field.

Unlike most aquariums, the 6.6-million-gallon Endless Ocean is deeper than wide. At 65 feet, the aquarium’s depth is twice that of two of the world’s largest (Chimelong Ocean Kingdom and Georgia Aquarium, both also designed by PGAV Destinations). Not only is this visually stunning, but it also allows different species to naturally stratify at varying depths, creating multiple distinct habitats within the aquarium itself.

The aquarium presented special design challenges not only because of size. Linenbroker explains, “The Endless Ocean

habitat is fully themed, has a back-story, and is 'inverted' from the normal aquarium experience. The guest spends most of the thematic viewing experience INSIDE the aquarium (as opposed to looking in from the outside of the box). Typically, in aquarium design, all windows are hidden from other windows. But here, you can intentionally see other people in other windows, giving a sense of scale to the sea base."

Endless Ocean is the crowning triumph of the park, and its innovation, success and high quality are emblematic of a successful partnership, creative collaboration and vision. This shining new SeaWorld is a new cornerstone of Abu Dhabi leisure development, standing alongside its sister parks, Ferrari World, Warner Bros. World Abu Dhabi, and Yas Waterworld. It adds variety to the mix and will help encourage longer tourist visits.

"The project would have been difficult without our existing relationship with SeaWorld," says Cross, "and we are fortunate that Miral understood that. For some members of our team – such as Mike Linenbroker, Matt Bigari, Ellen Mosley, Denise Schaberg, Mariusz Bleszynski, and Justin Stichter – the SeaWorld approach to habitat design is second nature. Similarly, SeaWorld Parks & Entertainment trusts us inherently, and this allows for full consideration of new ideas and innovative thinking, without the doubt and stress that might exist otherwise."

The park further evolves the SeaWorld brand through its transparency regarding animal care. "The Animal Care Center is the heart of the park," Linenbroker explains. "It allows guests to look at all aspects of care, including surgery suites and labs.

SeaWorld has developed a world-class facility here, and they're proud to show it off?"

"We are delighted to have collaborated with PGAV Destinations in bringing SeaWorld Abu Dhabi to life," shares Julien Kauffmann, CEO of Miral Experiences. "Over the course of their longstanding partnership of more than three decades, PGAV has consistently proven their excellence in designing major attractions for SeaWorld Parks & Entertainment. Their deep-rooted association with the brand has enabled them to seamlessly contribute to its evolution. With their multidisciplinary team's expertise in architecture, landscape design, theming, storytelling, and more, PGAV offered a comprehensive approach to creating world-class attractions. Their ability to integrate our vision into their designs was very impressive, and working alongside PGAV has been an exceptional journey. Their invaluable contribution has truly elevated the essence of the region's first Marine Life Theme Park."

The unique designer/client relationship helped everyone work together to successfully continue the SeaWorld brand and legacy while taking it to the next level. "We are always looking to break new ground, and SeaWorld is always evolving their guest-facing message," continues Linenbroker. "So, creating a park based on the story of how the Ocean is the sustaining force that brings all life together, regardless of which shore might constitute our physical connection to it, is a genuinely major step in the evolution of the brand. The fun part of this project was the freedom to pursue the theme in a deeper, fuller way than we normally could." •••



Walrus Encounter lets guests get up close to the park's walrus population. *Image courtesy of Miral*

Mermaids and dugongs

The Costume Connection helps celebrate marine life at SeaWorld Abu Dhabi

by Gabrielle Russon

The mermaid needed to look perfect underwater and swim with a functional tail. And so, celebrated costume designer Bonnie Sinclair found herself doing something she'd never done before in her decades of experience: An underwater fitting.

In November 2022, the opportunity presented itself, and Sinclair climbed into the water alongside a hired performer at one of the SeaWorld Parks & Entertainment properties in Orlando to field-test the underwater performance of the mermaid costume, a prototype designed for the new SeaWorld Yas Island, Abu Dhabi. This state-of-the-art marine life theme park would open six months later in May

2023 and take its place as the first international SeaWorld Park. SeaWorld Abu Dhabi is an instant icon of Abu Dhabi leisure development, offering a world-class guest experience including multimedia attractions, rides, live entertainment, and the world's largest multi-species aquarium.

Whatever it takes

The underwater fitting is exemplary of the "whatever it takes" work ethic that Bonnie Sinclair and Karen Weller, owners of The Costume Connection, bring to their work - in this case designing some 38 entertainment costumes for SeaWorld Abu Dhabi.

In 2019, during the design development phase, The Costume Connection was brought onto the project by Los Angeles-based Thinkwell Group, a leading design and production studio, now part of TAIT. For the ensuing three years, The Costume Connection worked closely with Thinkwell's creative team, led by project director Cory Asrilant. Also weighing in were Miral, owner and operator of SeaWorld Abu Dhabi and a leader in Abu Dhabi entertainment development, Miral's partner SeaWorld Parks & Entertainment, and the management team of Ellis Don. As the collaboration progressed with multiple rounds of research and drawings, the final designs evolved into illustrations detailing the front, back and sides of each costume so the costume fabricator could build them.

The Costume Connection designed and collaborated with vendors to engineer & build costumes for SeaWorld Abu Dhabi. For example, this mermaid design illustration resulted in the live performer pictured here. All photos by Jeff Krisch for The Costume Connection.





Goldy, the Seastar



Rosy, the Seastar



Sakina, the dugong

“It was a very smooth project process,” Asrilant said. “We were meeting with the client - usually two to three times a week - about various items in our scope, including costumes. They were very much involved from day one. SeaWorld and Miral were on every call. They reviewed every drawing. We discussed every individual piece - from the shoes to the wigs, the bodysuits and everything else that was very specific. It was a really fun experience.... It was great having Miral’s input and their entertainment team and design team on the phone calls to help guide us through, especially when it came to cultural costumes in the Abu Dhabi realm.”

These custom-designed costumes are now part of the fabric of SeaWorld Abu Dhabi - including the mermaid, atmosphere performers and a variety of engaging walk-around characters, including the giant pink and orange starfish, praying mantis, butterfly and tree frog costumes. They are Instagram-worthy, whimsical and fun.

Mandy the mantis and other designs

The stilt walker characters were technically quite challenging but are very striking in their final forms. Weller said, “Mandy, the praying mantis, is probably the most unique character of all we have ever developed.” And that’s saying a lot - considering that Weller and Sinclair have been in the business a good three decades, including the 10 years they’ve helmed The Costume Connection - with a distinguished client list between them that includes Disney, Universal Creative, Warner Brothers, Herschend Family Entertainment, and Radio City Music Hall Productions.

For the praying mantis, Sinclair and Weller’s focus was on creating a towering insect that wouldn’t frighten children despite its height,

and could also navigate the employee backstage areas. Their concept ended up being a nine-foot-tall mantis, scaled down from the original 12-foot-tall concept. “The real trickiness of the costume development was analyzing the insect so the costume could be broken into component parts that work on the human form - an exaggerated form on stilts, in this case,” Weller said. “Our collaborating vendor Ryan Rhodes and his team at Custom Characters, Inc have a very refined eye for such engineering, while also establishing a visual ‘personality.’”

Another big challenge was to interpret a dugong as a standing, walking sea creature to roam the park. In nature, this large, coastal ocean dweller can be 10 feet long and weigh upwards of 800 pounds. How would they design this swimming character to walk? How to ensure this large animal wouldn’t frighten young children? “There were many iterations explored to create an image that finally made everyone on the creative and client teams happy,” Weller said. The final design featured a softened shape, a smiling expression and an enchanting seashell and coral wreath headdress that gave the character charm. “We then worked very closely with our production vendor, Custom Characters, Inc. who realized the costume beautifully,” said Weller. The end result: Sakina, the sweet-faced, kid-friendly dugong.

Sinclair and Weller feel they succeeded in bringing a sense of merriment and joy to the park, and in expressing the park’s themes and messages in an “up close and personal” way with their costumes. In addition to being eye-catching, these costumes must meet targets of practicality and authenticity, as well as cultural relevance. They designed costumes that fit into the park’s different realms and accurately captured the different animals or wove in the history of Abu Dhabi. It took extensive research to

achieve this, down to the accurate spots on the jaguar costume. “The amount of research that Bonnie and Karen did to get us to that point was intense,” Asrilant said. “They take their work seriously.”

Collaborative process

Like so many in the attractions industry, Sinclair and Weller’s roots are in theater, where they loved being part of a collaborative process and feeling the synergy in the room. “Collaboration is a really important thing to us because that’s part of where the creativity comes from, especially on a multifaceted project like this one,” Weller said.

Everything The Costume Connection designed had to be habitat-conscious to protect the live animals in the park. None of the costumes worn in or near the habitats could contain buttons, snaps, sequins, pearls, or other embellishments that might fall off; no toxic fabric dyes or materials could be used. Weller and Sinclair’s research included understanding just how acrobats’ costumes needed to move or otherwise accommodate their activity. They also collaborated with the zoologists, the animal caretakers and experts who advised them on the animal and insect costumes. The jaguar, for instance, has different shaped spots on different areas of its body as well as a distinctive tail.

The details had to be spot-on (pun intended) and the communication precise as The Costume Connection provided the designs to Limelight Costume Services Limited, a Hong

Kong-based fabricator, to build the finished product. “Along with the design illustrations, we sent them detailed design information such as the jaguar spot reference images,” said Sinclair.

“Both our fabricators on this project were fantastic and a pleasure to work with,” added Sinclair. “Limelight Costume Services Limited fabricated the bulk of the costumes – all the show and atmosphere performer costumes, including the lovely mermaid. Virginia Chu, Jenny Wong, Angel Wong and the talented, dedicated team at Limelight deserve much praise for their excellent work. For their part, Custom Characters, Inc., built the amazing stilt walker costumes and the walk-around characters, and did a fabulous job.”

The complex craft of costuming

Although it often plays a significant role in a project, costume design for themed entertainment doesn’t always get its full measure of appreciation as a specialized industry discipline and art. This is beginning to change, partly thanks to the Themed Entertainment Association (TEA) Masters program, which honored Sinclair as a “TEA Master” in 2020. TEA has worked to broaden awareness of the myriad disciplines within the industry and the “masters of their craft” who propel them forward. TEA Masters don’t just sit on their laurels, but are active in professional development and education.

The level of detail and complexity required to produce costumes is still not well recognized. “Everybody wears clothes, so they

A lifelong joy

Weller and Sinclair are longtime friends who met working together during summer theater when they were college students. They both went on to have independently successful careers in costume design, working in different industries as well as domestic and international projects in themed entertainment.

As major park operators began to source costume design externally rather than maintain in-house costume designers, Sinclair and Weller’s careers began to converge. They decided it made sense to work together and in 2013, they created The Costume Connection, which is based in the Los Angeles area. Today, most of their clients are theme parks and themed entertainment operators for whom they design both mass-produced wardrobe (employee uniforms) and live entertainment costumes created for parades, shows and walk-around characters.

The two women reflected on how their successful career comes from their lifelong passion. Sinclair remembered the first costume she ever made was

a Joan of Arc Halloween costume out of aluminum foil and cardboard in sixth grade and Weller recalled the medieval gown she designed for her Barbie Doll as a child.

“I’ve been loving costumes and dress-up as long as I can remember,” Sinclair said.

Added Weller, “We both feel very fortunate, and pleased and honored to be able to make a living at what we love to do.” •



Bonnie Sinclair



Karen Weller



Mandy, the praying mantis



Tamarin acrobats

think they know costumes,” Weller said. She explained that the learning curve occurs when it is time to create or update wardrobes - which can include employee uniforms as well as costumes for performers, mascots and walk-around characters. “Once they begin to recognize the wide range of issues to consider, that’s often when someone will say, ‘Why don’t you call Karen and Bonnie at The Costume Connection?’”

In ideal circumstances, costuming is given ample lead time for concept, design and execution. Bidding out designs to costume shops can take several months; the same goes for producing a custom print. “If you want to create a custom fabric, then you’ve got to account for that kind of timing and fabricate the supply needed for the future,” Weller said.

Into the water

The in-depth research and need for precision detail are what led Sinclair to climb into the water to test the mermaid costume prototype. But the mermaid field-test was also a breakthrough in another way. For the three years prior, The Costume Connection had been obliged to work remotely with their international collaborators, it being the early stage of the pandemic. But in November 2022, their clients would be in Orlando for the annual IAAPA Expo and they were finally able to meet in person. The underwater fitting there led to a functioning mermaid that wowed the crowd when SeaWorld Abu Dhabi opened the following year.

The mermaid’s costume is packed with details. Her tail is the shape of a dugong’s. The design of the scales on her tail reflects the shape of traditional Middle Eastern tiles. Her crown represents the color of the local sea coral and is embellished

with pearls. “Of course, a mermaid is innately challenging as an underwater performer, but we believe that this design is a key contribution that adds a particularly lush quality to the show,” Weller said. “Beyond the practical challenges of such a costume, we hope the guests will be pleased to find that visually the character design supports the uniqueness of this story’s world.”

The costumes are one of the elements helping give the new park its sense of place, reinforce its conservation messages and provide “wow power,” as one of Weller’s colleagues called it. “We are honored to contribute our piece of the puzzle to the amazing achievement that is SeaWorld, Yas Island, Abu Dhabi,” said Weller.

“This is SeaWorld’s first international theme park,” said Asrilant. “We had to take everything, including the costumes, to the next level. And I believe we achieved that.” •••



Gabrielle Russon (gabriellerusson@gmail.com) is a freelance journalist who lives in Orlando. She previously covered the business of theme parks for the Orlando Sentinel, earning several statewide and regional honors for her coverage over theme park injuries, the economic challenges facing theme park workers and the pandemic’s impact on the tourism industry. A Michigan native, she is a Michigan State University graduate and has worked at the Sarasota Herald-Tribune, the Toledo Blade, the Kalamazoo Gazette and the Elkhart Truth during her newspaper career. In her spare time, she loves visiting Orlando’s theme parks and running marathons.



Developer's perspective

Joe Kleiman interviews Miral Experiences on the new SeaWorld Abu Dhabi

The first international SeaWorld park opened May 24, 2023 on Yas Island, Abu Dhabi. InPark Magazine Chief Correspondent Joe Kleiman was present for the grand opening and asked the park's developer/owner, Miral Experiences five questions about this innovative marine life park in a box.

How does the park highlight Emirati culture and achievements?

Through the park's immersive experiences, SeaWorld Abu Dhabi showcases Emirati values, maritime achievements, and advances environmental stewardship, honoring Sheikh Zayed's legacy. The Abu Dhabi Ocean realm at SeaWorld Abu Dhabi immerses guests in Emirati culture with authentic architecture, design, and décor, including traditional geometric motifs, dhows [traditional Arabic sailing vessels], palm trees, touch pools with local fish, and mangroves. At Al Naham Theater, shows celebrate pearl diving traditions and the profound connection between the UAE and the sea, offering glimpses into the country's rich Bedouin history.

How does the park help reinforce Abu Dhabi as a leader in both tourism and animal stewardship?

When it comes to animal care, SeaWorld Abu Dhabi employs hundreds of highly-skilled and passionate zoologists, marine biologists, veterinarians, and animal care specialists that devote their lives to caring for all the animals at the park. The park ensures that animals are provided with the highest standards of care, with systems like the Animal Acclimation and Life Support Systems in place to simulate the animals' natural habitats, ensuring their health and wellbeing. SeaWorld Abu Dhabi is

the first facility in the Middle East and North Africa region to be certified by Global Humane. Our habitats are specifically designed to meet the needs of each species. We continually invest in our animal habitats to ensure safe, enriching and engaging experiences for the animals and also to guarantee that they meet or exceed the highest zoological standards.

SeaWorld Abu Dhabi seamlessly integrates into Yas Island's award-winning theme parks, such as Ferrari World Abu Dhabi, Yas Waterworld, Warner Bros. World Abu Dhabi, and CLYMB, enhancing the overall guest experience with its distinct entertainment offerings. With a strong emphasis on marine life and conservation, the park underscores Miral's commitment to creating magnetic experiences for guests and aligns with the company's vision to position Yas Island as a leading tourist destination.

PGAV Destinations acted as creative consultant and animal habitat designer for the park. Why were they a good fit for the project?

With a longstanding relationship spanning over 30 years, they have designed the majority of SeaWorld Parks & Entertainment's major attractions. This deep-rooted association has given them an intimate understanding of the brand, allowing them to efficiently

contribute to its evolution. Their multidisciplinary team brings expertise in architecture, landscape design, theming, storytelling, and more, ensuring a comprehensive approach to creating world-class attractions. These qualities, combined with their familiarity with the brand and their ability to seamlessly integrate our vision into their designs, make PGAV the perfect design firm for SeaWorld Abu Dhabi.

Education has been part of the SeaWorld experience since the 1960s. How does SeaWorld Abu Dhabi interface with local educators?

SeaWorld Abu Dhabi actively engages with the community to provide enriching and inspiring educational experiences. The park hosts local schools, welcoming students on trips where they can explore the park and learn about marine life firsthand. Educators are present throughout the park, offering valuable insights and explanations about the animals, fostering a deeper understanding of marine conservation. In addition to school visits, SeaWorld Abu Dhabi hosts educational talks and seminars, promoting further engagement and learning opportunities.

Additionally, Yas SeaWorld Research & Rescue offers diverse programs for learners of all ages that aim to engage, educate and foster the next generation of marine biologists. These programs expose students to the rescue and rehabilitation efforts undertaken by the team of subject-matter experts, as well as the research side of things. Through these programs, students learn about ocean literacy topics such as the ocean's support of a variety of life, the role of microscopic organisms as primary producers, and human dependence on the ocean for life. The programs also delve into the human impacts on the ocean, including overfishing, ghost net entanglements, and pollution.

In some instances, learners engage in simulations of veterinary teamwork, practicing essential techniques. Students explore various ocean samples in the wet lab classroom, utilizing scientific equipment to deepen their understanding of marine ecosystems.

How does SeaWorld Abu Dhabi expand upon the concepts presented at the SeaWorld parks in North America?

In developing the park, Miral recognized the significance of certain elements from the American SeaWorld parks that were crucial to include in Abu Dhabi. One such element is the establishment of a research center, located adjacent to SeaWorld Abu Dhabi. This center, part of a network of three facilities in the United States, builds upon SeaWorld's remarkable legacy of 40,000 animal rescues to date and nearly 60 years in research, rescue, rehabilitation and conservation.

In line with the educational focus of SeaWorld, Yas SeaWorld Research & Rescue offers various programs that educate participants about research, rescue, and rehabilitation efforts, as well as the impact of human activities on the oceans. These educational initiatives aim to provide a deeper understanding of marine life conservation and foster a sense of responsibility among guests.

Additionally, animal encounters with diverse marine species are an integral part of the Abu Dhabi park, enabling guests to engage and connect with these magnificent animals. By bringing subject-matter expertise and experience from the American SeaWorld parks to the UAE, SeaWorld Abu Dhabi ensures a world-class marine entertainment experience that draws upon the legacy and success of its American counterparts and ensures the safety and wellbeing of the animals. •••



Photos by Joe Kleiman

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Innovative media, unprecedented scale

IPM chats with Thinkwell on their role as media producer for SeaWorld Abu Dhabi

interview by Joe Kleiman

Media is a vital component of the new SeaWorld Yas Island, Abu Dhabi park, open since June 2023. In this exclusive interview, InPark explored the role and achievements of Executive Producer Thinkwell Group, how Thinkwell's global team interacted with developer/operator Miral Group and with SeaWorld Parks & Entertainment, how they collaborated with other creatives on the project, and Thinkwell's estimable track record in the Middle East. Interviewees:



Amin Rashmani
Managing Director,
MENA, TAIT &
Thinkwell



Cory Asrilant
Project Director,
Thinkwell



Cynthia Sharpe
Senior Principal &
Executive Creative
Director, Thinkwell



Cory Watson
Executive Producer,
Thinkwell Media



Cindy Tsujimura
Producer, Thinkwell
Media



Tina Blakeney
Principal, Thinkwell,
Montreal

How did Thinkwell become involved in the project?

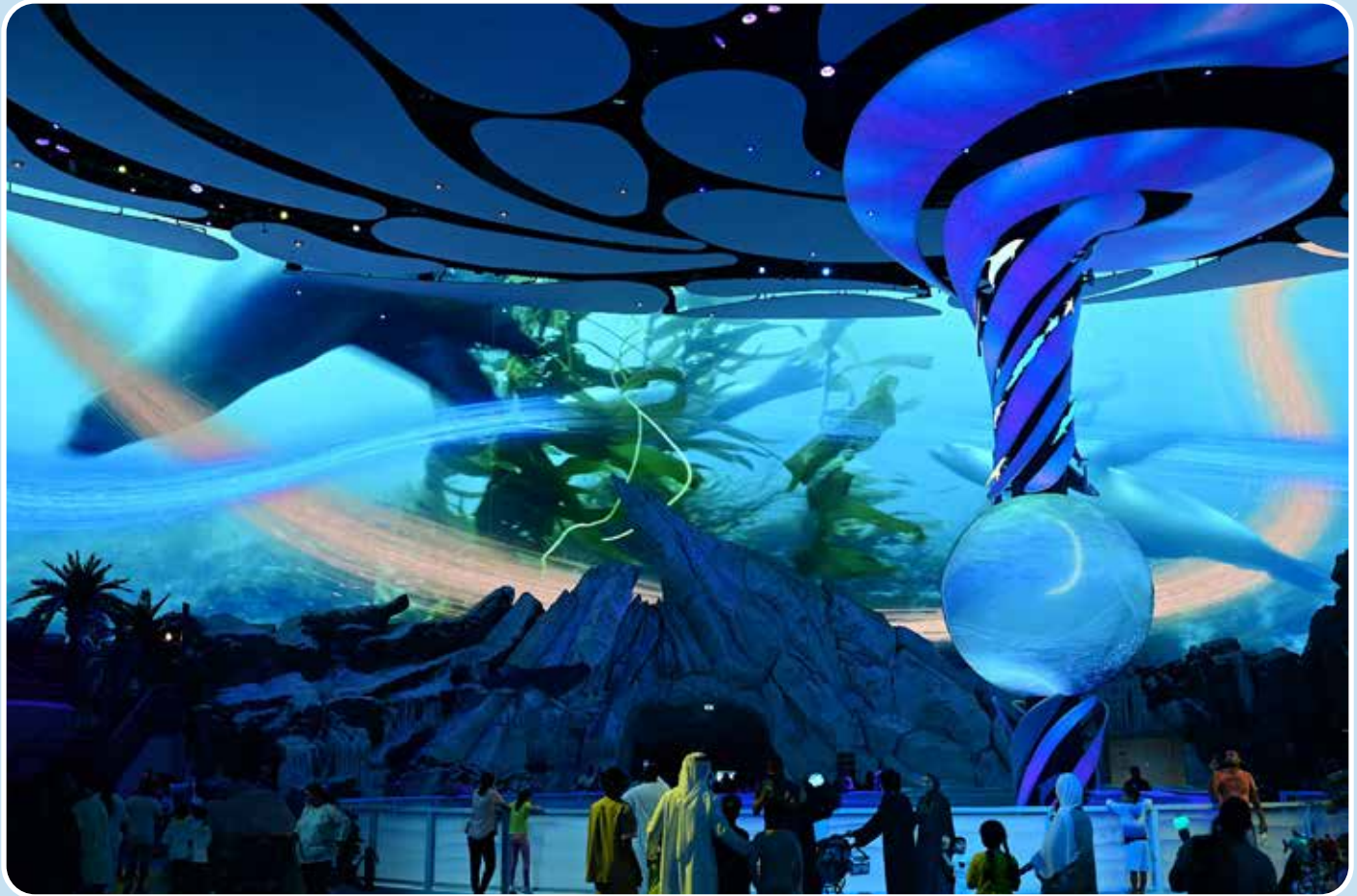
Rashmani: Over the years, Thinkwell has built a solid relationship with Miral by delivering multiple projects on and beyond Yas Island, Abu Dhabi. We were contacted by Miral to review the excellent work created by PGAV and compliment it by assuming the role of the Executive Producer for the live shows, media, and soundscape around the park. This was particularly important for One Ocean [the central hub featuring a cinematic spectacle on a 360-degree LED screen of unprecedented size], as our role involved guiding the visioning and development of the One Ocean show and integrating that work into the other creative content and development throughout the park happening with other partners.

What was the scope of Thinkwell's role at SeaWorld Abu Dhabi?

Asrilant: Thinkwell was responsible for the design and implementation of all park entertainment, media, and soundscape – from early “blue sky” development, through procurement and fabrication, all the way to creative integration, rehearsals, and pre-opening operation. Our internal teams across all global Thinkwell locations contributed to the project, across media, creative, technical, and more. The biggest areas of the park within our focus were One Ocean, the Armillary [the gateway to the two polar realms, featuring a projected full-dome presentation], and Hypersphere 360 [a simulator ride through the World Ocean in a 360-degree LED sphere, located in the Arctic Realm] plus Pearl Dive and the live entertainment (street shows, performers, magicians, and more).

Tell us about some of the external team members.

Asrilant: Thinkwell contracted with a variety of consultants, contributors, and vendors. Costumes were designed by The Costume Connection and fabricated by Limelight out of Hong Kong as well as Custom Characters in Los Angeles. Some of our larger props and set pieces were built by Def Lab and Adirondack Studios, Animax built the puppets and animatronics. Some of our media vendors included MacGillivray Freeman



One Ocean at SeaWorld Yas Island. Photo by Matt Parker, courtesy of Thinkwell

Films, Filmworks out of Dubai, and Mousetrappe. Much of the media was also produced by our own Thinkwell Media team.

Tell us more about creating One Ocean, Hypersphere, and Armillary.

Tsujimura: It took many conversations with SeaWorld to find the heart of the One Ocean story. The hardest part was determining what to exclude, with so much information about the importance of the ocean. In the end, SeaWorld decided on the key elements to showcase.

Then it was our job to make sure it was told in the most engaging and immersive way possible on the massive One Ocean screen: 360-degrees around, 4.5 stories tall (60% of the size and scale of the Statue of Liberty!) and over 22K resolution – the world’s first screen of that size and scale. Filming in 360 can be immersive and magical, but also can turn simple tasks like a lens change into a big challenge. You really have to consider the benefits and challenges – such as cost, safety, equipment, potential natural elements – especially when filming in the ocean and in some of the most tech-unfriendly parts of the world. We had to invent our own camera rig and system in order to accomplish the underwater filming for this format, which was its own feat. Led by Thinkwell Media, all live action footage in the field was

captured by MacGillivray Freeman Films through custom-built drones and underwater rigs.

For the Hypersphere 360, the intent was to create an original, visually stylized animated film that would work in conjunction with a unique ride system to fully engage and immerse the guests. We kept the show fast, fun and full of wondrous facts about our planet’s One Ocean. The experience is hosted and driven by courageous Captain Jules and her loveable sidekick V·E·R·N·E. V·E·R·N·E is actually realized as both an original animated character in the film, and also as an animatronic in the park guests can interact with.

Blakeney: The Armillary is a fully immersive, 360 dome walk-through multimedia experience celebrating the natural contrast and diversity of the Arctic and Antarctic regions. The physical environment is thematically and visually designed to represent an ancient Armillary – an instrument designed to demonstrate the movement of the celestial sphere about a stationary Earth at its center. The animated Armillary rings appear as extensions of the physical armillary structure, and are used as a critical storytelling and transitional device between scenes, modules and themes.

The dynamic content spans an hour in total, with ambient pieces and four story modules: The Constellations, Global Currents, 24

Hours Of Light And Dark and Life At The Poles. The Ambient modules showcase the beauty and unique phenomena of the Arctic and Antarctic Landscape as well as the Aurora Borealis and Aurora Australis.

How does the media complement the animal experiences?

Watson: The wildlife filming on this project adds crucial color, context and texture to the animal experience as well as bringing audiences closer to the far ends of the oceans. We aim for the media to help tell a more emotional and personal story to make guests feel even more connected to the ocean that connects all of us around the globe.

How did Thinkwell enforce authenticity for this mission-driven park?

Sharpe: It starts with identifying every area where we may need Subject Matter Expert (SME) guidance or input, and lining up those resources. It's important to get the science right, and SeaWorld was a great partner in that. We also reached out to experts from AZA-accredited zoos and aquariums, and worked with top talent in marine photography and videography. On the history and culture side, we worked with an array of SMEs, from textile design and puppetry to music and history. This work began in the earliest creative phases, to ensure we were accurate and respectful about every detail. We consistently revisited our SME talent pool to see if we needed to add more expertise.

Why was this a great match for Thinkwell's capabilities?

Rashmani: Four main reasons: 1) a multi-disciplinary team, 2) our technological solutions, 3) the project delivery and 4) our strong regional presence. Our large, multi-disciplinary executive producing team oversaw the creative development and was responsible for alignment with SeaWorld's requirements. We effectively managed diverse and globally dispersed teams and vendors in the challenging first years of the pandemic to ensure successful delivery of the project. Our strong presence on the ground between our teams in Abu Dhabi and our network and talent pool in the region, which helped us across the entire project lifecycle.

You've had other successes in the region including the US Pavilion at Expo 2020 Dubai and Warner Bros. World Abu Dhabi. How does this complement Thinkwell's existing Middle East portfolio?

Rashmani: We're very proud of our success in the region, and even more so with the diverse types of projects we've been involved in over the last decade. Our work on SeaWorld, coupled with our involvement on Warner Bros. World and Ferrari World, highlights not only our expertise in themed entertainment, but also our strategic partnership with Miral in creating a world-class, multi-day entertainment destination on Yas Island. Over the last decade we have also delivered multiple snow parks, museums, expos, and urban attractions in the region. We are committed to



One Ocean at SeaWorld Yas Island. Photo by Matt Parker, courtesy of Thinkwell

delivering extraordinary experiences and maintaining a strong presence in the region, and dedicated to pushing the boundaries of guest experience in this vibrant MENA market.

What are some aspects of the project you're most proud of?

Asrilant: The breathtaking scale of the media elements in the park. Guests walk in and their jaws drop when they see the size and scale of everything, beginning with One Ocean. Our teams engineered and invented new ways to capture and deliver the epic media required for this epic park.

Tsujimura: The authenticity and heart throughout the live entertainment, all of the media, and the One Ocean spectacular. At every scale, it helps people form real connections to the ocean and its incredible creatures. Everything was thought through so minutely, from the finest details on the puppeteer's costume to the biggest of gestures in One Ocean.

Watson: The entire team at Thinkwell Media and the many technology specialists, underwater filmmaking experts, and filmmakers who helped us successfully deliver this monumental creative and technological achievement. We built a world-class team. We are also extremely proud of the wonderful collaboration with our clients at Miral and SeaWorld, and all our media vendors. •••



Thinkwell's impressive portfolio in the Middle East includes Warner Bros. World Abu Dhabi, next to SeaWorld. Photo by Joe Kleiman



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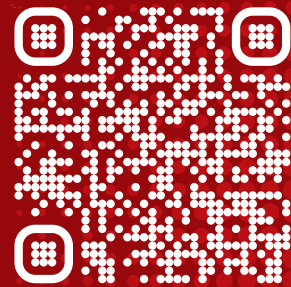
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