



Present and Future of Volumetric Video

Chuck Ian Gordon,
www.GordonsArca.de

Author of:
The cinematic VR Formula

how to wake the superhero inside you



"It seems that I've been living two lives.

One life, I am an IT consultant for a respectable software company.

I have a social security number, pay my taxes and I ...

... am sent by my wife to carry out the garbage.

The other life is lived in my Gordon Cave where I go by the alias Chuck Ian Gordon trying to help mankind qualify for the 22nd century. "

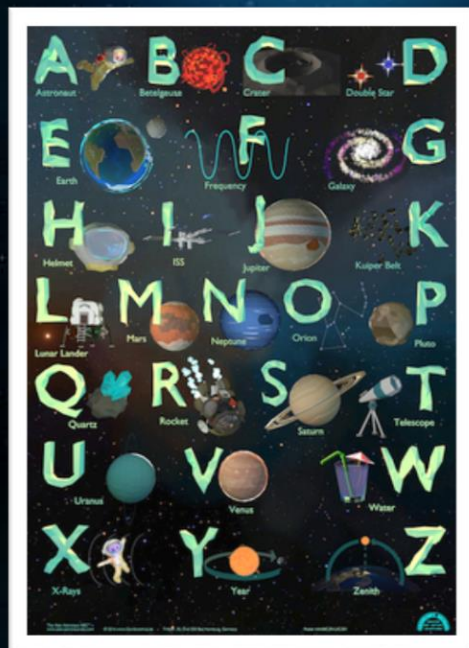
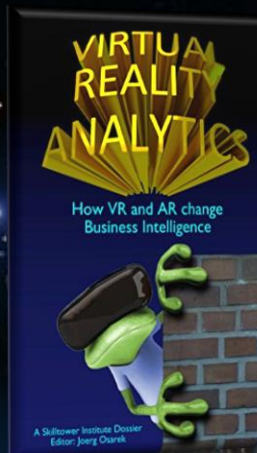


THE
3FUTUREZ
HOLODECK
MUSICAL



www.3futurez.com

GORDON'S ARCADE
VR
Animation
Studio



Chuck Ian Gordon
www.GordonsArca.de

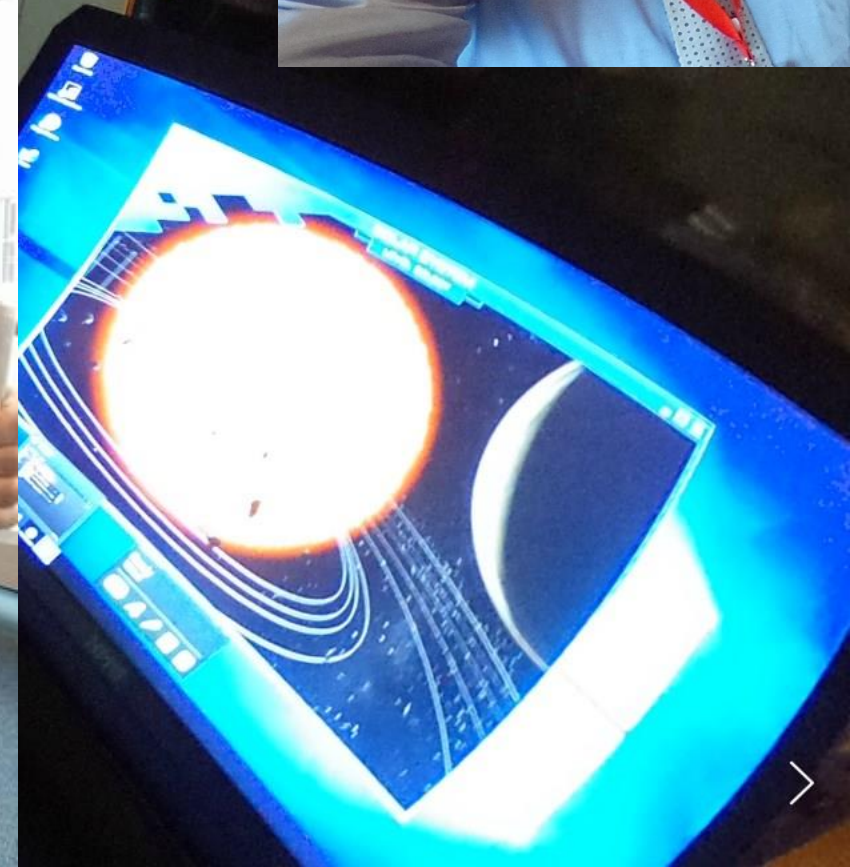


12:48 / 29:39

https://www.youtube.com/watch?v=i0j1fU_jLMw - is licensed under CC BY 3.0 - Creative Commons Attribution license (reuse allowed)



You need Theory and Practice: 1. Try



Level up your Book: Virtual and Augmented Reality for Graphic Novels and Books

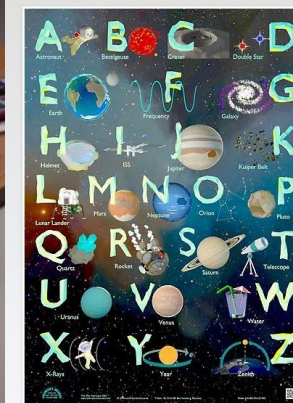


Level up your Book: Virtual and Augmented Reality for Graphic Novels and Books

REDBUBBLE

Suche nach Themen & Produkten

MÄNNER FRAUEN KINDER HÜLLEN & SKINS STICKER WANDBILDER WOHNEN SCHREIBWAREN T



GordonsArcade
BAD HOMBURG, DEUTSCHLAND
FOLGEN

PRODUKT-
INFO

PRODUKT-
BEWERTUNGEN (37)
★★★★★

You need Theory and Practice: 2. Build

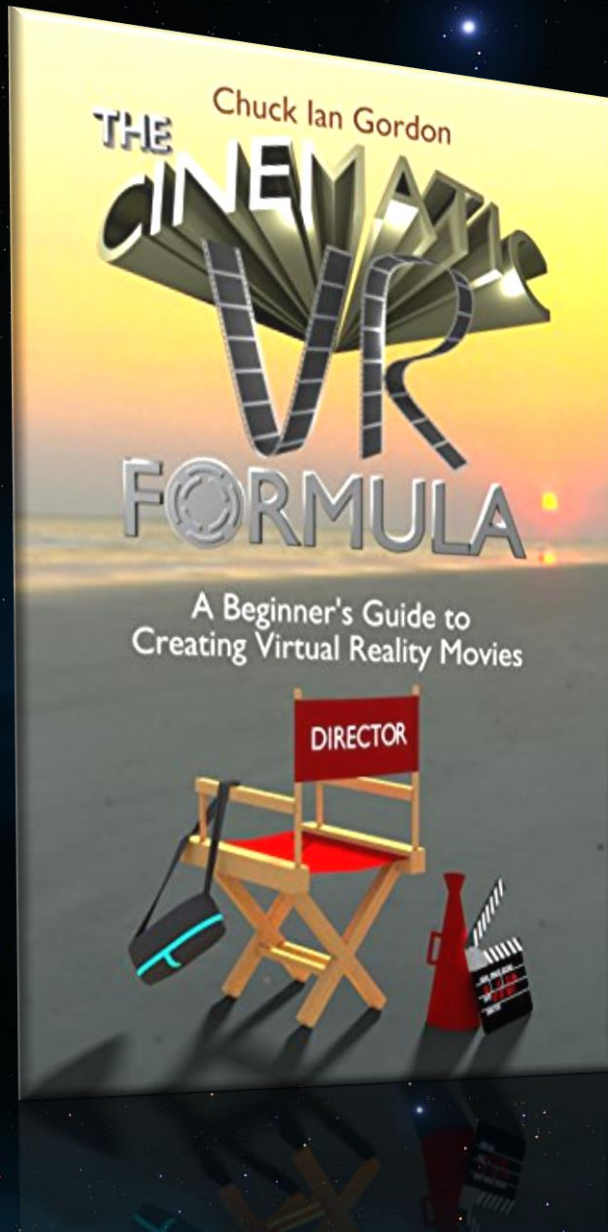
Level up your Book: Virtual and Augmented Reality for Graphic Novels and Books

www.Alex-Astronaut.com

Level up your Book: Virtual and Augmented Reality for Graphic Novels and Books



Released Nov.2017: The Cinematic VR formula



Level 1: Funding Your VR Movie and Thinking about ROI

Level 2: The Story

Level 3: What is your screen?

Level 4: The realm of technology: render methods, their implications and emerging standard formats

Level 5: Spatial Sound

Level 6: Lessons learned so far

Level 7: - PreProduction Chapter 1: How VR can change preproduction

Level 7: - PreProduction Chapter 2: VR Cinematography

Level 7: - PreProduction Chapter 3: The VR Production Pipeline

Level 8: - Production

Level 9: - PostProduction

Level 10: - Release Date and Beyond

Get it on
Amazon

lets dive into two topics for a start:

a) VR/AR/MR is not just headsets

b) projection methods in VR

VR/AR/MR is not just headsets!

Display Technology



2015: Samsung Gear, Oculus DK2, Mobile VR, Google Cardboard, +++



2016: Oculus Rift Consumer Version
Playstation VR (Morpheus)
HTC Vive, FOVE (Eye Tracking)
Microsoft Hololens for Developers,
Google Daydream

Full domes



Leia Holodisplay



Magic Leap



Recording Lytro Immerge



Google Jump + Youtube VR



JauntVR Neo Lightfield Cam



Interacting

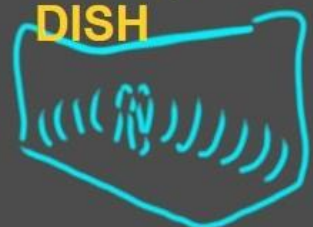
LeapMotion



Google Soli Radar Chip



Disney DISH



Fairy Lights Touchable Hologram



VR Sculpting



ILM X-Labs



VR/AR/MR is not just headsets!

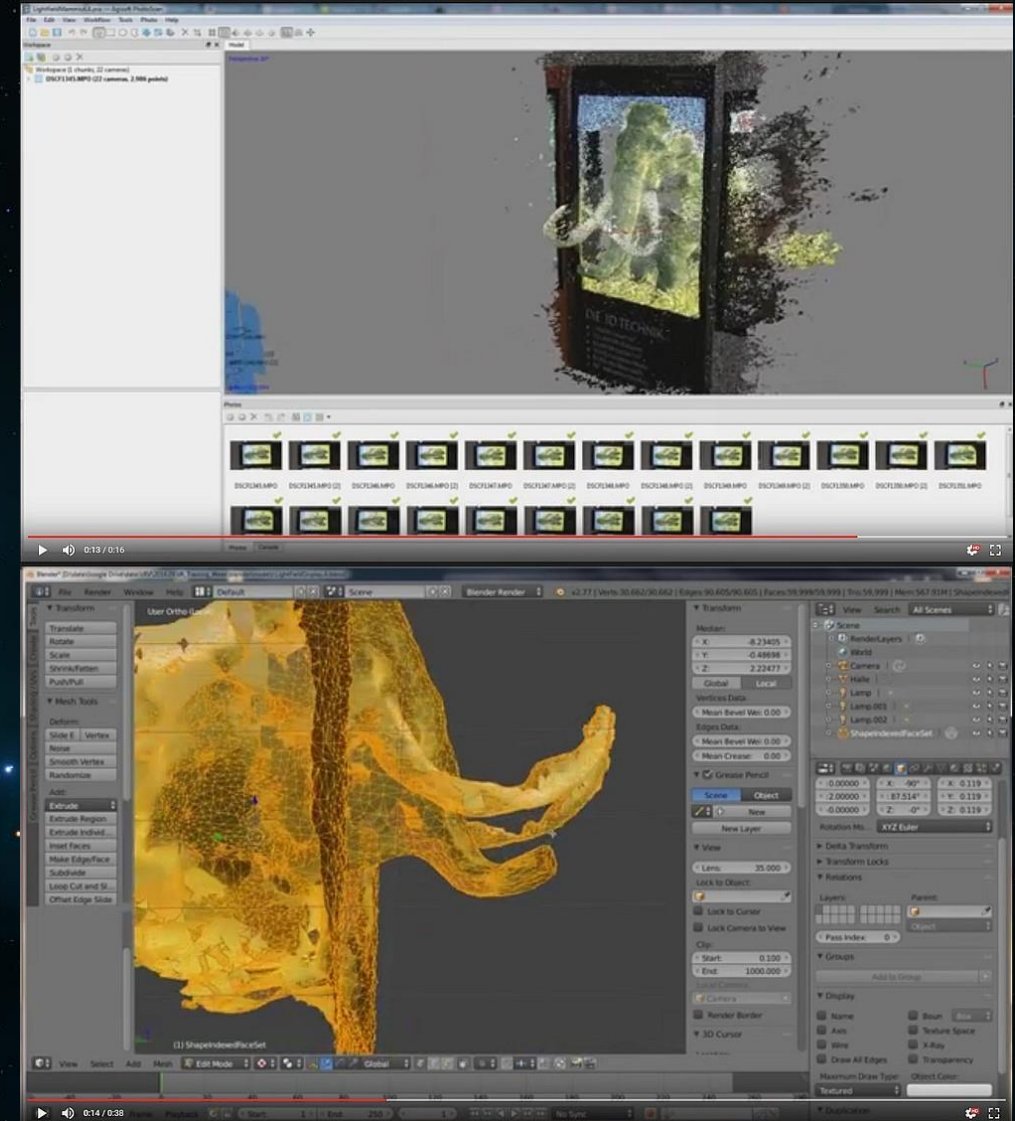
2USEMIR: Real-Eyes Lightfield-Display without Headset/glasses



11 Stereo-photos
converted to 3D model
using photogrammetry

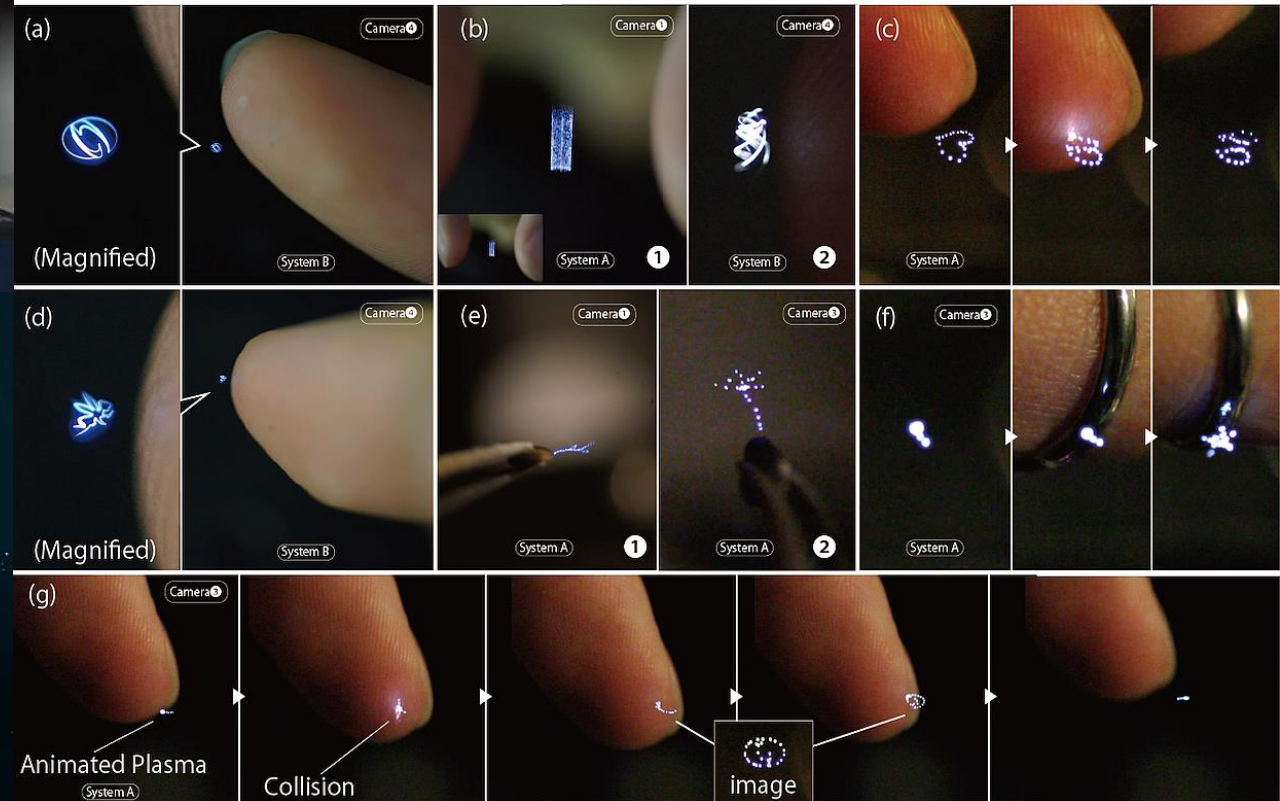
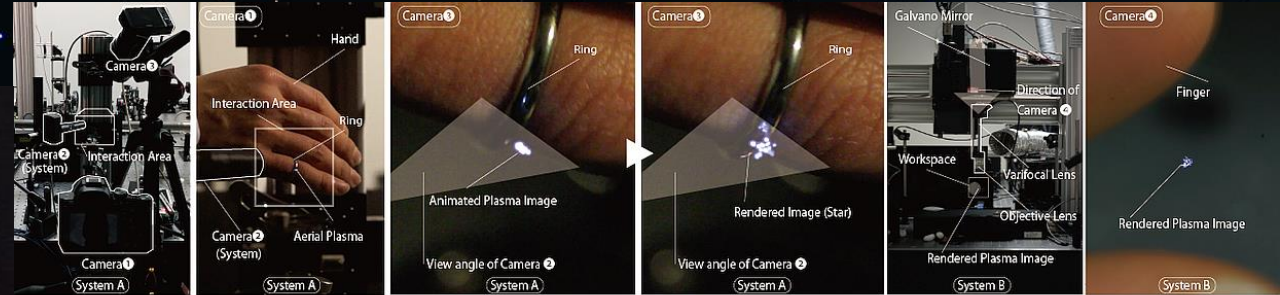
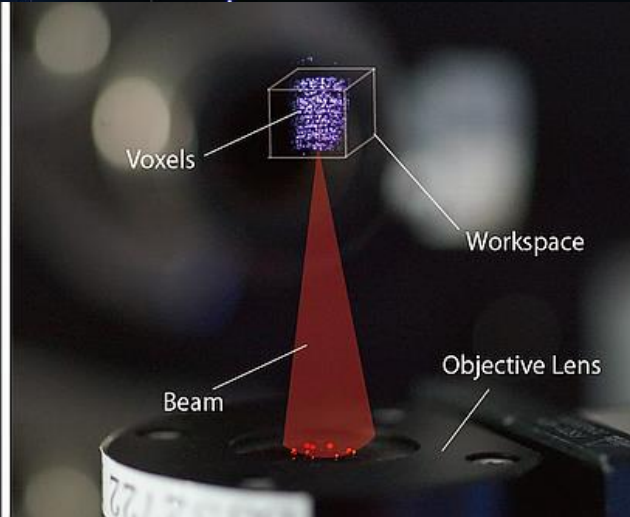
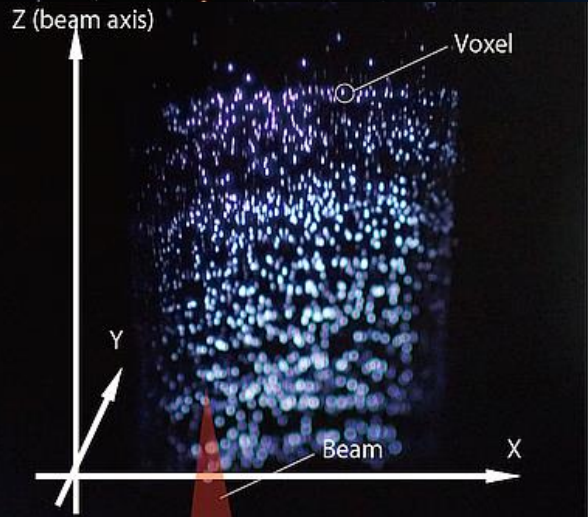


www.real-eyes.eu – own footage



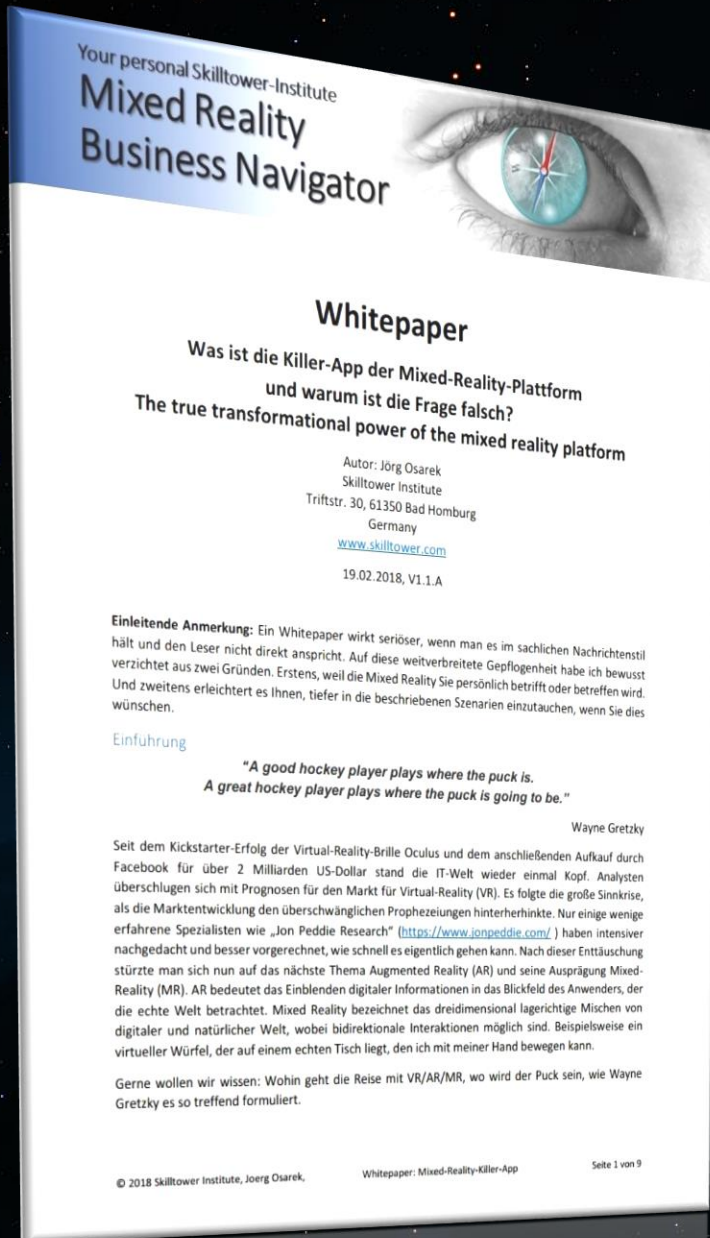
VR/AR/MR is not just headsets!

Fairy-Lights



<http://digitalnature.slis.tsukuba.ac.jp/2015/06/fairy-lights-in-femtoseconds/>
<https://www.youtube.com/watch?v=AoWi10YVmfE>
 Large Plasma Holograms: <https://www.youtube.com/watch?v=KfVS-npfVuY>

VR/AR/MR is not just headsets!



Deutsch / German:

<http://mixed-reality-whitepaper.skilltower.de/>

English:

<http://mixed-reality-whitepaper.skilltower.com/>

Projection Methods for VR

PRE-RENDERING

ROTATIONAL TRACKING
E.G. 360 VIDEOS
SOME IMMERSION



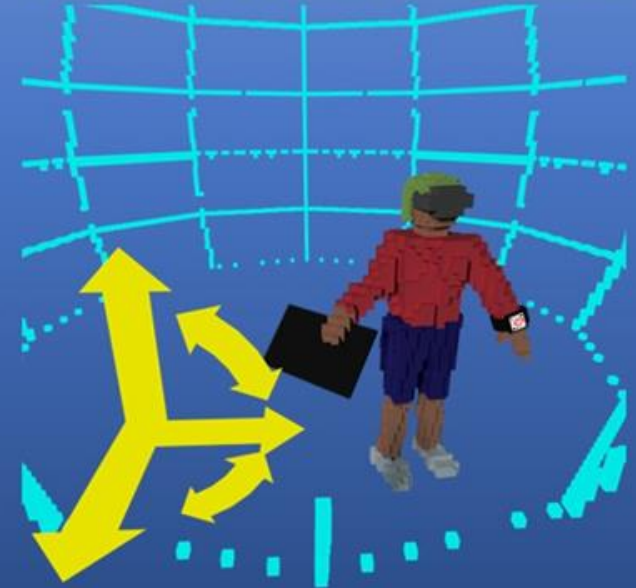
HYBRID APPROACH

ROTATIONAL + LIMITED
POSITIONAL TRACKING.
6DOF: HYBRID APPROACH
E.G. VOLUMETRIC VIDEOS
HIGHER IMMERSION



REALTIME 3D

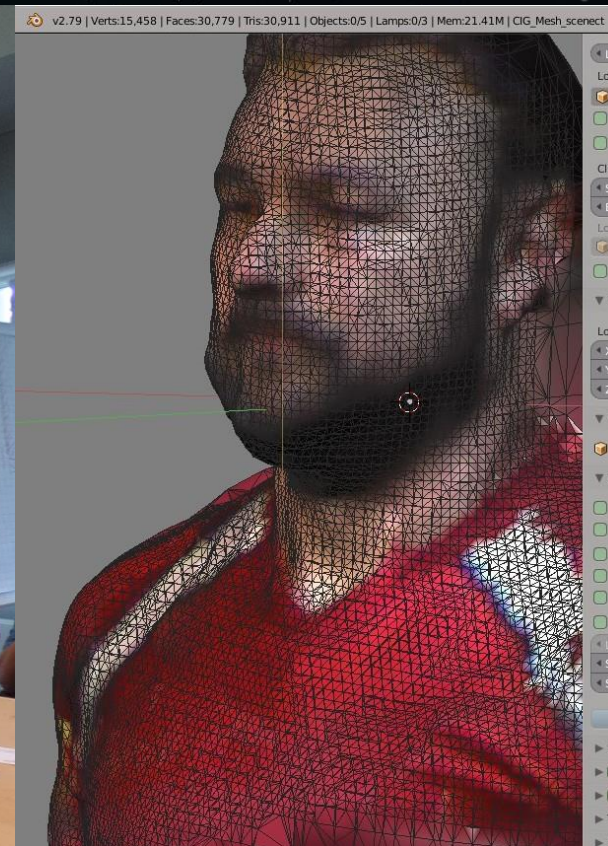
ROTATIONAL+POSITIONAL
TRACKING, FULL 6DOF.
INTERACTIVE
E.G. GAME ENGINES
FULL PRESENCE+AGENCY



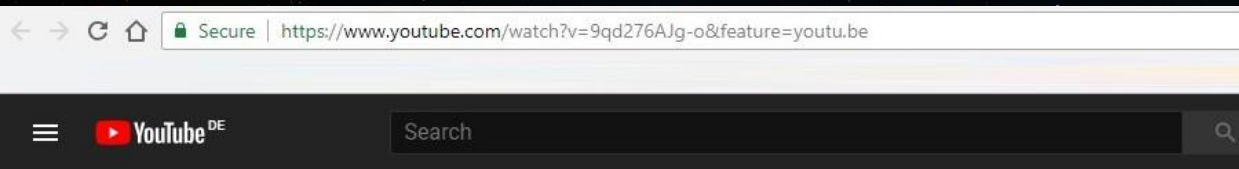
Game Engines are the future PLAY-PLATFORM
for volumetric videos and a major part of the
mixed reality platform

2018: The volumetric video path into the future

Raytrix Light field cam: 08.2016 and MS Kinect Scan (middle)



2018: The volumetric video path into the future



Volumetric Video INTEL CES 2018:

compared to early
1980s bad
chromakey
BlueBox



2018: The volumetric video path into the future

- Intel CES 2018 Volumetric Video
<https://youtu.be/9qd276AJg-o>

- Microsoft example: volumetric video cleanup
<https://youtu.be/kZ-XZIV-o8s> (until 02:05)

- otoy example: what can we do with it? (3:50-4:40)
<https://youtu.be/EK3RaU6IPf4>



Where will volumetric video head to?

2017: Chuck's prophecy from "the cinematic VR formula":
How will immersive media influence acting?

...your actors will have to perform longer takes without interruption. Like... yes. Like in theater.



Where will volumetric video head to?

2017: Chuck's prophecy from "the cinematic VR formula":
How will immersive media influence acting?

~~...your actors will have to perform longer
takes without interruption. Like... yes. Like in theater.~~

which he bluntly revokes in 2018 and now says:

Volumetric video:

a) will allow us to create phantastic immersive scenes.

b) will allow bad actors to play like gods.

Blockbuster-recipe: record 8 hours of action, get the 1 great minute out of it. blend the 3d movements - if necessary blend with other mocap the actor never did or could. Repeat this with gibberisch and you have a perfect scene with a word perfect actor dancing like a god. Do this for 90 days and you have a blockbuster!

c) AI will help us achieving perfect stuntman-injected-volumetric acting in real time.*



* (e.g. Look at KINEMATICA of unity –

<https://blogs.unity3d.com/2018/06/20/announcing-kinematica-animation-meets-machine-learning/>)

Links

Imverse Mixed Reality Demo / Published on Jan 30, 2018 / 0:41 / <https://youtu.be/kwb-SQlr5l8>

Atomontage Columetric Technology Reel - April 2018 / Published on Apr 5, 2018 / 2:35 / <https://youtu.be/nr5JqYYye3w>

Intel Studios Debut Volumetric Video Demo / Published on Feb 4, 2018 / 0:31 / <https://youtu.be/9qd276AJg-o>

Intel Studios: A Home for Volumetric Video Capture and Creation / Published on Jan 8, 2018 / 02:22 / <https://youtu.be/nd6vrSL7i1s>

Weather Forecast Bad Chroma Key / Published on May 16, 2016 / 00:52 / <https://youtu.be/WwA60MtUygQ>

How Microsoft records Holographic video content for the HoloLens / Published on Jul 28, 2015 / 03:27 / <https://youtu.be/kZ-XZIV-o8s>

OTOY Explains 6 Degrees of Freedom Video Workflow Developed With Facebook / Published on Apr 19, 2017 / 5:05 / <https://youtu.be/EK3RaU6IPf4>

Volumetric Capture Work Flows for Virtual Production / Published on Feb 4, 2018 / 37:38 / https://youtu.be/SKUlv3B_Xfs

Hallelujah by Within with Lytro Light Field Technology, 360° Video Review / Published on Sep 27, 2017 / 1:45 / <https://youtu.be/Hv61aSHtCoM>

Unite Berlin 2018 - KINEMATICA Demo / Published on June 19th 2018 / 0:11 / Unite Berlin 2018 / <https://youtu.be/ayrDupnR7Yc>

Unity Kinematica Blog article: <https://blogs.unity3d.com/2018/06/20/announcing-kinematica-animation-meets-machine-learning/>

nozon Presenz - precompute volumetric 6DOF animations from your 3d models: <https://www.presenzvr.com/>

16.07.2018: Sony's neues volumetric VR Video: <https://vodo.de/playstation-vr-sony-experimentiert-mit-raeumlichen-videos/>

Contact

All my websites are currently down due to GDPR / DSGVO

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and

LinkedIn: <https://www.linkedin.com/in/chuckiangordon/>