

Discovery, Inc. deliver virtual upfronts created by Final Pixel using virtual production & disguise xR

Long known for its innovative programming, [Discovery Channels](#) broke new ground by promoting its 2021-22 season for marketers and media buyers with virtual upfronts created by [Final Pixel](#) using virtual production, powered by [disguise xR](#).

In this case study you will see how Final Pixel brought together talent in New York, Los Angeles and London through virtual production to deliver a more cinematic experience for the viewers.



At a glance

In television, an upfront is a gathering hosted by TV network executives for major advertisers and media, generally held at the start of important advertising sales periods.

A certain adherence to the presentation format is inevitable for upfronts – as a result, a number of top executives at Discovery were pre-recorded, but with a twist. The network enlisted the help of global creative studio Final Pixel, who specialise in end-to-end virtual production for film, TV and advertising, to shoot the presentations in various photorealistic, cinematic environments following the theme of coming back to work.

The recordings saw various Discovery executives emerging from an elevator and immediately transported to different virtual settings, all driven by the topic of their presentations – from the rooftop of the new Discovery HQ in New York, to the network's International Mission Control Center in London, and even a small town in Mississippi. Final Pixel ran the entire production process end-to-end using its own virtual production studios in New York and London to shoot Discovery's staff, designing the background and foreground elements, and creating the virtual worlds in Unreal Engine.



The challenge

With just six to seven weeks from the initial client discussion to the first shoot, Final Pixel knew they had to deliver fast.

Although virtual production has proliferated during the pandemic, Final Pixel often finds that clients are still getting to grips with the implications of this new way of filming. Educating others in this new method is paramount and showcasing real-life applications helps them grasp the potential of the technology. Virtual production is an evolution in filmmaking, similar to when cameras moved from film to digital capture, according to Final Pixel CEO Michael McKenna.



The solution

Final Pixel first collaborated with disguise earlier in 2021, having seen disguise as a significant part of a number of exciting virtual productions, so they quickly saw its **xR workflow as the ideal solution for creating and shooting photorealistic backgrounds that would be close to the camera.** Final Pixel deployed disguise vx 4 media servers and rx render nodes for the project.

Concerns around the latency between the camera and background movements were dispelled when **disguise allowed Final Pixel to shoot with two tracked cameras.** “That reliability was especially beneficial with so many different shoots involved,” McKenna explains.

Final Pixel had already switched from an 8-bit to a 10-bit workflow on a previous project because they needed a photorealistic background with a colour space as close to reality as possible. For the Discovery upfronts, they worked closely with disguise to make sure they could use the rx render nodes to achieve photoreal environments in 10-bit for a high production value. Final Pixel was able to replicate that workflow for Discovery using **two rx nodes driving the in-camera frustrum for a workflow that was both repeatable and easily manageable.**



The solution

When shooting the New York scene, the team **applied virtual set extension following a LIDAR scan of the LED wall**, then they colour matched the scene on the LED display with the virtual scene in the set extension.

They also used the **virtual zoom feature** in disguise's xR workflow to achieve a flyover of New York City, then dropping down and zooming into the presenter on the Discovery rooftop.



“

With many previous projects, when we had to set up our LED stage in the studio we spent a lot of time making sure that everything was running smoothly. But with disguise, we never felt more confident that, once everything gets plugged in, it just works. It's that element of repeatability and a well-established and well-understood workflow. It made the stage set-up efficient.

Michael McKenna, CEO and Co-Founder, Final Pixel



The results

The successful completion of the project and innovative element of shooting in a real-time extended reality environment left the team at Discovery “blown away” by the quality and end result of the virtual upfronts. Feedback from the audience was equally enthusiastic with many people unable to tell that the backgrounds were created in xR.

“This kind of response helps to foster a broader understanding of the benefits of the technology and production process and how it can be used in the future,” McKenna concludes.



Success

6-7

weeks of planning and
set-up

3

virtual production scenes

10-bit

photorealistic environments

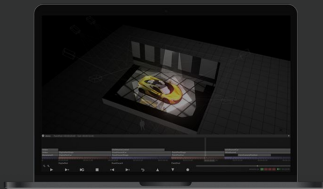
The project proved to Final Pixel the value of disguise as a workflow for virtual production, thanks to its repeatability and easy management.

Keeping teams constantly trained on the latest releases is also crucial. As a result, Final Pixel are launching a new training initiative running a series of courses specifically for on-set roles, including disguise operators. The aim is to provide teams with an in-depth look at cluster rendering, set extension and virtual zoom to make sure they can apply these techniques on upcoming shoots and further the advantage of virtual production compared to shooting on location or with green screen.



disguise equipment used

Designer software



Designer is the ultimate software to visualise, design, and sequence projects at every stage, from concept all the way through to showtime.

[Find out more.](#)

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.](#)

rx



rx is our dedicated system for hosting content render engines, enabling new possibilities for scale out rendering.

[Find out more.](#)



In partnership with:

Director: Chris McKenna

Director of Virtual Production: Michael McKenna

Executive Producer: Monica Hinden

VFX Supervisor: Steve Hubbard

Technology Vendor: [Creative Technology](#)

Render engine: [Unreal Engine](#)

LED display: [ROE Visual](#)

LED processing: [Brompton Technology](#)

Camera tracking: [Mo-Sys StarTracker](#)



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Curious to know more about us? Want to master our production toolkit? Need support on your project? Our team will be happy to speak to you, whatever your query:

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