

# WWE THUNDERDOME

Images: Quince Imaging, Screenworks

As the coronavirus pandemic and a host of government-regulated safety mandates swept the nation in 2020, event planners, venue professionals and broadcasters were forced to redefine best practices for hosting live events while ensuring the safety and wellbeing of talent and audiences in large gathering spaces. Event producers were especially challenged with finding a new medium to connect with and engage target audiences. As public safety regulations tightened in the midst of the pandemic, venues began experimenting with a wide range of solutions to overcome the unprecedented obstacles they faced. Producers quickly exhausted early audience simulation efforts with minimal success, including reduced-capacity ticketing, piping virtual crowd noise into venues, cardboard 'spectator' cutouts to fill vacant seats, and inserting fans into venues digitally via augmented reality. Finally, though, through a series of trial and error, the single standout solution that has revived live events, and proven more effective and authentic than any other – the 'virtual fan experience' – was born.

The industry veterans at World Wrestling Entertainment, Inc. (WWE), were among the first to rise to the challenge and tackle this solution head-on with the debut of its revolutionary ThunderDome virtual fan experience, which premiered during Friday Night SmackDown at the Amway Center in August 2020. WWE's bold choice to fill the arena with 1000 virtual fans remains one of the largest and most successful use cases to date, having successfully created an elaborate, immersive experience that captures the essence of its popular live shows.

Following its television debut, the WWE ThunderDome was an instant hit, as Kevin Dunn, WWE Executive Vice President of Television Production, explained further: "WWE has a long history of producing the greatest live spectacles in sports and







entertainment, yet nothing compares to what we are creating with WWE ThunderDome.

“This structure will enable us to deliver an immersive atmosphere and generate more excitement amongst the millions of fans watching our programming around the world.”

Tasked with designing a robust, large-scale virtual fan experience, producers at The Famous Group called on their long-time technical partners at Quince Imaging and renowned cloud infrastructure experts, Frozen Mountain, to develop a premium, custom solution for WWE, scalable enough to be deployed in professional sporting arenas worldwide. The WWE’s world-class solution was conceived through large-scale installation of the most sophisticated high-resolution LED screens, populated edge to edge with WWE fans.

The infrastructure created a larger-than-life virtual audience mosaic consisting of 1,000 live fans, each streaming into the broadcast from their own home, transcending time zones and geographical boundaries throughout the world in real time. As with traditional live events, virtual audience members were able to cheer on and engage with their favorite entertainers as their on-air participation was filmed live throughout the broadcast.

The virtual fan experience concept has grown rapidly over the past year in both prevalence and sophistication. While early

versions of virtual fans were little more than set dressing, the virtual fan experience has evolved into a suite of services and products that includes thousands of concurrent livestreams, tiered seating, complex LED and graphical layouts, tiered moderation and, most importantly, low-latency video feeds for fans to truly react in real time. Key to the success of this product has been combining the low-latency of traditional video conferencing services, with the level of graphic control and audience management required for a live production. Bringing the virtual fan experience display system together was a complex technological feat, with WWE’s most dedicated fans streaming in from all around the world, while simultaneously keeping WWE and technical partners connected throughout the broadcast, all while adhering to strategic planning guidelines in compliance with COVID-19 regulations. Deploying a combination of cloud-based control, SRT video transport technology, and remote intercom systems, made it possible for the majority of the game-day operations staff to work off-site. With moderators, producers, and support staff working remotely, local team members were able to monitor the real-time render engines on premise while adhering to proper social distancing protocols.

Quince Imaging’s Director of Innovation, Eric Gazzillo, added: “The streaming industry is a crowded market, so it was imperative that we distinguish our virtual fan experience







technology as a suite of products and services that provides event producers with the reliable elements of control they've come to expect in traditional live events. Geographical flexibility for clients, producers and fans, technical scalability, graphical adaptability, and moderation controls are all integral elements that provide a measure of control and security unrivaled by any other product on the market." Central to the concept was the ability to allow fans to experience the action up close and personal, bringing them into the arena via live video on huge LED screens – and it was Screenworks, the video display solutions specialist, providing the innovative LED solution to help achieve this. "The intention was to give the WWE Universe via technology, the most immersive experience that we could think of," stated Duncan Leslie, Senior Vice President of Event Technical Operations at WWE.

Screenworks, part of the NEP Worldwide Network, has been working with the WWE for some two decades and, according to the company's Vice President, Kevin Hoyle, it's a relationship that has been long and fruitful: "This isn't the only new challenge we have been thrown during our relationship with WWE," he began. "Our task has always been and will continue to be to support them however we can during these difficult times."

Kevin furthered: "It gives that live interaction between the fans and the WWE superstars that make the shows so special. This virtual audience solution has changed everything – it's not just one big Zoom call. The team has recognised frequent fans who dial in regularly, whole families get involved and it has really helped the WWE superstars keep the energy up. The possibilities for this are really endless and it could be used in so many other settings."

The WWE ThunderDome set includes 2,194 LED panels, with a stunning 16 million pixels. In addition to the LED screens used, over 30 projectors were added to achieve the result. ROE Visual Carbon series CB5 and Magic Cube MC7 were used to create both the set as well as the fan boards. With the immediacy of the COVID-19 lockdown meaning that the teams had to scramble to get the facility up and running quickly, it's no surprise that the number one challenge as far as Kevin was concerned was time. He revealed that, within just nine days from getting the original call, his team had fabricated, cleaned and installed everything in the Amway Center.

"It was a big challenge, but there was a great camaraderie between all of the vendors and staff out there," Kevin reflected. "We all banded together. We sent out 24 guys from Screenworks to get it up and running. They just jumped in





and everyone helped out.”

While health and safety is always a major consideration, the current climate around COVID-19 meant that extra measures were necessary to ensure the safety of everyone on site.

“ThunderDome is a completely sealed environment, which means that no one comes in without being COVID-19 tested,” Kevin revealed. “Once you are inside the ThunderDome, everyone is masked up, social distancing, the whole nine yards. Also, consistency of crew is crucial to keeping the bubble and keeping everyone healthy.”

The Vice President thanked some key members of the team, including Project Managers, Neil Broome, Andre Nolan and Jeff Hoyle; as well as techs, Jason Lowe, Shawn Wollard, Matt Mueller, Eric Nickloy, Derrick Terveer, Jason Keyes, Andy Wlazewski, and Bradley Barrier. He also praised Show Designer, Jason Robinson, and Production Manager, Jeremy Shand.

“Jason is 100% responsible for everything designed on this show – he is an amazing talent. He creates a larger-than-life visual experience and then gets it into a camera frame,” he commented. “And Jeremy puts all of Jason’s ideas together, working with all of us vendors. They are both magic.”

With the COVID-19 pandemic leaving an indelible mark on all live events this year, Kevin reflected on the hard work that

he and his team have put in to ensure that the crisis hasn’t meant a complete shutdown of all forms of entertainment.

“We are all craving entertainment right now for a little extra joy in our lives, and these types of virtual solutions can really help enhance productions, allowing audiences to connect beyond just watching,” he concluded. “At Screenworks and across NEP around the globe, we have really seen our staff digging in and innovating during this crisis. It has been really great to see all the new virtual solutions our teams have come up with, from virtual studios, to remote production, virtual audience, and virtual events. We have really been trying to use this as a time to innovate.”

The numbers back up the success of WWE’s ThunderDome. There were a total of 500,000 registered fans, with 226 total countries and territories represented. Crucially, capacity was always at 100% for each show, with an impressive 70% of virtual fans returning multiples times. It’s clear that, during these difficult times, there is a place for virtual crowds, however, the exciting thing is that it’s opened up more opportunities for fans from all over the world, even when things return to normality. The virtual crowd may just become a permanent fixture for the sporting industry.