

# AXM - E0404

Designing and Creating Virtual Worlds

# Designing and Creating Virtual Worlds

- Cultural history of virtual reality and anthropology of the human senses
- Immersion and presence, storyboarding, and user studies research
- Information architecture and content development
- Interaction design, user interface, and narrative
- Using sound for storytelling







# Huldufolk - AR game



Image credit: John Bauer



# Phobi



Credit: Mixamo

# SPICE Project - EU H2020

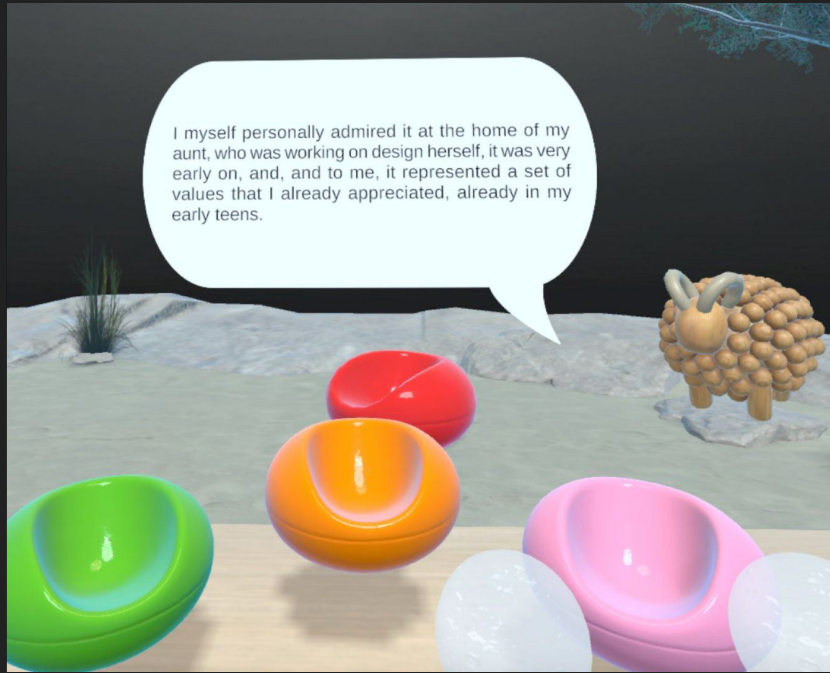
Social Cohesion, Participation, And Inclusion Through Cultural Engagement.

Citizen Curation of Cultural Heritage:

- Design Museum - Helsinki
- Galleria d'arte Moderna - Turin
- Hecht Museum - Haifa
- Irish Museum of Modern Arts - Dublin
- Museo Nacional de Ciencias Naturales - Madrid



# Pop-up VR Museum



Team: Gautam Vishwanath, Leena Svinhufvud, Lily Diaz, Wiebke Spieker



# Pop-up VR Museum



Background

Experience with VR/AR

Your main interest in this course

Favorite VR experience/game/installation

# Course

Mondays (Oct 23rd, 30th, Nov 6th, 13th, 20th, 27th):

- Lectures
- News
- Assignments

Thursdays (Oct 26th, Nov 2nd, 9th, 16th, 23rd):

- Immersion sessions at VR Hub and VR Studios
- Online review and assistance for groups

# Onsite sessions - M202

Mondays (0915 - 1200):

- Oct 23rd: Anthropology of the human senses
- Oct 30th: Presence, narrative, time and space in VR
- Nov 6th: Information Architecture and a visiting lecture by Timo Wright
- Nov 13th: Spatial sound design and avatar design
- Nov 20th: Qualitative evaluation of VR experiences
- Nov 27th: DEMO DAY!

# Immersion sessions

- Thursdays (Oct: 26, Nov: 2, 9, 16, 23)
- 1315 - 1500

## Session used for:

- Testing VR experiences
- Discussing ideas
- Technical assistance

## Booking these spaces on your own:

- VR Hub: [booking.aalto.fi](https://booking.aalto.fi)
- VR Studios: [takeout.aalto.fi](https://takeout.aalto.fi)



# News: “Remember This Place” by Patricia Echeverria



Credits: Patricia Echeverria



# Lecture: Anthropology of Human Senses

<https://edu.flinga.fi/s/EJSRHTG>



# Group divisions

## Group 1:

- Mikko Linko
- Nuutti Muurimäki
- Siiri Kemppainen
- Wanqiu Lin
- Xuefei Shi

## Group 2:

- Agnes Kloft
- Aleksandr Tikachev
- Otto Tolppanen
- Yuan Xiao

## Group 3:

- Aurora Tulilaulu
- Elde Siilbek
- Marek Sevcik
- Mengqing Wang

## Group 4:

- Markus Kirjonen
- Iivari Ojala
- Xinya Wang
- Marko Liusvaara

## Group 5:

- Aurora Navarro Villacampa
- Lauri Lyytikäinen
- Olli-Pekka Turtio
- Valentina Santner

# Booking VR Headsets

- At least 1 Meta Quest is available per group

To reserve more headsets either visit:

- Väre Takeout next to Kipsari
- Aalto Studios Takeout in Otakaari 7B

Booking done through:

- [takeout.aalto.fi](https://takeout.aalto.fi)



# Mozilla Hubs and Spoke



# Mozilla Hubs

## Affordances and potential:

- Easy to use
- No programming
- Social aspect

## Limitations:

- Interactive mechanics
- Frame-rate

Performance Check

High	<b>Polygon Count: 142,483 Triangles</b> We recommend your scene use no more than 50,000 triangles for mobile devices. <a href="#">Learn More</a>
Low	<b>Materials: 14 Unique Materials</b> We recommend using no more than 25 unique materials in your scene to reduce draw calls on mobile devices. <a href="#">Learn More</a>
High	<b>Textures: ~725 MB Video RAM, 7 Large Textures</b> We recommend your textures use no more than 256MB of video RAM for mobile devices. We also recommend against using textures larger than 2048 x 2048. <a href="#">Learn More</a>
Low	<b>Lights: 1 Lights</b> While dynamic lights are not enabled on mobile devices, we recommend using no more than 3 lights in your scene (excluding ambient and hemisphere lights) for your scene to run on low end PCs. <a href="#">Learn More</a>
High	<b>File Size: 63 MB</b> We recommend a final file size of no more than 16MB for low bandwidth connections. Reducing the file size will reduce the time it takes to download your scene. <a href="#">Learn More</a>

Cancel Publish Scene

# Unity Game Engine



# Assignment 1: Due on Oct 30th

Theme: ROOT

Create a description of a concept. It should include the title, a written abstract no longer than fifty (50) words, and a sketch that provides additional information/visualization. Each group should be ready to present this in the next class session.

Please upload the materials to MyCourses by 9:00 AM, 30 October 2023.

# Immersion session 1: Thursday - Oct 26th

- 1315 - 1500: Visiting the VR Hub and testing experiences as well as tools.

