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# **Inspiration**

## **VR**

- 2019 AYAHUASCA
- 2019 Afterlife: Combining Branching Narratives With Live Actors In VR
- 2017 Alice The Virtual Reality Play

# Overview UnityTeam Digital Human Rigging & Shading

A general overview of some of the tools and workflows used and applied by the Unity Team for the creation of their state of the art Digital Human, Gawain.

### Maya File

### Rig

They used two different rig hierarchies. One for the body the other for the head.

#### **Body Rig**

Classical full body game rig. Skin weights up to the torso. Corrective blendshapes for the hands and the back.

### **Head Rig**

Combination of Joint hierarchy and over 200 Blendshapes.

### Model

Non-deforming body parts like the gum don't have an optimized topology.

All the hair consists of cards. Hair is exported as a separated object and is not part of the head mesh. It's attachment to the deforming mesh happens in Unity.

## **Unity Files**

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**Attachment Tools** 

The Unity Team developed a set of very useful tools to attach elements to a deforming mesh in realtime. You can implement those tools in your own project by getting them here.

First an empty dataset is created. (right click → Digital Human → skin attachment data )

### **Shading & Rendering**

### Links

## **RealTime PreViz**

- 2018 Siren (Unreal) Siren with Actress
- 2018 Reflections (Unreal)
- 2018 ForestScene (Unity)
- 2018 Andy Serkis Face to Face (Unreal)
- 2019 Ted Talk about Digital Humans with real time character

### **Dance**

- 2014 Peking Opera
- 2017 Exisdance (Unity)
- 20xx Huge collection of dance performances

# Scenography / Dance

- 2014 HAKANAI by Adrien M / Claire B
- 2018 Dökk (OpenFrameWorks)
- 2019 Das Totale Tanztheater 100 Jahre Bauhaus Palais Populaire

## **Projection Mapping & Dance**

- 2014 OMOTE
- 2017 INORI (Prayer) Making-of

# Scenography / Theatre & Opera

- 2002 Jude von Malta by Art+Com
- 2010 IAM4Mime
- 2016 Manipulation | Pepper's Ghost

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2017 The Tempest | Royal Shakespeare Company

# **Tradeshow examples**

2017 Dynamic Projection Mapping

# **Technology**

• Why CG sucks / or not (Essay)

### ΑI

- Realtime Face Reenactment
- Image Synthesis through semantic manipulation
- Interactive AI rendered 3d World
- Reconstructing Images
- Tranform Video from Winter to Summer / Day to night
- Reflections on deep fakes
- creative AI in the arts

### **FilmSets**

Realtime Compositing

### Film VFX

- The Social Network VFX Breakdown
- Rachel in Blade Runner 2049
- VFX Oscar Winners from 1929-2018
- The Lion King 2019 Making Of How it was filmed in a realistic way

### **Robotics**

- Uncanny Valley/Unheimliches Tal by Stefan Kaegi with robot-avatar as double of the author Thomas Melle
- Why Artists Love the Eerie Sensation of Characters That Look Almost Human

# **Old Style**

## Scenography

• Opera Scene change

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### Film / Animation

- Loving Vincent Making of / Rotoscope
- Loving Vincent Rotoscope Painting in Time Lapse

# **Companies**

- LuxMachina
- Stiller Studios
- Meow Wolf

# **Volumetric**

• Intel Studio

From:

https://wiki.zhdk.ch/IASpace/ - immersive art space

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https://wiki.zhdk.ch/IASpace/doku.php?id=inspiration&rev=1599142627

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