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VOLUMETRIC VIDEO

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General info from Wikipedia:

“**Volumetric video** is a technique that captures a three-dimensional space, such as a location or performance.^[1] This type of volumography acquires data that can be viewed on flat screens as well as using 3D displays and VR goggles. Consumer-facing formats are numerous and the required motion capture techniques lean on computer graphics, photogrammetry, and other computation-based methods. The viewer generally experiences the result in a real-time engine and has direct input in exploring the generated volume.”

- https://en.wikipedia.org/wiki/Volumetric_video

Information about Microsoft Mixed Reality Capture studios

- <https://www.microsoft.com/en-us/mixed-reality/capture-studios>

Volumetric capture will be key for mixed and virtual reality content. Here's how it works.

- Article by Philippe Lewiki
<https://www.afternow.io/volumetric-capture/>

Polymotion Stage by Mark Roberts Motion Control

“Polymotion Stage is a unique mobile studio for the creation of volumetric video, images, and avatars, that can be deployed to wherever it’s needed. Together with our partners Dimension, we are advancing the frontiers of what is possible with volumetric capture and advanced virtual humans.”

- <https://www.mrmoco.com/volumetric-capture/polymotion-stage/>

Holocap

“HoloCap is a software tool for capturing volumetric video, more commonly known as “Holograms” using a low cost depth camera.”

- <https://holocap.com/>

Metastage

“STATE OF THE ART 3D PERFORMANCE CAPTURE PHOTOREALISTIC VIRTUAL HUMANS
INTERACTIVE TOOLS“



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- <https://metastage.com/>
- <https://metastage.com/specs-integrations-and-production/>

3D Video Format / MPEG-I

“MPEG is currently working on the new era of coding for immersive applications, referred to as MPEG-I. It ranges from 360-degree video with head-mounted displays to free navigation in 3D space, with head-mounted and 3D light field displays.”

- <https://www.ibc.org/create-and-produce/mpeg-i-coding-performance-in-immersive-vr/ar-applications/3338.article>
- <https://mpeg.chiariglione.org/standards/mpeg-i>
- <https://sites.google.com/site/dragoam/mpeg-i>
- <https://sites.google.com/site/dragoam/homepage/3dmm>
- https://www.itu.int/en/ITU-T/Workshops-and-Seminars/20191008/Documents/Renaud_Dore_%20Presentation.pdf
- <http://clim.inria.fr/workshop/Jung-immersive.pdf>

Virtual production

“Virtual Production 101: How does it work, how can it revolutionise VFX?”

- <https://medium.com/@thefocus/virtual-production-101-how-does-it-work-how-can-it-revolutionise-vfx-1c7e80ade0f2>

“Explore how virtual production is changing the creative landscape for film, broadcast, and VFX studios. Join us in the conversation with our new series Visual Disruptors: Exploring the Future of Virtual Production!”

- <https://www.youtube.com/watch?v=voVPO8w9-x4>

“VIRTUAL PRODUCTION IS WHERE THE PHYSICAL AND DIGITAL WORLDS MEET.”

- <https://www.wetafx.co.nz/research-and-tech/technology/virtual-production/>

Unreal Engine is widely used in virtual production:

- <https://www.unrealengine.com/en-US/programs/virtual-production>
- <https://www.unrealengine.com/en-US/blog/virtual-production-field-guide-a-new-resource-for-filmmakers>
- <https://cdn2.unrealengine.com/Unreal+Engine%2Fvpfieldguide%2FVP-Field-Guide-V1.2.02-5d28ccec9909ff626e42c619bcbe8ed2bf83138d.pdf>



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Virtual studio software companies utilizing UE4

- <https://www.zerodensity.tv/>
- <https://www.futureuniverse.com/product>
- <http://kehointeractive.com/>