

STEPPING  
INTO THE

*Story*



**HOW THE NOMINEES FOR THE PGA'S 2025 INNOVATION AWARD COMBINE CUTTING-EDGE TECHNOLOGY AND VISIONARY CONCEPTS TO CREATE TRANSPORTIVE EXPERIENCES FOR AUDIENCES.**

WRITTEN BY EVE WESTON

**D**o you want to be a pirate? Cast a spell? Hear from forest creatures? Understand the feelings of someone experiencing a disability—or outer space? Thanks to technical innovations, combined with creative talent, you now can.

Each one of these experiences is provided by a nominee for this year's Producer's Guild of America Innovation Award, which recognizes the production of a noteworthy emerging media program that significantly elevates the audience's viewing experience. Following is a description of each piece and the producing efforts that led to these innovative, transforming works of art.

**THE PIRATE QUEEN WITH LUCY LIU**

**Produced by Singer Studios**

Allowing the player to step into the boots of the legendary pirate Cheng Shih—who led the largest and most successful pirate fleet in history—this VR game gives the player insights into Shih's life and her road to becoming Pirate Queen by letting them move around, pick up objects and hear from characters. Shih is not the only formidable woman integral to this project. Lucy Liu voices Shih, and Emmy nominee Eloise Singer directed and produced the experience. In their fitting tribute to the pioneering Shih, *Pirate Queen* uses innovation in development, spatial sound, haptics and eye tracking to tell her story.

In game development, game mechanics are often determined first. Then the narrative designer writes the story to fit what a player is able to do. Singer flipped this process on its head and adopted a writers room. "Me, our narrative designer, our producer, our game designer and our lead artist sat down for about two weeks," recounts Singer.

Sumptuous settings (left and right) are part of *The Pirate Queen's* immersive gameplaying experience.





The monochromatic milieu of *Emperor* underscores the sensations of aphasia that are at the heart of the interactive VR experience.

"We were like, 'OK, if we're gonna start on the pontoon, how are we gonna get to the boat? Let's row to the boat.'" This led to the decision to add a rowing mechanic to the game.

"It was really refreshing to do it that way," Singer adds, "because it felt very authentic to the narrative."

As innovative as *Pirate Queen* is in its development process, that's just the tip of the iceberg. The immersive game also leverages sensory experience. One example is its use of haptics: You feel the pull of the water when you're rowing, the resistance of the rope when you're climbing, and the catch's bite against the line when you're fishing. How? Essentially, buzzers in the controllers. Another example is the game's use of 3D spatial sound "which means, for example, if I go to the west of one of the rooms," explains Singer, "I'll be able to hear the wind blowing toward the ship. If I go to the other side, I'll be able to hear the waves crashing against the side."

The game also employs eye tracking. When you-as-Shih are throwing something in a pot, you can look at the pot, fix your eyes on it, and then when you throw, it locks in the location for accuracy.

#### EMPEROR

**Produced by Atlas V; Coproduced by Reynard Films / France Télévisions**

*Emperor* is an interactive, narrative VR experience that invites the user to step inside the shoes of a father suffering from aphasia. You, as this father, have lost your ability to speak, and your daughter is trying to communicate with you. You are able to move around the space and use gesture-based mechanics to engage in the experience. The piece is innovative aesthetically, technically and through its approach to story.

Marion Burger wrote and directed the experience—which is based on her personal experience—with Ilan J. Cohen. With this, their first foray into virtual reality, they've created an impressionistic

reality. The hand-drawn, monochrome landscape visually represents the father's experience as aphasia begins to impede his writing and speech, conveying a sense of the void he may be feeling.

"The idea was not to represent everything, every environment or every asset in full 3D," explains producer Oriane Hurard. "We used a combination of 3D assets, 2D assets, hand drawings and textures, as well as some camera mapping for the distant elements in the environment."

*Emperor* also innovatively uses the idea of technical difficulty as a feature, not a bug.

"The real first interactive scene is on the table where you have to write the date," Hurard explains. "It's very frustrating because it doesn't work, because writing in VR is not so easy."

At first, the user thinks it's difficult because the VR apparatus is not working. It then becomes apparent that the experience is designed that way. The frustration the user feels in their role

as the father character is analogous to the frustration that the director's actual father felt dealing with aphasia. While simple in concept, it was challenging to make the interactivity work—and also not work too well. “The balance, the fine-tuning, was really difficult to achieve,” Hurard says.

While some of *Emperor's* story-related innovation will be visible to the audience, one noteworthy approach is invisible. In the aforementioned writing scene, the viewer-participant discovers that they need to use their nondominant hand. Since more people are right-handed, one might assume—incorrectly—that the experience just plays the odds and defaults to a left-handed writing experience. In fact, the creators found a clever way to determine the viewer-participant's dominant hand at the start of the experience. This information is recorded, and when it comes time for the writing interaction, the experience requires the use of the nondominant hand, supporting the story by making the task more challenging.

#### WHAT IF...? AN IMMERSIVE STORY

Produced by Marvel Studios / ILM Immersive / Disney+

In this game, the player takes the leading role in an hourlong, narrative-driven superhero journey, learning how to cast spells and more. But what's truly magical is that the player uses their hands and eyes to interact with the world around them. This experience answers the question “What if we didn't need game controllers anymore?” and showcases innovation in its immersivity, gameplay and workflow.

To appreciate its innovation, we need to understand mixed reality (MR), in which elements of the physical and digital worlds are blended. This is a step beyond augmented reality (AR), in which digital information is overlaid onto the real world, effectively augmenting it. MR goes beyond merely augmenting the real world; in MR, the digital and

physical elements are able to interact with each other. MR is also distinct from virtual reality (VR), in which the real world has been replaced by one that is entirely virtual.

“What really attracted us to the entire concept was bringing Marvel characters into your living room,” says executive producer Shereif Fattouh. While pass-through functionality—allowing the wearer of a VR headset to see the real world around them for safety reasons—has been on headsets for years, it was only with the release of the Quest 3 and Apple Vision Pro (AVP) that true, high-quality mixed reality became available for game experiences.

“It was exciting, but really challenging because now we're dealing with an all-new tech stack. There was no native game engine support,” Fattouh explains.

At the time, the Apple OS system didn't support Unreal Engine, the computer graphics game engine of choice for creating 3D experiences, and/or importing from Unreal in any sort of

native or direct way. This meant that to achieve their target fidelity, Fattouh's team couldn't rely on all the tools that they were familiar with. Rethinking their approach, they wrote a software program—a middleware translation, enabling their application in Unreal Engine to communicate with the AVP's operating system—and developed a new pipeline.

Such technical innovation allowed for the innovative gesture-based mechanics, which were custom-built for the experience.

“What we ended up doing was thinking about what would be the most authentic Marvel gestures that really tied in with the fiction. Then we were able to design them from our imagination,” explains Fattouh. “(In the game), you're going to draw spells like Doctor Strange. Now, with tracking as well as this is (in the AVP), we can do it.

“We didn't want to do something that had been done before. We asked what you could do that's like fantasy fulfillment.”



### IMPULSE: PLAYING WITH REALITY

Produced by Anagram / Floréal / France Télévisions

This 40-minute VR experience leverages the mixed reality feature of the Oculus Quest headset to engage the user in a narrative experience about Attention Deficit Hyperactivity Disorder (ADHD) that plays out in the real physical space around them—e.g., their living room. The viewer-participant is able to move around the space and use the controllers to interact with the experience.

A production of London's Anagram studios in partnership with Meta, the experience was cowritten and codirected by May Abdalla and Barry Gene Murphy, narrated by Tilda Swinton and produced by Ryan Genji Thomas.

"It's a mixture of immersive VR and MR, mixed-reality pass through, probably 75% pass-through," Thomas explains. "There are interactive elements as well as an overarching narrative, an artistic imagination of what it's like to have ADHD married with the testimonials of individuals expressing their lived experience with visuals that animate in front of you as they tell their story."

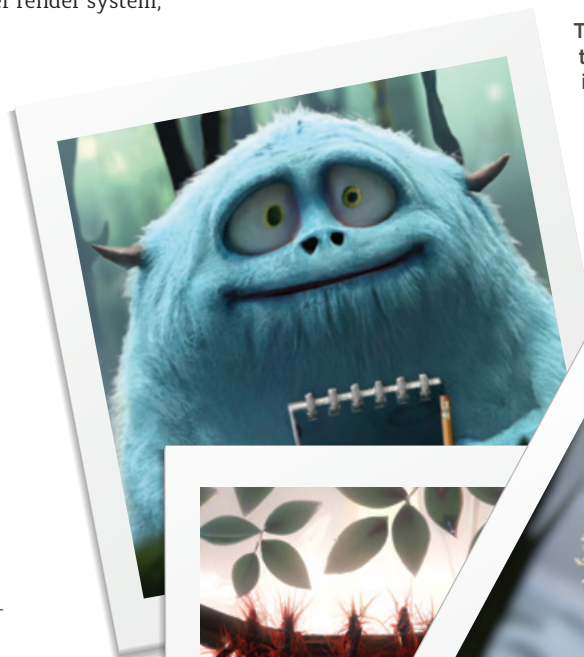
The production's innovations—and related challenges—largely came out of creating for the Quest 3. "We developed this as the Quest 3 was getting released," explains Kirsty Jennings, managing director at Anagram, "There's quite a lot that wasn't off the shelf that we've kind of invented to try and push what you can do with mixed reality." The team is particularly proud of their software for real-time user interaction and their projector shader render system, which projects textures onto 3D surfaces, allowing for effects like projected shadows and stylized lighting.

"The software development kit features bundled by Meta have very strict limitations guided by privacy concerns," says Murphy. Challenging restrictions include a lack of UVS, which is a method by which texture and correct placement of textures can be rendered onto surfaces.

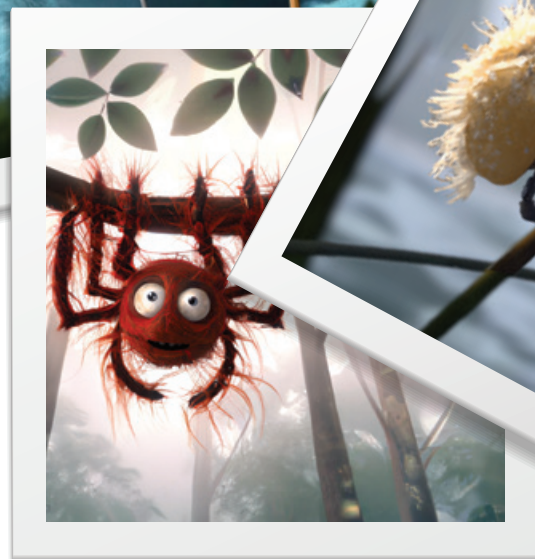
Murphy describes the process as similar to pattern cutting when making physical garments. "UVS determines where each color pixel's information sits on any given mesh." This is where the custom-built projector shader render system came into play, which forced the image desired by the creators to sit on top of the pass-through layer.

"This gave an uncanny effect of light passing through the space, creating another level of immersiveness that speaks directly to the animal brain of a viewer," says Murphy, referencing what is also known as the "reptilian brain." That's what controls basic survival functions like breathing, heart rate and immediate fight-or-flight responses. Murphy's figurative usage indicates that the intention here is to appeal to the viewer's instinctive response rather than their capacity for complex thought.

*Impulse* delivers an interactive VR experience of what it is like to live with ADHD.



The *Criterz* critters were the result of dozens of iterations rendered by OpenAI's DALL-E AI, by way of a series of creative prompts and, ultimately, human fine-tuning.



## CRITTERZ

### Produced by Native Foreign

*Critterz*, an animated science documentary-turned-comedy—while not virtual reality or mixed reality—is definitely the harbinger of a new reality. It is a first-of-its-kind film whose imagery was entirely generated with OpenAI’s DALL-E AI.

“We asked how can we utilize normal, traditional techniques, but bring AI into the workflow and use this as a tool,” recalls Chad Nelson, writer and director of *Critterz* and cofounder of production company Native Foreign.

The process began with simple prompting, with Nelson describing characters he wanted to see with nothing more than entering text like, “a red, furry spider hangs from a tree in a misty forest.” DALL-E would generate an image based on the prompt, which Nelson would fine-tune by entering additional prompts.

“It was like talking to a sketch artist over and over for dozens and dozens of generations,” Nelson says. “I finally got a spider that I kind of liked. Then I would work on the eyes, I’d work on the mouth, and iterate and iterate and iterate until I got to the point where I was like, ‘Yeah, this is actually matching the vision in my head.’”

Then Nelson and his team applied tried-and-true animation techniques with Unreal Engine, using facial performance capture to do the lip sync and After Effects to do all the background animations. Real-life writers wrote the script, and real actors voiced the characters. The team used AI only for iterat-

ing the visuals at a faster rate. Doing so proved an excellent case study for the saying “time is money.”

“I’ve heard numbers from \$200,000 to \$300,000 a minute for a Pixar or DreamWorks film,” says Nelson, “We came in under \$10,000 a minute.”

Nelson is quick to point out that *Critterz* isn’t Pixar quality. But it shows that for commercial or independent production, new voices can be heard and stories told that may not have been told before.

Whereas the same budget would have allowed Nelson to explore only five or six character designs in the traditional way before he ran out of money, DALL-E allowed him to explore closer to hundreds of designs.

And iterating isn’t the only thing that was done quickly. “We had two weeks of preproduction, then two and a half weeks to do all the animation in post,” Nelson says. “So, about a month to build the film.”

## ORBITAL

### Produced by: Cosm Studios / Planetary Collective / Kuva

The team at Cosm, an experiential media and immersive technology company, has managed to fit the epic journey from the big bang to the flourishing of life on Earth into a dome theater. *Orbital*, a film by Guy Reid and Planetary Collective, is the first planetarium film made at 12K+ resolution. It uses NASA datasets to recreate the feeling of seeing Earth for the first time. But the technical accomplishments do not include the innovation the team is



*Orbital* conveys to Cosm theatergoers “the overview effect” of gazing down on Earth from low-Earth orbit.

most proud of. *Orbital* was inspired by author Frank White’s work on “the overview effect” (and his book by the same name)—the profound shift in perspective and awareness that astronauts experience when viewing Earth from space. It’s often characterized as a feeling of awe, interconnectedness, and a deep appreciation for the planet’s fragility and beauty when seen as a single entity against the vast backdrop of outer space.

Andy Merkin, director of creative productions at Cosm, explains that the team developed a creative treatment specifically to address the recollections of actual astronauts.

“Only 681 (astronauts) have ever seen this view,” Merkin explains. “How do we bring three or four hundred people to space and show them that overview effect? It’s a very complex feeling.”

To make sure they were living up to their intent, the *Orbital* team did extensive previsualization in VR and Unreal Game Engine along with more than 40 hours in domes. The fact that *Orbital*, which allows the audience to gaze down on our planet from low-Earth orbit, has been launched at all COSM venues implies that the creative team feels that they’ve delivered on their intent. ■

