How to design an artistic narrative virtual reality experience based on sign language poetry

Master 2 2018/19

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State-of-the-Art Fields

- Sign Language Poetry

- Time-based Narrative

- Action-Based Narrative

- Virtual Reality

- Motion Capture
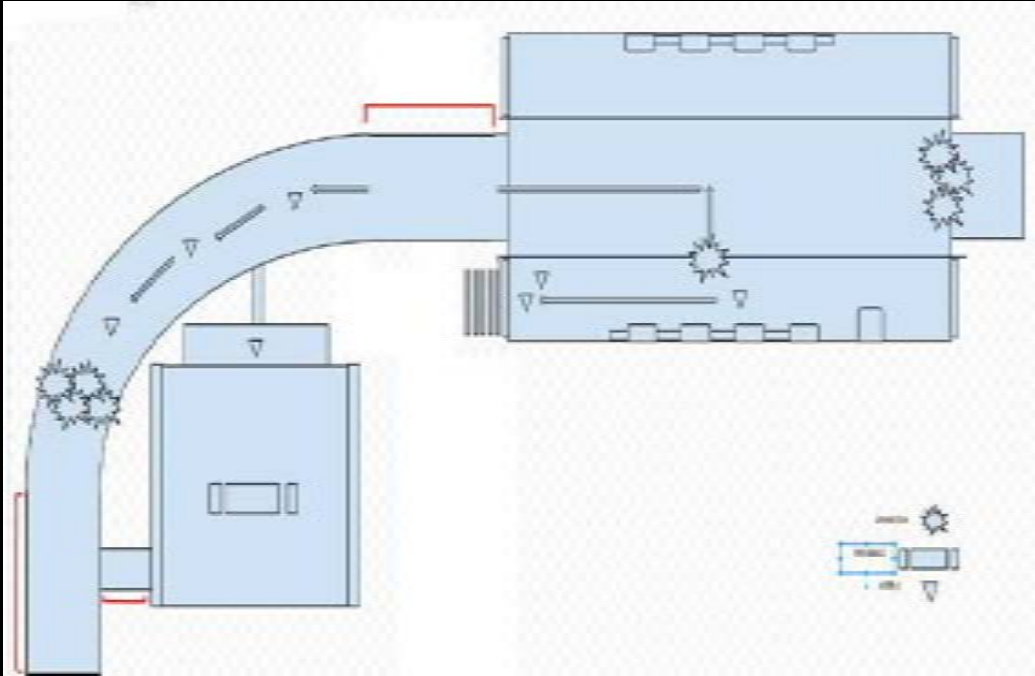

Peter Cook, ASL Poetry Performer

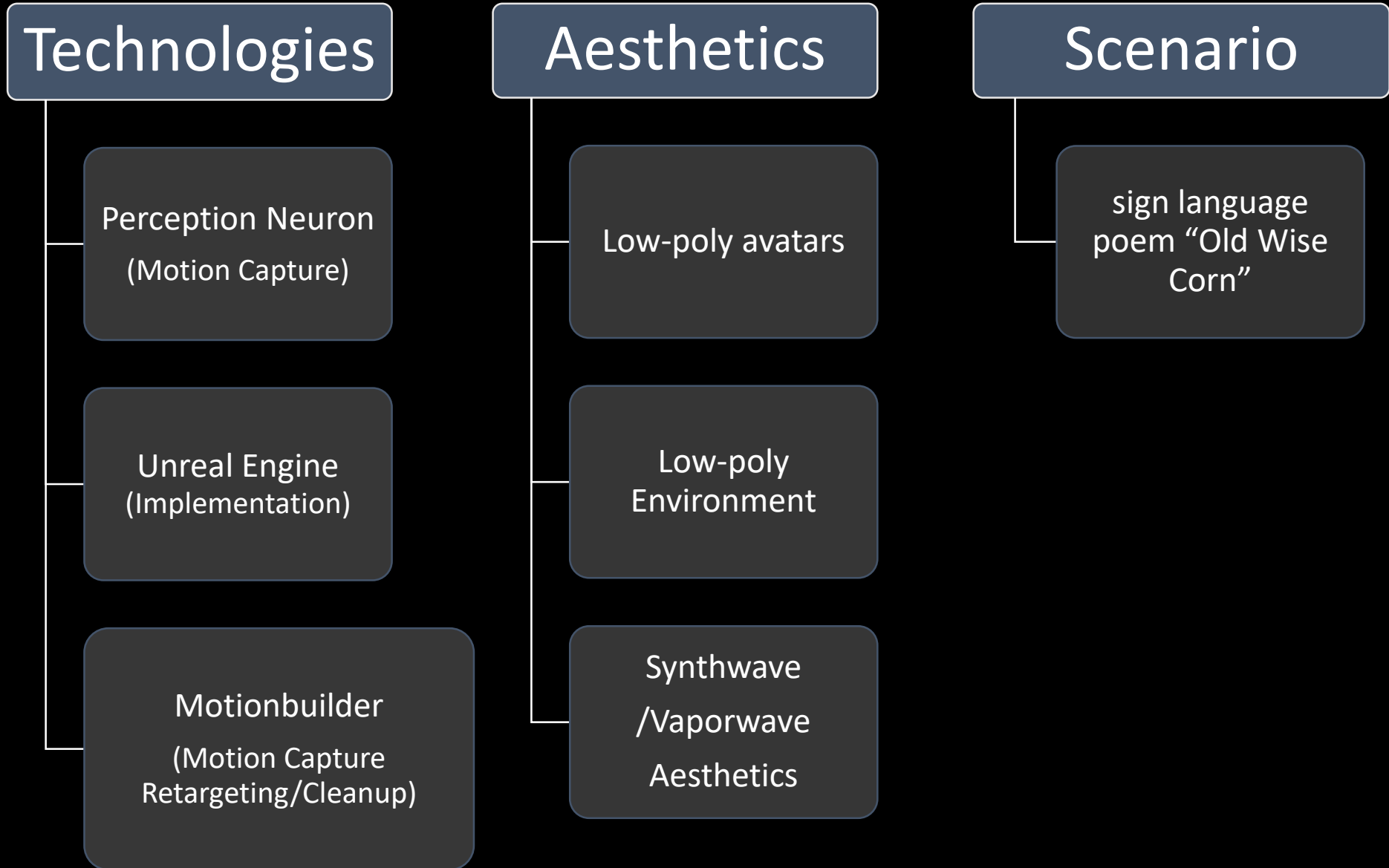Julie Chateauvert, ASL Poetry Mocap Performer

Research Questions

• How is virtual reality and sign language poetry related to each other?

• Does the artistic visualization of sign language poetry in VR enhance the way that the spectator appreciates and experiences it?

• Can different aesthetics affect the user in their experience with the narrative?

• Does the time-based narrative in virtual reality have a strong impact on the user?
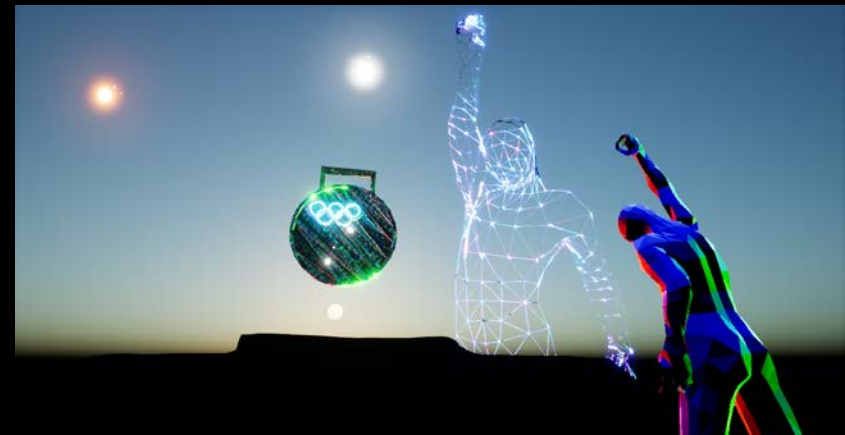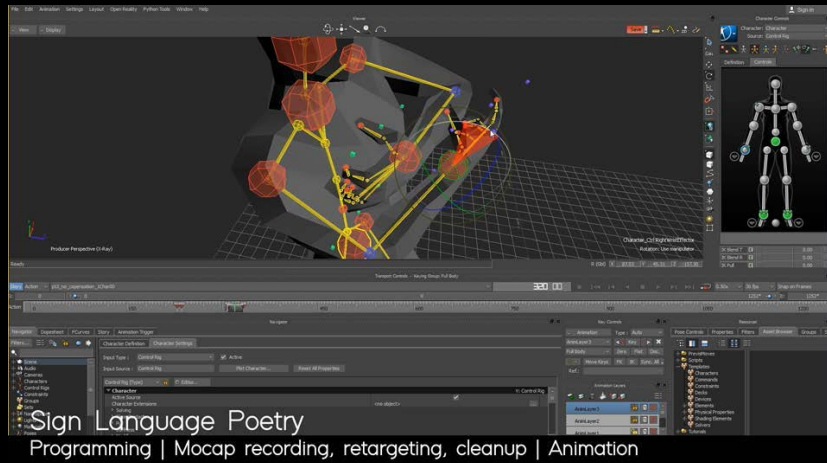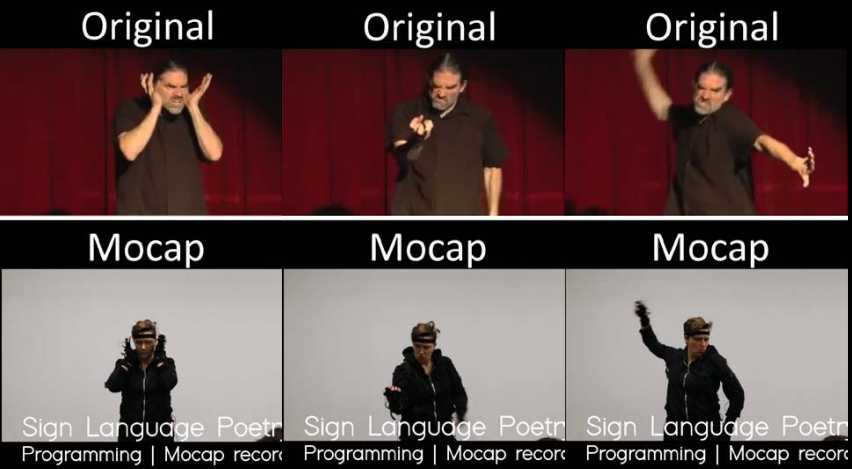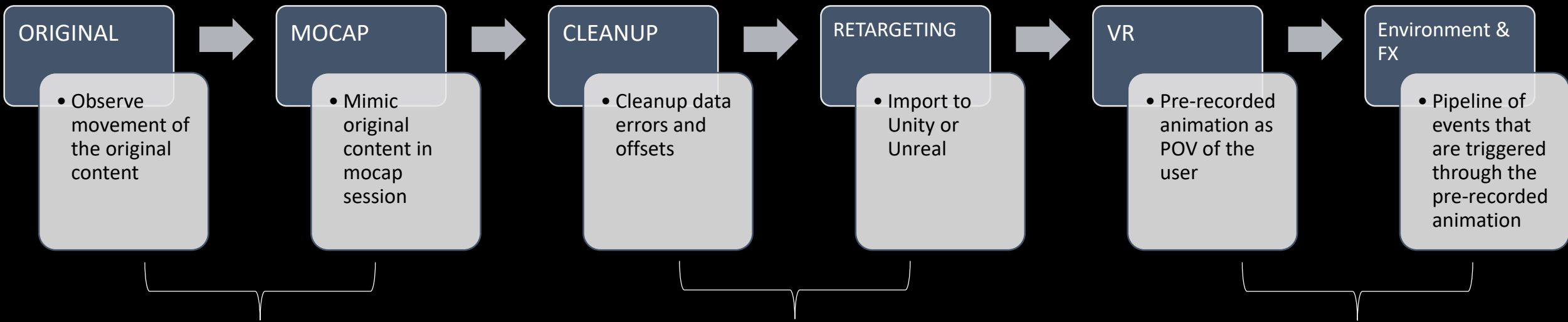
Bandersnatch :
Flowchart of Action-based Narrative

Intensif: Time-based Narrative (Horror VR Experience)

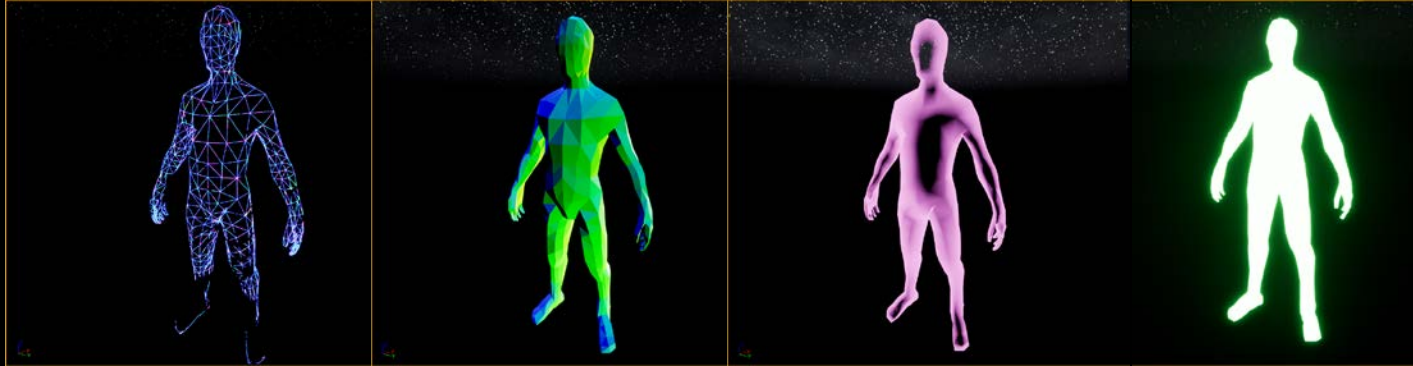Sofos VR
Programming | Mocap (all aspects) | Animation | Narrative

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Structure

Technologies	Aesthetics	Scenario
Perception Neuron (Motion Capture)	Low-poly avatars	sign language poem "Old Wise Corn"
Unreal Engine (Implementation)	Low-poly Environment	
Motionbuilder (Motion Capture Retargeting/Cleanup)	Synthwave /Vaporwave Aesthetics	

Pipeline

ORIGINAL	MOCAP	CLEANUP	RETARGETING	VR	Environment & FX
• Observe movement of the original content	• Mimic original content in mocap session	• Cleanup data errors and offsets	• Import to Unity or Unreal	• Pre-recorded animation as POV of the user	• Pipeline of events that are triggered through the pre-recorded animation

Original   Original   Original

Mocap   Mocap   Mocap

Sign Language Poetry
Programming | Mocap recording, retargeting, cleanup | Animation

Avatar Material Tests

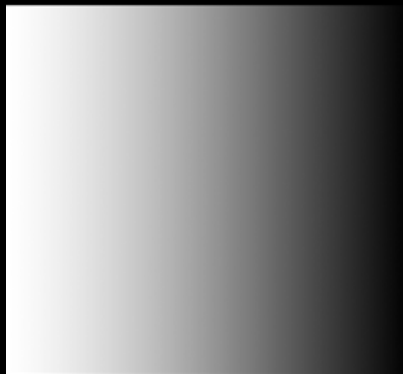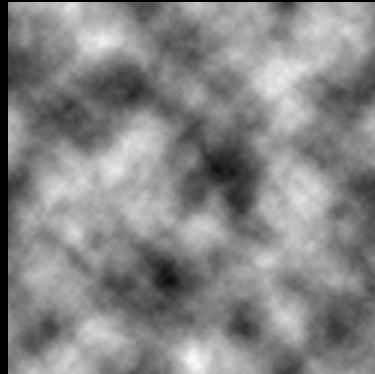
Wireframe

Flat

Semi-transparent
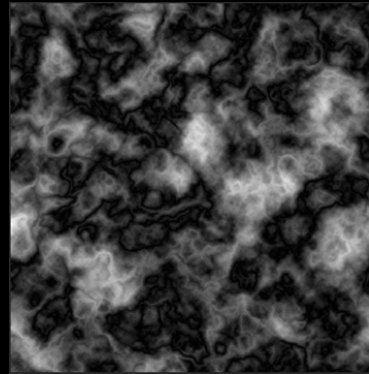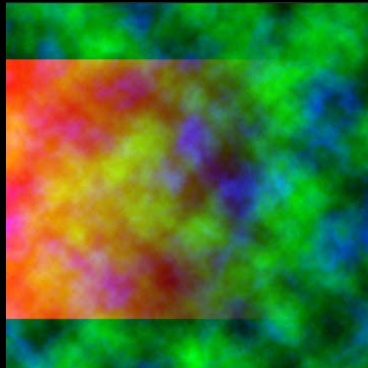
Emissive
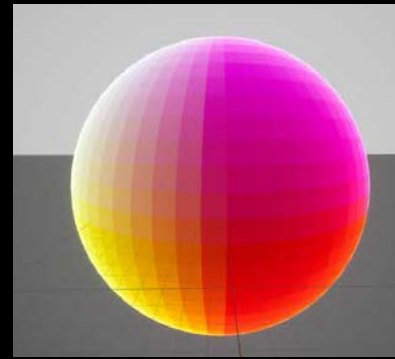
Flat
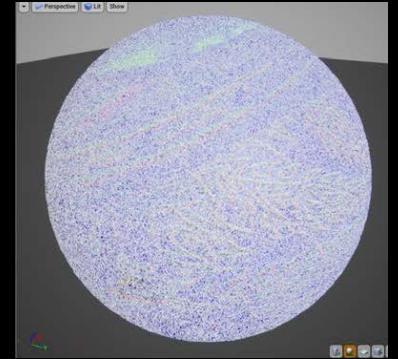
Simplex Noise
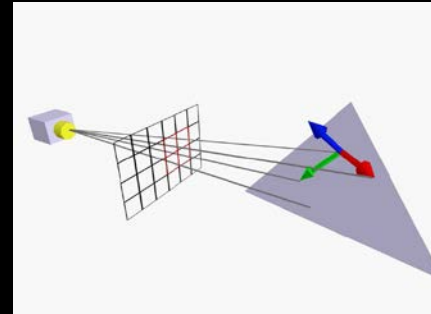
DDX x DDY

Trail Implementation

R
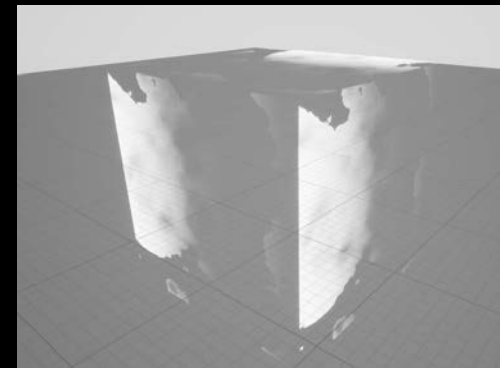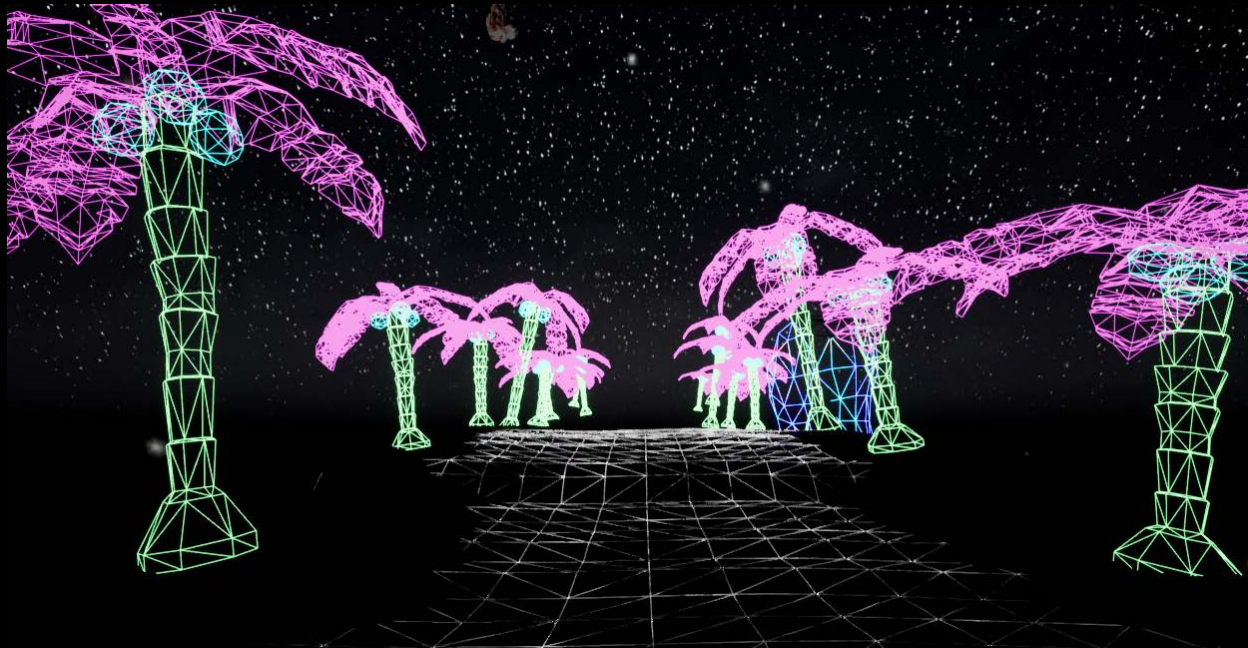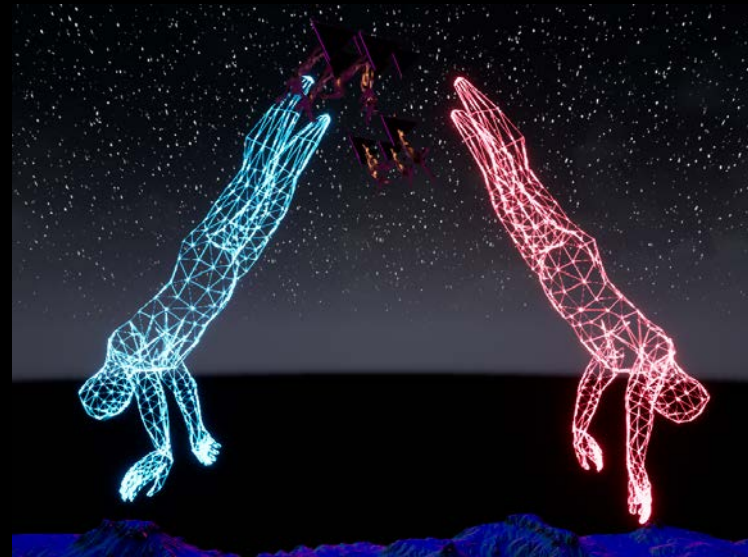
G

B

RGB

Trail Material

Light Trail

Samples from VR Experience

Future Work: Parallel World Timelines ➡ Several VR Narratives

Keywords: Remnants of Humankind | Möbius strip | futuristic post apocalypse | vaporwave

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