

IMMERSIVE ARTS FINAL PROJECT

# Transcendence: An interactive audiovisual instrument and experience

by Geom.one

# Origins



Extensive Research

+



Experience

Performance

DJing

VJing

Live event planning and production

Music composition

Audio production

Interests: Science + Art

Music

Geometry

AI

Nature

Therapeutics

Emotions

Consciousness

Technology

Motivations

Do good

Help people

Help planet

Try to leave the world a better place

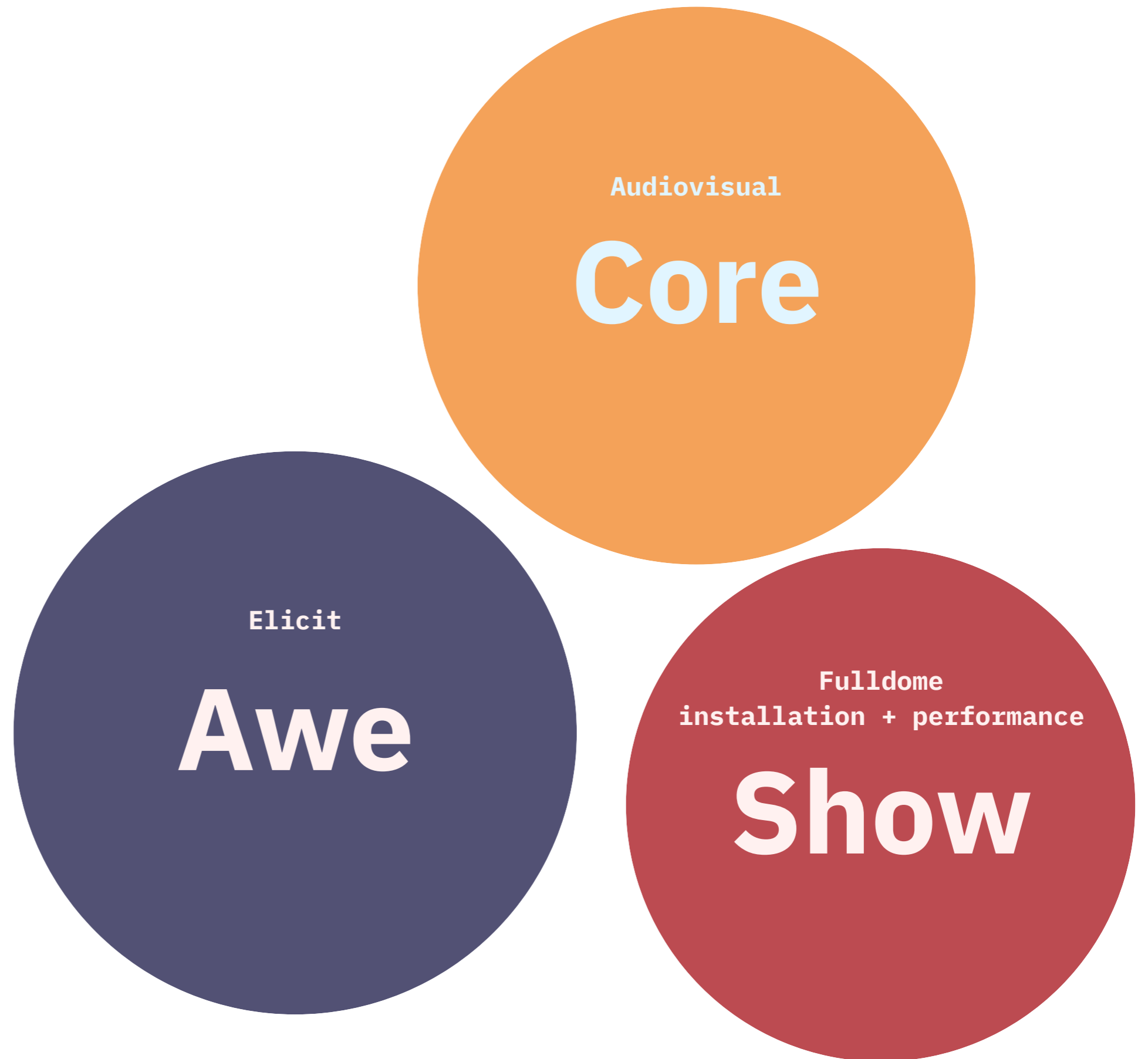
Evolution

# Aims

Leave audience with greater wellbeing by eliciting awe in them

A robust audio and visual core system capable of generating evolving visual and sound, and can be performed with

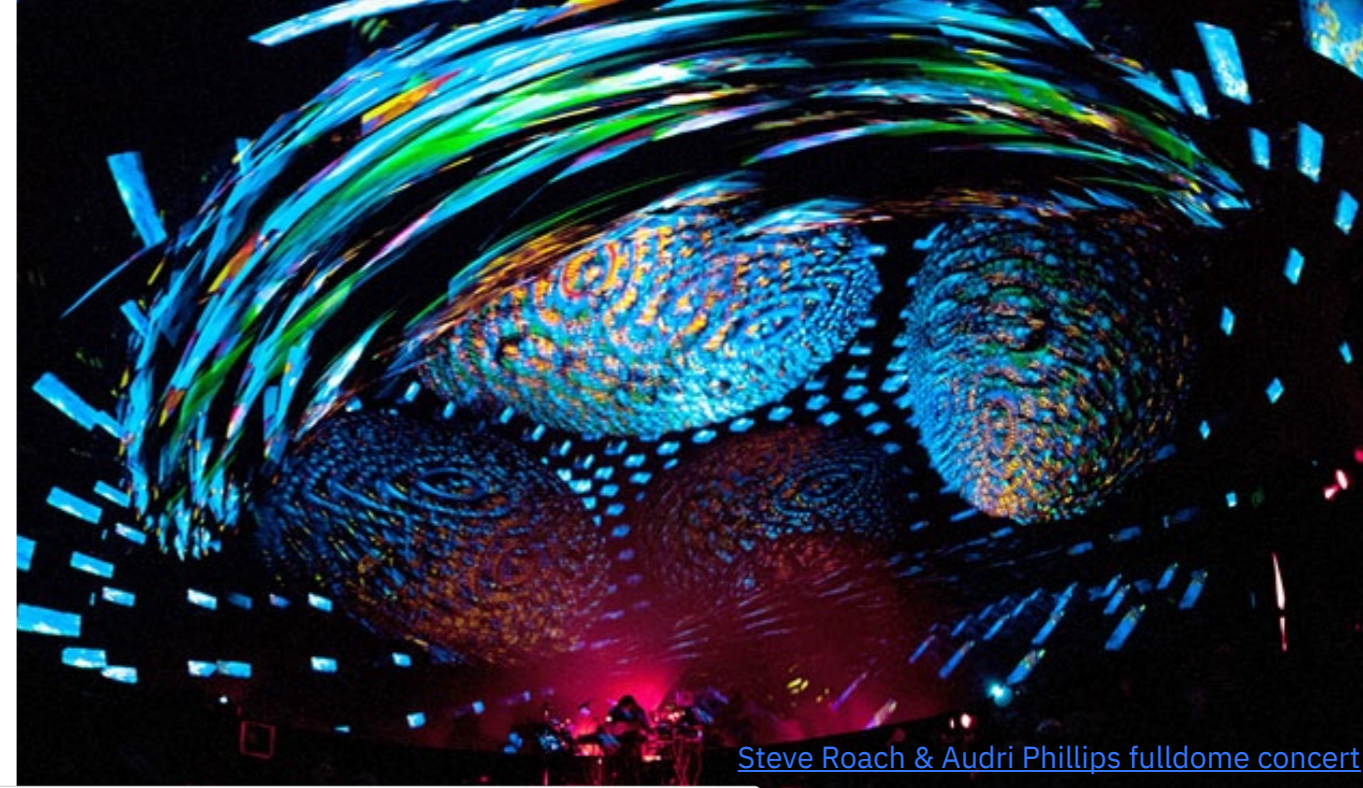
An immersive show for between 1-6 people



# Fulldome Medium

## WHY DOME

1. Temple like - Awe inspiring
2. Communal group experience
3. Physically embodies the audience in experience
4. Can create great scale (Eliciting 'small-self')
5. Geometric structure in line with theme
6. Technical aspects
  - a. Can be portable and tour-able
  - b. Spatial sound easy to set up outside dome
  - c. Can be developed and previewed using a VR headset by creating a virtual dome



Steve Roach & Audri Phillips fulldome concert



Créatures at SAT  
Vimeo

<https://vimeo.com/276110952>



NONOTAK presents VERSUS [Full Dome 360° Live A/V] | Todays...  
YouTube

[https://youtu.be/\\_4drwmIGZ-Q](https://youtu.be/_4drwmIGZ-Q)

# Show



## DETAILS

- **Fulldome medium**
  - Partner with planetarium or
  - Hire inflatable planetarium
- **Surround sound system**
  - 8 Channels each with mid/top/high
  - Sound positions controlled from within Ableton Live
- **25 minute duration**
  - Allows time for shows to happen back to back every half hour if there is more than one group
- **Livestream in 360**
  - Gather learnings from this from remote audience

## AUDIENCE EXPERIENCE

- **1-6 people**
- **Start outside dome they hear a soundscape**
- **Enter dome, visuals respond to them**
- **Dark and simple at start**
- **Generative to begin**
- **More elements get introduced**
- **Performance begins**
- **Audience can choose to move around or recline on beanbags**
- **Performer guides experience - a dynamic journey with contrasting sections e.g. order and chaos play out**
- **Experience awe**

# About Awe

## A SIGNIFICANT STATE

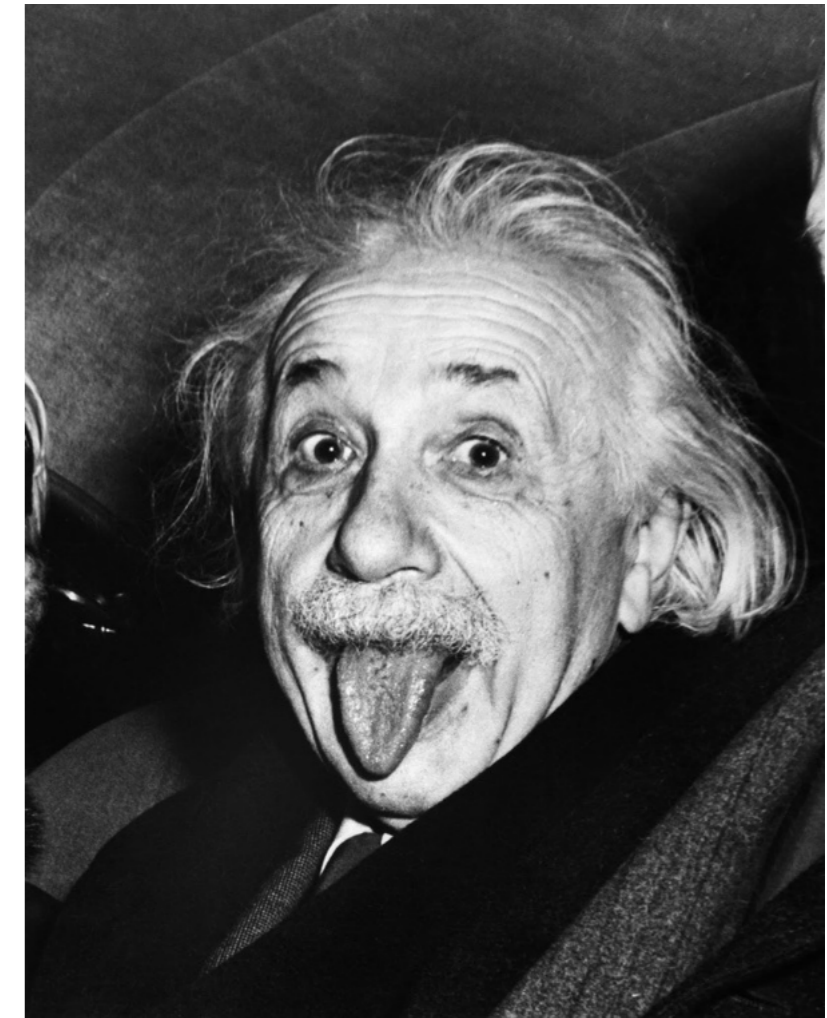
Psychologists began researching in 2002, philosophers and religious leaders for much longer- still early days for research

A difficult emotion to define but one that is present through cultures

Can be experienced as positive or negative

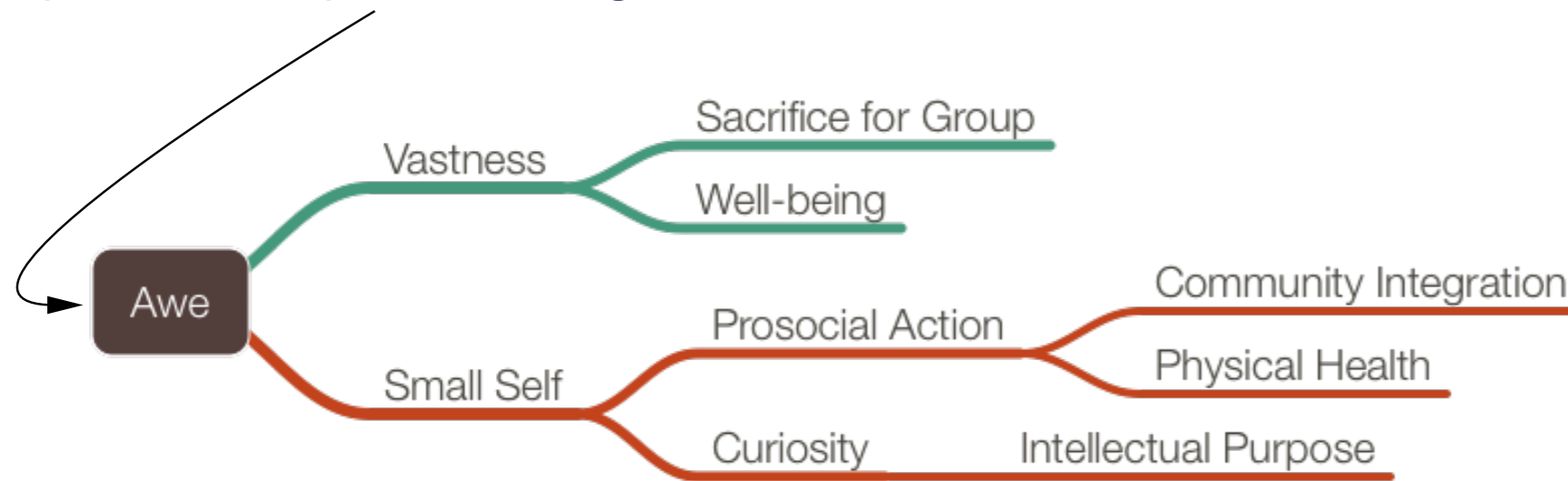
*"Experiencing awe often **puts people in a self-transcendent state where they focus less on themselves and feel more like a part of a larger whole.** In this way, awe can be considered an altered state of consciousness, akin to a flow state, in addition to an emotional state."*

*(Allen 2018)*



*"The most beautiful emotion we can experience is the mysterious. It is the power of all true art and science. He to whom this emotion is a stranger, who can no longer pause to wonder and stand rapt in awe, is as good as dead."*

**Albert Einstein**



(Keltner, 2009)

# Eliciting awe

## COMPONENTS

Keltner & Haidt (2003) suggest there are two components of awe:

1. **Perceived vastness**
2. **Complexity:** A need for accommodation ("defined as an inability to assimilate an experience into current mental structure")

## This project will

- **Leverage chosen medium to create vastness**
- **Draw from nature for sounds and visuals**
- **Aim for complexity that the audience finds it challenging to assimilate/comprehend**



# Theme

## Number, Geometry, Music

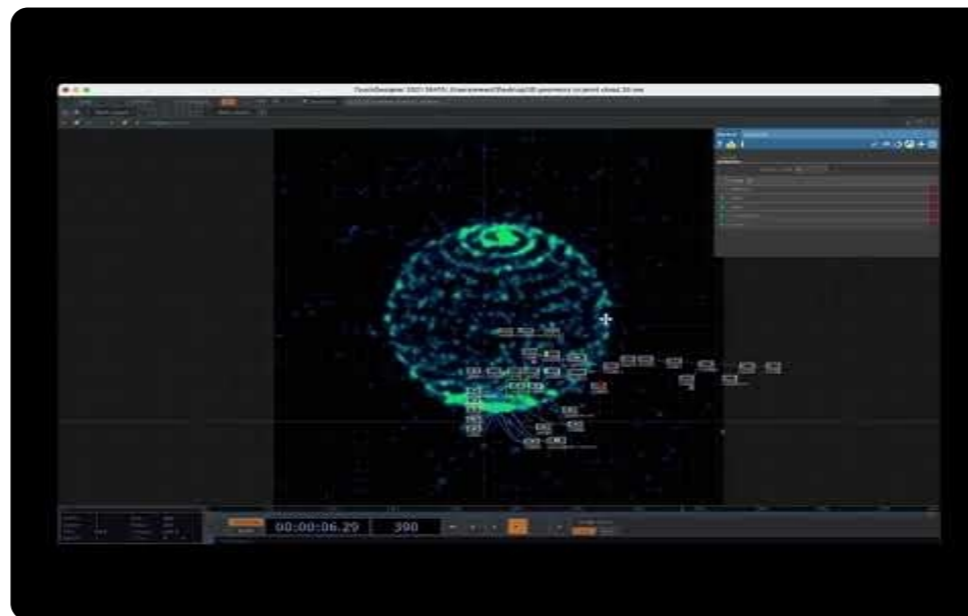
- **Geometry is number in space**
- **Music is number in time**
- Geometry = Nature
- Experiencing it is to observe the universe
- Visually and aurally rich
- Platonic solids



*“The **grand book of the universe... was written in the language of mathematics**, and its characters are triangles, circles, and other geometrical figures, **without which it is impossible to understand a single word of it.**”*  
GALILEO GALILEI, 1623



Image Source: [artofislamicpattern.com](http://artofislamicpattern.com)



3D Geometry Particles TouchDesigner test 1  
YouTube

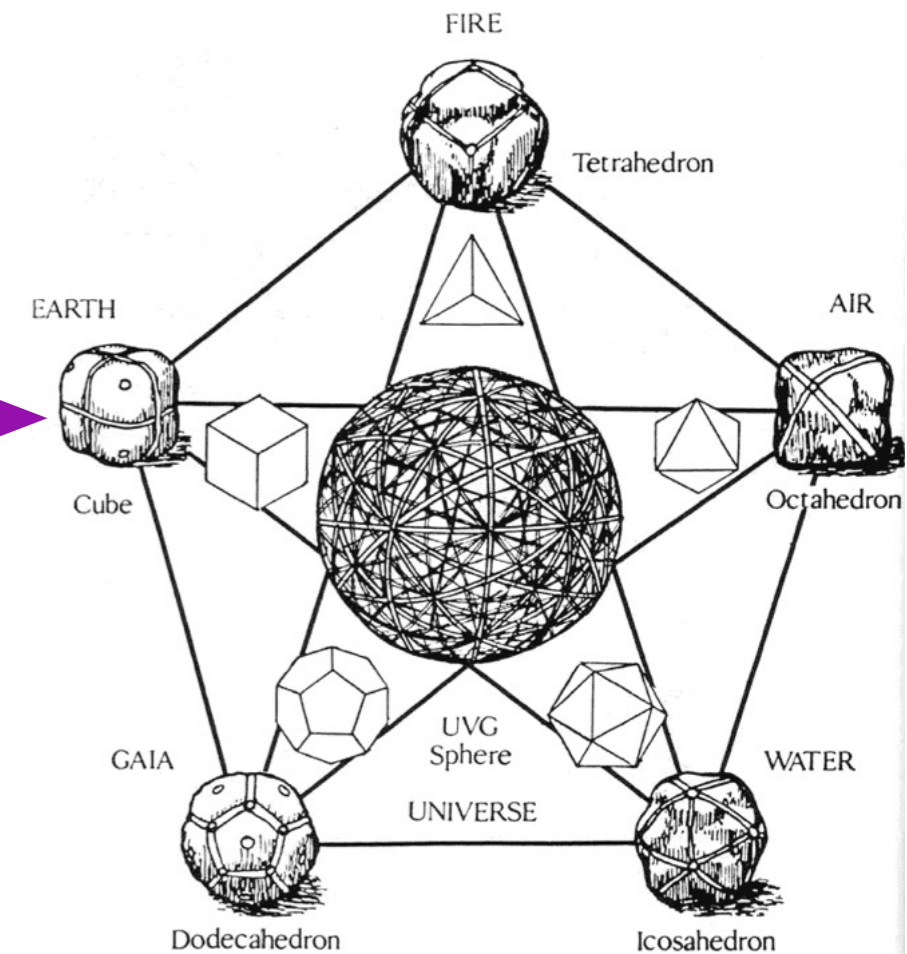


# What's the Story



**An immersive meditative experience:**

- **Create a mythical story world to guide creative decisions (e.g. Afrofuturism and Protopias)**
- **Drawing from ancient mythologies that already exist**
- **Storyboard scenes for a dynamic experience with a story journey or 'arc'**
- Some interpretation is left to the performer who will improvise based on audience observation



Pythagorean Cosmic Morphology

Illustration #5

©Becker-Hagens 1984

# System design

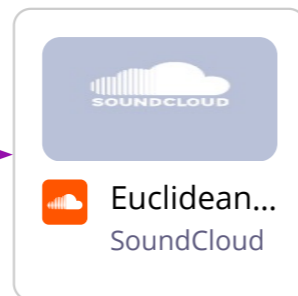


## Core approach

- **Adaptable audio and visual core** system to be used in this and future projects across various mediums

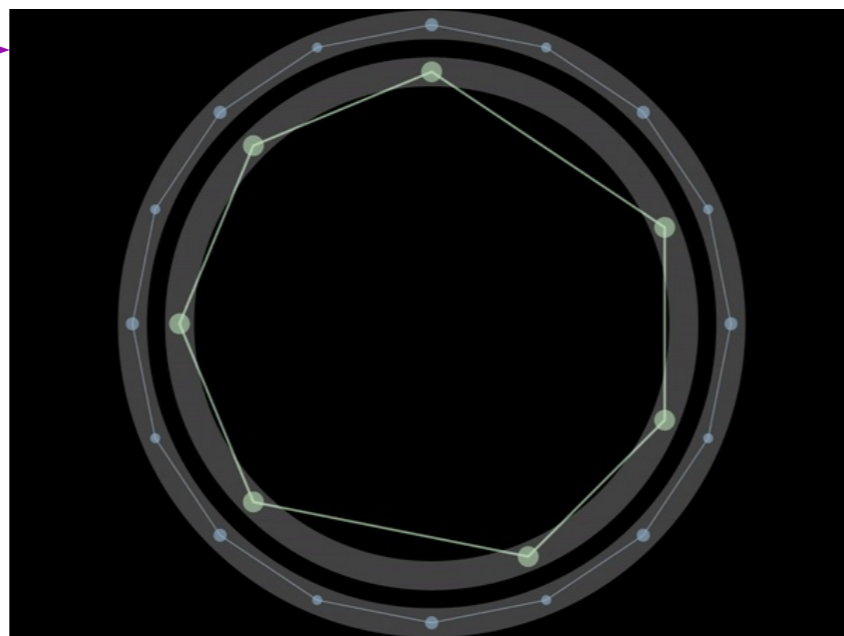
## Audio

- **Ableton Live**
- **Spatial sound**
- **Euclidean rhythms**
- Nature sounds
- Generative algorithms
- Sequences/scenes with transitions



## Visual

- **TouchDesigner**
- Nature scenes > Awe
- Animated sacred geometry
- Design for sense of scale
- Sequences/scenes with transitions



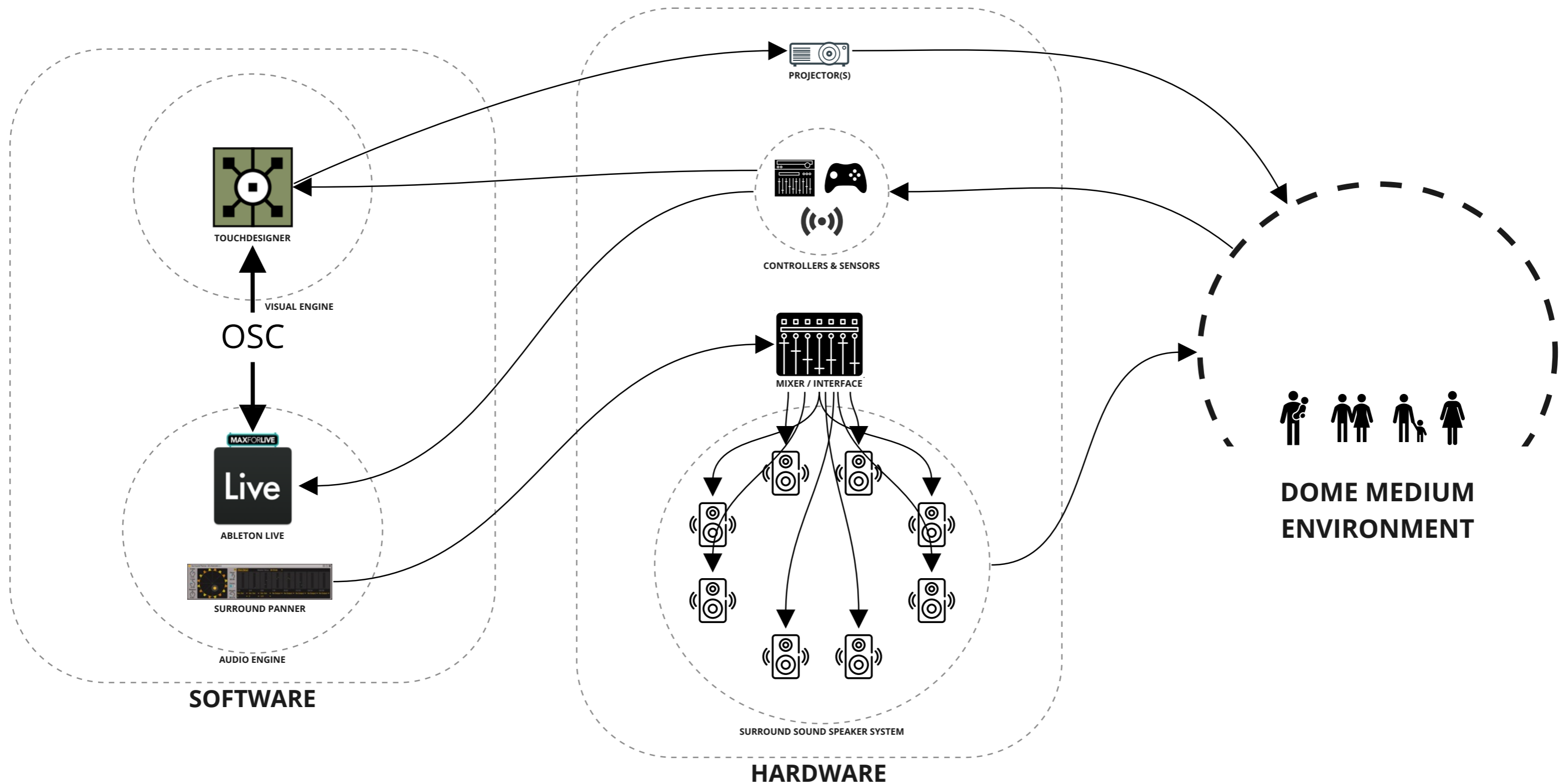
## Performance

- **Allow high levels of expression with MIDI controllers**
- **Should be fun**
- Sequence scenes of experience

## Audience Interactivity

- **Kinect sensors - detect position in space + shapes**
- **Enough agency to notice**
- **Not so much they get carried away (ego can lead to less small-self)**
- **Connect audience with experience**

# System schematic



# Timeline & Work

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Milestones &amp; Phases</b>	R&D / Prep	R&D / Prep	R&D / Prep	Design	Design	Production	Production	Production	Production	Prototype testing	Feedback integration	Prototype testing & feedback	Delivery	Exhibition & Performance	Reflective Commentary Writeup
<b>Audio Engine</b>	Define audio elements selection (eg voices, effects)					Build audio engine					Improve audio engine		Practice		
<b>Visual Engine</b>		Define visual elements selection				Build visual engine					Improve visual engine		Practice		
<b>Controllers / Sensors</b>			Define sensor and controller inputs					Code controls			Tune controls		Practice		
<b>Generative Algorithms</b>				Define algorithms					Code algorithms		Tune algorithms		Practice		
<b>Exhibition &amp; Performance</b>	Narrative concept development- develop sacred geometry theme and myth and refine story				Design exhibition space & define tech	Source / Book tech							Venue setup & test	Exhibition & Performance	
<b>Livestream</b>					Design & spec livestream								Practice	Livestream	
<b>Audience &amp; PR</b>	Create website & Newsletter list	Copywriting & Share in social network groups	Copywriting & Share in social network groups		Post updates to blog & newsletter		Post updates to blog & newsletter		Post updates to blog & newsletter		Post updates to blog & newsletter		Post updates to blog & newsletter		
<b>Monitoring &amp; Evaluation</b>				Draft survey questions				Finalise and print surveys						Survey participants	Evaluate surveys

- **4 phases**
- **Agile product development**
  - Iterative process collecting and integrating feedback from audience and performer
- Evaluate success through audience surveys
- Gather learnings from livestream
- A prototype for multiplayer VR (which will allow for greater distribution)

# Questions?



# References

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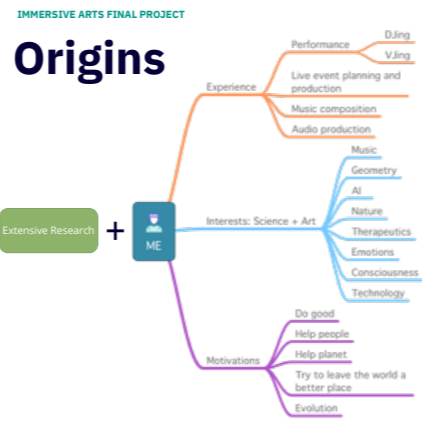
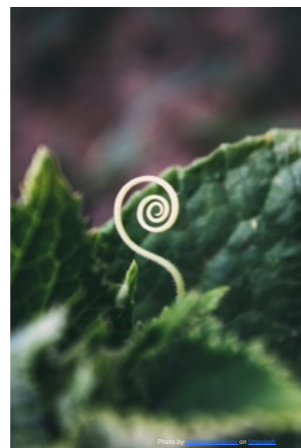
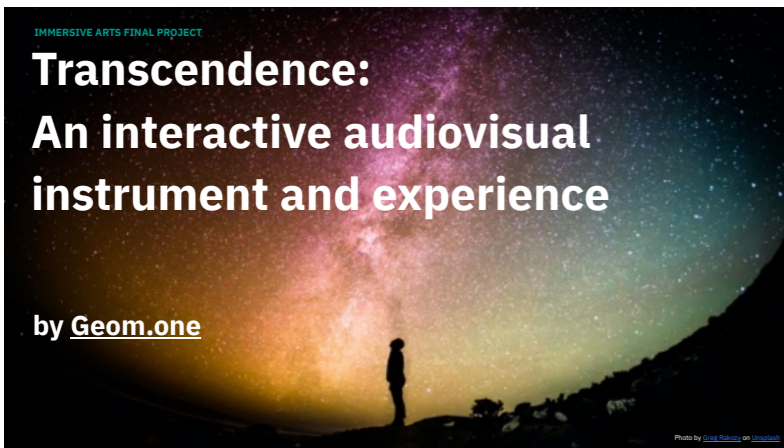
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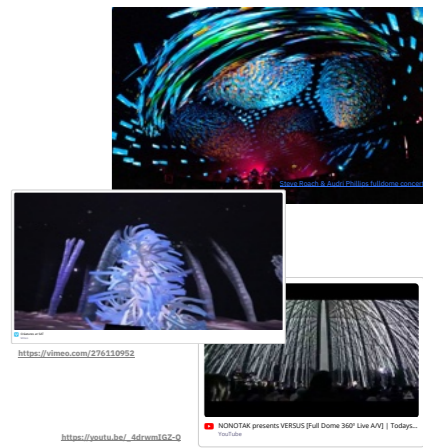


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## Full-dome Medium

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## About Awe

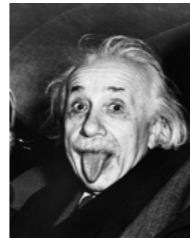
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Photo by [Jeremy Bezanter](#) on [Unsplash](#)

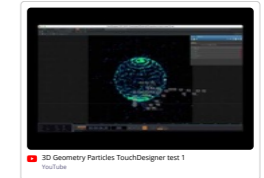


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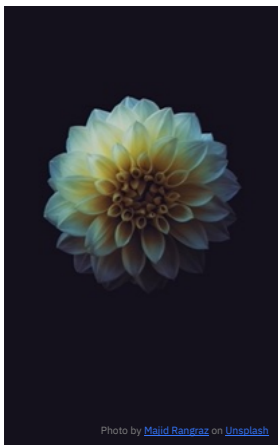
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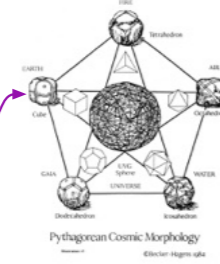
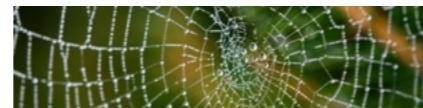


Photo by [Maid Rangraz](#) on [Unsplash](#)

IMMERSIVE ARTS FINAL PROJECT

## System design



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- Audio**
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## Questions?

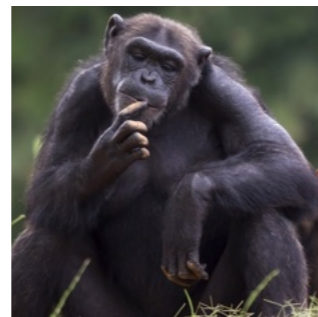


Photo from <https://youtopiaproject.com/the-chimpanzee-entp/>

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## Timeline & Work

Task	Start	End	Status	Dependencies
Project Planning	2023-01-01	2023-01-15	Completed	
Audio Design	2023-01-15	2023-02-15	In Progress	Project Planning
Visual Design	2023-01-15	2023-02-15	In Progress	Project Planning
System Integration	2023-02-15	2023-03-15	Not Started	Audio Design, Visual Design
Performance Practice	2023-03-15	2023-04-15	Not Started	System Integration
Documentation & Review	2023-04-15	2023-05-15	Not Started	Performance Practice

- **4 phases**
- **Agile product development**
  - Iterative process collecting and integrating feedback from audience and performer
- Evaluate success through audience surveys
- Gather learnings from livestream
- A prototype for multiplayer VR (which will allow for greater distribution)