



CASE STUDY

Disguise powers Karate Combat 35's record-breaking hybrid broadcast

Karate Combat is the only combat sports league to offer a proprietary blend of live-action, full-contact karate fights taking place in immersive CGI environments powered by Unreal Engine software. The Karate Combat 35 competition, held in August on the backlot at Universal Studios in Orlando, shattered viewership and social media records for the organisation.



Summary

In this case study you will see how Atlanta-based Meptik, a Disguise company specialised in reimagined hybrid, virtual and metaverse experiences, used the Disguise xR workflow to deliver an event for a league which continues to set records with every new competition.

As a mixed martial art, Karate Combat includes a combination of stand-up striking, judo throws and ground-fighting. With global Olympic medalists and national champions as participants, Karate Combat's trademark CGI-based look borrows from the best of video games, blockbuster moviemaking and traditional sports.

Attended by a sold-out live audience, Karate Combat is streamed live across all the major social platforms, with the full card then immediately re-posted as video-on-demand in a democratised digital distribution strategy. The event also airs live to millions of households in more than 160 countries on such flagship regional networks as Eurosport and Globo (Brazil) plus numerous other terrestrial broadcasters and OTT platforms.

For Karate Combat 35, the Meptik team were tasked with integrating xR and Unreal Engine VFX workflows into a live broadcast sports environment to create a futuristic dystopian Paris environment. In-camera workflows were used via an LED videowall background while set extensions broke the boundaries of the physical set for a fully encompassing visual experience for viewers at home



The challenge

The project's timeline had a quick turnaround: less than one month from Meptik signing on to delivery and just one week to deploy the xR solution on set. The Meptik team, needing a robust and reliable xR workflow, opted to use two Disguise VX 2 and one VX 4 media servers plus a pair of RX II real-time rendering nodes.

Their biggest technical challenge proved to be calibrating the LED videowall for a variable lens due to the breathing of the lens at longer focal lengths. The precise nature of virtual set extension made even the smallest offset noticeable. They also faced issues with frame delay, which were resolved by manually calibrating the delay on two axes.



The solution

The virtual set featured a rough cobblestone road leading to the still iconic Eiffel Tower. The actual fighting ring was right in the centre of the road with physical props adding to the illusion of being on a dingy side street. The seamless blending of the real and the virtual immersed the studio audience to almost 270°.

The Disguise xR workflow helped the team overcome their challenges by providing an integrated solution that could be quickly deployed. Meptik's Senior xR Specialist, David Vargas, believes that xR was a great choice as it allowed for fluid creativity for everyone involved: The team were able to make quick, live changes to the project that were immediately iterated while virtual set extension provided the perfect solution to build out the world they had envisioned.



“Working with the Disguise xR workflow was fantastic -- the ability to quickly set up and troubleshoot issues was imperative to the success of the project. Disguise provided an integrated ecosystem that allowed for quick and reliable deployment, perfect for the turnaround required.”

Alex Smith
Junior xR Specialist

The results

The energy of the live crowd and the physical set combined with the unlimited possibilities of a virtual environment created a best-of-both-worlds setting for a unique event, reaching a sold-out live audience and an additional 2.1 million viewers watching on Facebook, Instagram, YouTube, TikTok, Snapchat and Karate.com

With extended reality, each event could take place in a different time period in history or in a fictitious future location – a fresh and different creative approach that makes Karate Combat stand out from other live and virtual shows.



Conclusion

According to Smith, Karate Combat 35 exemplified the possibilities of the symbiotic relationship between a physical live set and a virtual environment, bridging the best of both worlds.

“This approach is beneficial for live events that might lack the studio space or the capabilities to furnish a complete physical environment while allowing for more dynamic camera moves and a more exciting production,” says Smith.

2.1

million livestream
viewers

23%

increase in live
event viewership

26%

increase in social
impressions

160

countries where
the broadcast was
aired live



Disguise equipment used



VX 4

Optimised for playing up to four times uncompressed 4K60 and lossless 10-bit video, the VX 4 powers content of the highest quality at any scale.

Find out more [→](#)



VX 2

Building on the strength of the VX 4, the VX 2 gives you the freedom to build out your technical capacity depending on the size of your production.

Find out more [→](#)



RX II

RX II is our dedicated system for hosting content from real-time render engines, unlocking 40% more graphics processing power than its predecessor.

Find out more [→](#)

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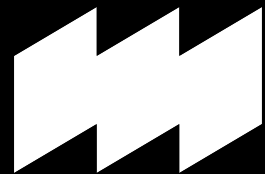
Senior xR Specialist: David Vargas

Junior xR Specialist: Alex Smith

Senior Systems Designer: Ed Lunsford

Junior System Technician: Jess Wong

Technical Producer: Jamie Mellars



Get in touch

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Need support on your project?**

Our team will be happy to speak to you,
whatever your query.

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