Technicolor VR Services

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Overview

Virtual Reality in Technicolor

Case Study „My Brother‘s Keeper“

- Introduction/Making of
- Content Preview

Case Studies with Interactivity or 4D experience

More examples of produced 360 VR content items by MPC and The Mill

Case Study „Embodied Multi-Users VR Media”

- Introduction/Making of
- Content Preview

Split by Content Type and Market Segment

Future VR Services

Some VR issues

Conclusion

Virtual Reality in Technicolor

TEC Mission: To support, inspire and lead our brands and partners to realize the potential of immersive media, feeling free to explore, create and learn we will reimagine the future of storytelling

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Case Study: My Brothers Keeper

Collaboration between PBS, Technicolor TEC and young film makers

Cinematic VR

- Dawning area of new story telling
- Make the user feel that he/she is in that space, get a sense of presence
- Enabling of new artistic possibilities: exploring full 360 scene towards guiding attention through blurring
- During production the team did many things for the first time
- With VR the complete film crew is gone

Production equipment

- Jaunt One: High quality 360 camera rig with 120 fps
- Build an alternative rig based on GoPros so as to get close to the actors

Case Study: My Brother‘s Keeper – Preview (2D and Gear VR)

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Case Studies with Interactivity or 4D experience

The Nature Conservancy

Campain

Occulus

Gaze control

Goosebumps

In Theater VR

Gear VR

Motion seats

Buster‘s Garden

Advertisement

Occulus, Leap Motion

Hand Control

Examples of more titles from MPC

Occulus, Introduction to VR

The Martian VR Experience
Partnering with 20th Century Fox and others, MPC created a thrilling preview of a mission to Mars.

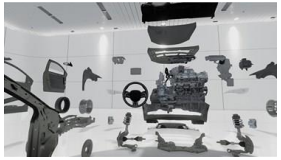
Kygo, ‘Carry Me’
MPC partnered with musician Kygo, Ultra Records, and Sony Music to create the VR experience for his hit song ‘Carry Me’.

Catatonic VR
Collaborating with Vrse.works, MPC offered VR post-production on an immersive horror story that debuted at SXSW.

OneRepublic, ‘Kids’
MPC collaborated with Nokia OZO on technical direction and post-production for OneRepublic’s ‘Kids’ 360 Video.

Tilt Brush by Google
Production company
m ss ng p eces, director Ray Tintori and MPC VR created this mixed reality film for Tilt Brush by Google..

Go Baby Go
Directed by MPC, this teaser trailer immerses viewers in a journey through a dystopian future.



Chrysler, “Beneath the Surface”
VR Experience at Auto Shows

*MPC is an Academy Award and Cannes Lions-winning visual effects studio. MPC VR is a dedicated team within MPC focused on immersive exploration across industries, including Advertising, Feature Film, Architecture, Entertainment Content and Experiential Event Production

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Examples of more titles from The Mill

Reeps One, ‘Does Not Exist’
Beatbox phenomenon Reeps One’s VR music video combines Mill+’s visual expertise and Aurelia Soundworks’ pioneering work in spatial audio.

The NYT, ‘The Modern Games’
The New York Times collaborated with The Mill to transform archival imagery into historical settings for ‘The Modern Games’ VR experience

The Jack Daniel’s VR Experience
Created by The Mill and FCB/RED, this fully immersive 360-degree virtual reality experience artfully displays the timeless craftsmanship of America's first registered distillery.

The Guardian’s *6x9*
The Mill collaborated with The Guardian to build a virtual jail cell, bringing the experience of those in solitary confinement to life through VR.

Help
Google ATAP, Bullitt, and Director Justin Lin collaborated with The Mill on Google’s first immersive film for mobile

Bryce Harper Virtual Reality Experience
Gatorade partnered with The Mill to present a hyper-real first-person avatar VR experience.

Top Gear 360
Mill+ teamed up with BBC Worldwide to launch Top Gear’s latest 360 films.

Nike’s ‘Turkey 360’
The Mill worked with Bob Harlow, W+K Amsterdam and Somesuch on Nike’s latest VR campaign, 'Turkey 360'.

* The Mill, an early pioneer in the VFX industry, works with production companies, brands and advertising agencies to create the most powerful and engaging stories through moving image. Mill Immersive is pioneering the next wave of premium experiences in VR, AR and architectural installations

Case Study: Orbit-2

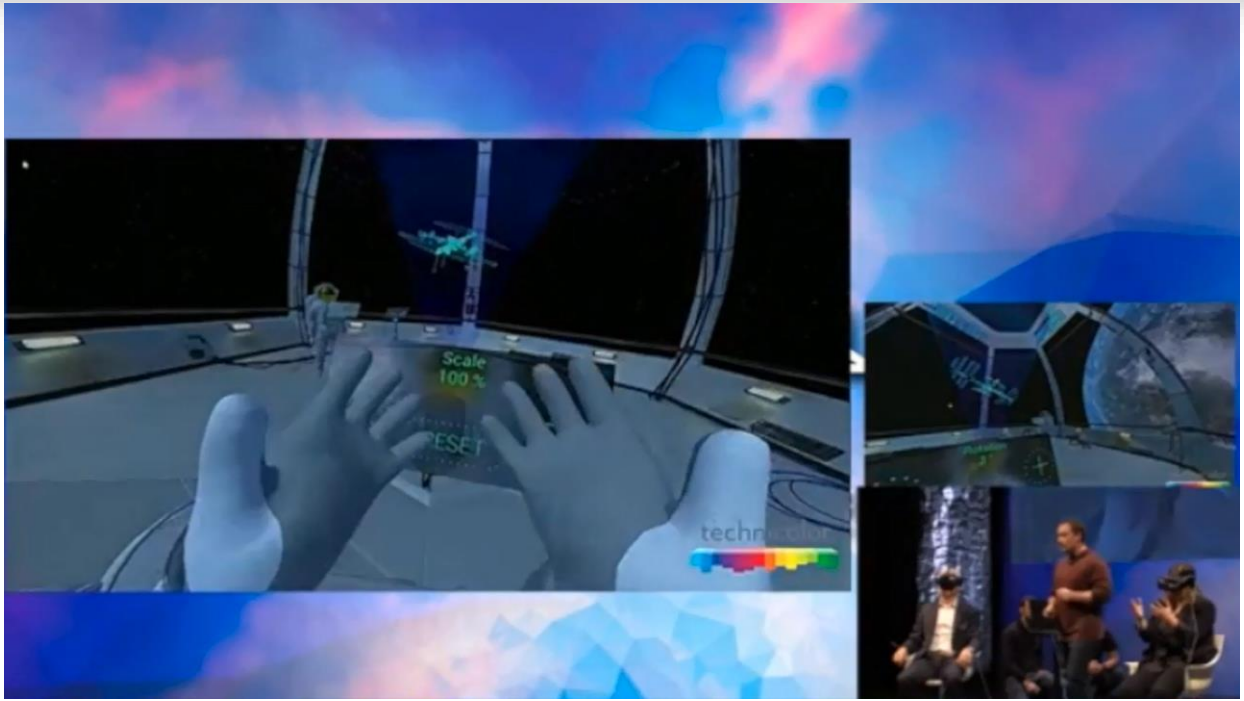
Embodiment: who/what are you in the story ?

- Having a body moving as the user moves is fundamental to increase the presence and to lower cyber-sickness
- Embodied as ghost, object, character of the story or nothing
- Interaction with content from the video to feel more present, not to change the story: the media is still a video

Production Orbit-2:

- Production of 2x360 CGI video for the 2 points of view (1”40 total) – it works with any (360) video, including live/real shoot
- Real Time: dynamic relighting, live vfx, mirrors, interaction, avatars

Case Study: Orbit 2 – Preview



Through Head-Mounted displays, two users are embodied in the same video media as two different characters. They have the ability to see each other inside the video, to move their arms and fingers, to adopt two points of view on the same linear story, and to interact with this content. This content blends 360 videos with real-time objects

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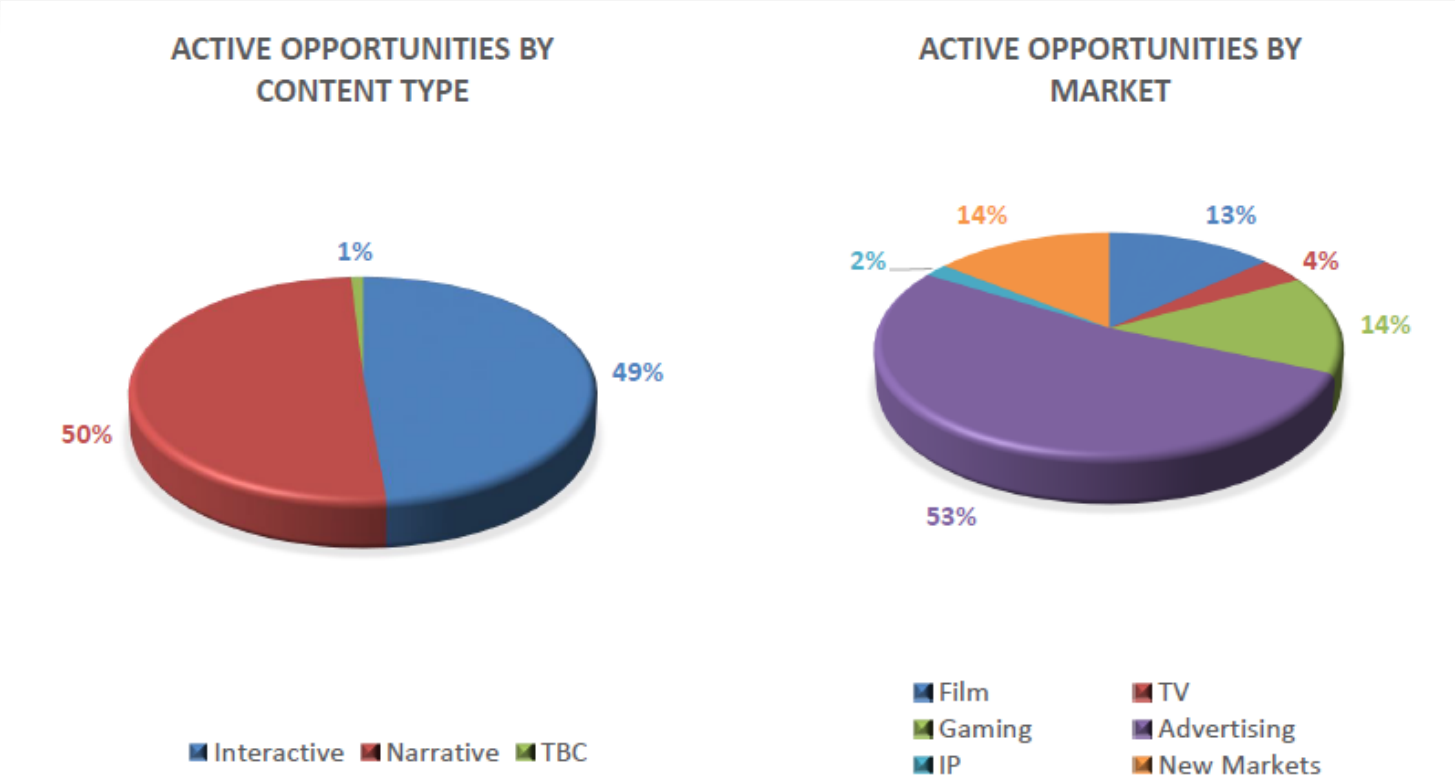
Split by Content Type and Market Segments



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Technicolor sees clear interest for services going beyond 3DoF

Some VR Issues

Color consistency from capture to rendering (from on set camera capture up to headset rendering)=> Ensure a final rendering matching producer expectation

Image stitching: spatial-temporal stitching, color consistency among cameras, occlusions => Minimize impact of artefacts on the compression

Multiplicity of content type: 360 videos, 360 video + CGI objects, full CGI => Minimize use of game engine has impact on compression schemas

Spatial Resolution: 8K and more => Bandwidth, decoding complexity

Bit depth limitation (e.g. 8 bits on some popular VR platforms) => Issues with particular contents (e.g. dark zones)

High frame rates and very low latency are needed for good quality experience

Social interaction => low latency network, compression format (e.g. embodiment demo with transfer of arm rig)

Content repurposing for different devices difficult due to multiplicity of Audio/Video formats, game engines, formats => Improve interoperability through standardization

Conclusion

VR is an exiting new technology allowing to position the user right in the center of the content

VR enables new ways of story telling and new experiences for the user

The content production industry is exploring many new service types based on VR

Content needs to be produced on a number of VR Platforms, where each has its specific limitations and formats

The VR mass market needs improved interoperability so that content producers can bring content more easily to the user

High Quality VR is likely the condition for success

Thank you – questions ?

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Links:

Busters Garden