IMMERSIVE GALLERY OF DIGITAL ART

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STATEMENT

Digital art is mainly displayed in 2D-format and immersive VR-content experiences are entered from your desktop computer. This immersive art gallery investigates and propose ways of displaying digital art forms in their own context or logic. A way to add to the experience of viewing digital art and promote its creators.

The architecture is designed by rescaling and multiplying split curved and spherical surfaces creating apertures, voids and spatial sequences.

The tangents of surfaces determines your gravitational direction within the architecture creating a simulated gravitation.

Can these architectural parameters be used to create meaningful architecture for our future virtual worlds?

WHAT KIND OF GALLERY?
Aesthetic

VISITORS PERSPECTIVE
Enlightenment of the digital arts.

WHAT IS THE GALLERY DISPLAYING?
3D-models
Holographic experiences
Immersive experiences.

DO YOU MEET OTHER VISITORS?
Most art galleries has something sacral around them. There is a quietness and a possibility for contemplation. I believe this to be a social space in the same way the white box museums of today makes us behave. We whisper and respects one and another’s space.
**DEFINITION OF GRAVITY**

"Gravity, or gravitation, is a natural phenomenon by which all things with mass are brought toward (or gravitate toward) one another, including planets, stars and galaxies."

Our physical world is bound by the laws of nature. On a terrestrial body like earth - with its orbital position relative to our sun - it works as a setup which gives the possibility for life to exist. Gravity creates light...

**MY DEFINITION OF GRAVITY**

My personal relation to gravity is that it means attraction, willingness to seek and understand the world around us. Gravity also means something's ability to draw one's attention. It means up and down in our daily life. In the bigger picture it's the massive forces that places us in the universe and provides the possibility for life to exist.

**IN WHAT WAY IS GRAVITATION INTERESTING IN ARCHITECTURE?**

"Much of architecture, from the posts and beams of the Parthenon to the Pontiac Silverdome, can be seen as a struggle against gravity. Without gravity, such basic concepts as “floor”, “wall”, and “ceiling” lose much of their meaning. It seems reasonable to expect that the state of gravity in an environment should have a significant influence on its architecture" Space Future - The Architecture of Artificial Gravity: Theory, Form, and Function in the High Frontier by Theodor W. Hal.

Gravity sets unavoidable rules when it comes to creating physical objects such as a building. The organization of materials builds on the principle of load bearing elements which support objects to maintain a position relative to the ground.

**HOW DOES GRAVITY RELATE TO MATERIAL ATTRIBUTES?**

Matter is any substance that has mass and takes up space. The definition of "matter" based on physical and chemical structure is that it is made up of atoms. The three most commonly states of matter is solid, liquid and gas.

The composition of materials gives an object its state, mass, size, friction and reflection of light.

**LIMITATIONS, WHAT PARAMETERS DO I CHOOSE TO WORK WITH?**

I'm limiting my project to interiors with surrounding elements adding to the depth reading of the spaces. In parts of the architecture the view is opened to an endlessness gradient without elements. This adds to the fact that you are in fact in another world where the laws of our physical world is set aside.

The inside of a sphere or curve shaped surfaces is of interest to me due to the fact that it leaves you with the opportunity to create an endless path of walking. Inverted from our physical world. Secondly the pieces of building elements are not bound to load bearing principles. For example this means that a space dividing element can float.

Artificial gravity also raises questions of the thickness of elements. I’ve worked with surfaces rather than volumes to create geometries that hints and plays with the idea of volumes.
HOW DOES GRAVITATION WORK IN OUR PHYSICAL WORLD IN RELATION TO VR?

In computer generated visual worlds objects consist of light rather than matter. Objects consist of code generating light that creates an interpretation of objects. These objects can be explained as imagination taking form but not by physical means of matter but of light.

HOW DOES MATERIALS ORGANIZE IN OUR PHYSICAL WORLD AND IN VR?

The material organization of our physical world is the result of gravity which can be visually explained by looking at how water fills a crater and how sand falling from a point on to a planar surface creates a growing cone.

The material composition of a wall or air sets physical boundaries in terms of that one can’t pass through it. We can move around the wall and reach the other side of it and we can push air around us.

Since there is no physical boundaries of mass or matter in a computer generated world the organization of materials depends on the laws of how we interpret light. The cube in an immersive environment can be explained as equally sized planes (surfaces) emitting light from a directional light source. The planes can but mustn’t create shadows. The planes can be set up to allow for moving through it or not. The tangent of a plane can also be used as the direction of which we orient ourself in relation to our surroundings. What basically happens is that the objects around you turns relative to the tangent of the picked surface.

HOW CAN I LIMIT THE USE OF GRAVITY IN A MEANINGFUL WAY?

Having experimented with gravity in previous parts of this project I feel that the outcome focused on the relation to the surroundings rather than the main point of displaying art.

Still having the notion of artificial gravity I want to use it in a more sensitive or careful way. When you transport from a place that is considered as “ground” onto another it’s easy to cause vertigo. I’m going to allow myself to have elements of possible vertigo causing spaces but it cannot be a main feature and will be used in specific places.
Parameters of physically built architecture

Parameters:
- Scale
- Program
- Sustainability
- Tectonics
- Load bearing structures
- Spatial sequence
- Voids and apertures
- Light
- Field of view
- Materiality
- Technical challenges
- Technical development
- Social aspects
- Scale
- Tectonics
- Form/figure
- Meeting of building and site/ground
- Economics
- Fire protection, signs, etc
- Limitations of build able space
- ...

Parameters of immersive architecture

Parameters:
- Program
- Spatial sequence
- Logic of environment
- Light
- Field of view
- Voids and apertures
- Materiality
- Texture
- Economic
- Technical challenges
- Technical development
- Social aspects
- Form
- Accessibility
- Atmosphere
- ...

Parameters of my project

Parameters:
- Program
- Gravity
- Scale
- Spatial sequence
- Voids and apertures
- Materiality/Texture
- Atmosphere/environment
- ...

...
HOW - SITE AND VISITING GALLERY

By having The Immersive Gallery of Digital Art set inside Bonniers Konsthall sets a tone of importance of the digital arts. This environment is known for having a fine tuned curating process when it comes to picking art.

The architecture of entering the immersive gallery rhymes with the surrounding architecture of white walls. Stepping into the area of walkable immersive space starts with having the floor feeling slightly softer. Starting the movement from the physical space to the digital immersive by altering the surface on which you stand on.

When putting on the head mounted display and hand control you step into the digital world. A second space. The physical space you can move around is created by the physical walls around you. The hand control opens up a world much larger than the physical using it to point where you want to teleport yourself.

The Entry Hall has three portals teleporting yourself into the three different galleries.

When the visitor feels like exiting the digital world, you simply take off the head mounted display.
REFERENCES

James Turrell - Aten - Reign-5

This piece of art is an exploration of perception using shifting artificial light and curves to create a sense of space. I’m drawn to how the curves and light creates forms in terms of voids. The surfaces are creating a void that blends with the air of the room. You can almost feel the weight of the void. I’m using the narrowing distance as a way of creating form consisting of voids by multiplying and rescaling geometries.

PICTURE 1
REFERENCES

“Jean Giraud” aka “Moebius” and “Gir"

French artist, cartoonist and writer known for Blueberry with writer Jean-Michel Charlier. As Moebius known for, The Long Tomorrow (a visual reference to Blade Runner by Ridley Scott), Aarzach, The Incal and the Airtight Garage of Jerry Cornelius. He also contributed with storyboards and concept designs for films such as Alien (1979), Star Wars – The Empire Strikes Back (1980), Tron (1982), The Abyss (1989) and The Fifth Element (1997). His works visualizes an extraordinary visionary imagination using lines and dots to accentuate objects giving depth, texture and a sense of scale to the highly perspective illustrations. Moebius also uses gradients to further emphasize the depth of perspective. The techniques combined gives a smoothness and softness. The works of Moebius is a reference of a world which I long to visit. I’m investigating his works and use it as a reference to create an architectural tone in the Immersive Gallery of Digital Art.

PICTURE 1
http://i843.photobucket.com/albums/zz352/loaloauk/Disney%20Planets/voyagedhermes_moebius_01.png~original

PICTURE 2
http://i843.photobucket.com/albums/zz352/loaloauk/Disney%20Planets/voyagedhermes_moebius_02.png~original
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EXAMPLES OF DISPLAYED ART

IMMERSIVE EXPERIENCES

3D-ART

HOLOGRAMS
ENTRY HALL
This is where the visitor wakes up after putting on the head mounted display. In this space the visitor moves along paths to portals for entering the different art galleries.

ARCHITECTURE
This form this space derives from a elongated and pushed curve shaped surface. The shift in scale works as a contrast going from the physical world into this space.
The curved surface is split up by smooth curves forming visually soft geometries.
The rescaling and multiplying outwards makes the surfaces act as if they are forming free floating volumes.
The large scale of the room has a centered pathway leading the visitor through the architecture letting the eyes see the depth of the voids surrounded by surfaces.
The pathway curves and twists upwards. Moving along it shifts the gravitational pull of all surrounding surfaces relative to your own simulated gravitation.
HOLO

Large animated 3D-models or scenes from a film installation, a movement through the universe. And so on. It relates to the often separated rooms in galleries which displays projections and plays sound.

ARCHITECTURE

In this space, the art is centered in the middle of a large sphere. The visitors can move around and underneath the center. Zooming in and out.

The inner sphere is copied and rescaled outwards and cavities are used to tear up the shape of the sphere, creating decreasing narrowing shapes of voids. The ambition is to create a sense of direction and void volume using textures and flat surfaces.

The shapes of cones, tetrahedrons and pyramids are then geometries used to make the voids. The base of these geometries are placed in the central part of the sphere and is then used as volumes to split the spherical surfaces.
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3D-ART
This gallery displays 3D-models. Animated and still objects.

ARCHITECTURE
The walkable surface of this gallery is a quarter of a circle. This means that the visitor walking from one end to the other will stand in a 90 degree difference in angle. All of the art displayed is visible during the walk from the starting direction. The screens have a transparency from this point of view or direction.

When moving through the architecture the visitor turns to see the art displayed. When turning, the back of the screen turns into a non transparent texture screening the displayed object from the other ones. Setting focus to the viewed object.

REFERENCE
IMMERSIVE ARCHIVE

This gallery exhibits VR-experiences which you enter entirely. It also works as an archive for previous exhibitions. The visitor walks up to a sphere and enters the experience by touching the sphere and returns at any time they wish to enter more display objects.

ARCHITECTURE

This space is a continuous space defined by a elongated curve shaped surface It’s interior surface is the walkable elements which let’s the visitor experience the architecture from 360° of direction. It's using the shape of the room to give the viewer an understanding of the “curved plan” by looking up and around. Looking straight forwards gives you a sense of having walls around you. The textures of the almost horizontal surfaces slightly appear while moving. The method of dividing the space into paths and separated areas is done by having circles projected on the curve shaped surface. The circles are then used to split the curved shaped surface into separate surfaces which are scaled inwards, keeping their form but altering their size.

WHAT DOES THE DIFFERENT KINDS OF ART DEMAND IN TERMS OF SPACE/SPACIAL QUALITIES? HOW DOES ONE INTERACT WITH THE ARTWORK?

REFERENCE
Frederick Kiesler
Endless House
1950-60
PORTALS TO GALLERIES
Stepping into a portal teleports the visitor to one of the three galleries. Entering the portals again within the galleries takes you back to the Entry Hall leaving you with the option of visiting the other galleries or stepping out, back into the physical world.

ARCHITECTURE
The main idea of the portals is to step inside something and by that entering another space. The idea is that when stepping inside, the objects surrounding the portal is partially blocked from view.
Standing inside the portal looking up gives the viewer a narrowing view which fades when the teleport starts.
The shape of the surfaces are curved and bent, cut and then rescaled and multiplied outwards.
Using a different texture on the the portals makes the visitor see them. Bringing them out in an already visually rich environment.
ATTACHED FILES

VIDEOS
-ENTRY HALL.MOV
-HOLO.MOV
-IMMERSIVE ARCHIVE.MOV
-3D-ART.MOV

VR-CONTENT
-ENTRY HALL.EXE
-HOLO.EXE
-IMMERSIVE ARCHIVE.EXE
-3D-ART.EXE

EXE-files are used on Windows 10 with a setup of HTC Vive HMD.