



Dreams & Dangers: A Starry Night Experience

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A reproduction of Vincent van Gogh's painting "Starry Night". It depicts a dark blue night sky filled with numerous small, yellow stars and several larger, swirling yellow and orange constellations. Below the sky, a small town with a church steeple is nestled among rolling hills and fields of green and yellow. The overall style is post-impressionistic with visible brushstrokes and expressive color use.

Roles

Hajin Ahn

- Create 3D elements
- Script
- Make Environment
- Adding triggers/functionality

Sophia Callesen

- Setting up github
- Create 3D elements
- Script
- Hallway images
- Make Environment
- Metahumans
- Adding triggers/functionality

Josiane Isingizwe

- Script
- Make Environment
- Metahumans
- Adding triggers/functionality

Concept Overview

Core Idea

- Challenging users' senses of reality when confronting real-life situations by initially placing them in a realistic situation that quickly alters into a surrealistic one they are able to manipulate/navigate within

Realistic or Surrealistic

- Realistic Beginning
 - Museum setting with an "audio tour" that explains the history of air pollution
- Surrealistic Ending
 - Entering into an environment that resembles a famous painting (Starry Night)

VR

- We have chosen to use VR because we wanted to challenge users' perceptions in a fully immersive environment when transitioning from a hyper-realistic environment (the museum) to a more surrealistic, dream-like environment (a landscape painting)
 - We also wanted users to be able to fully experience the changes they are creating in the environment all around them

The background of the slide is a composite image. The upper portion is Vincent van Gogh's famous painting 'Starry Night', featuring swirling blue and yellow starry skies above a dark town with a church steeple. The lower portion shows a dark, industrial landscape with several tall smokestacks emitting thick, billowing plumes of smoke into a hazy orange and yellow sky, suggesting a polluted environment.

Goals

- Create grabbable objects within a VR environment
 - Interactivity with 3rd party objects that trigger events to occur
- Utilize level sequencers to drive changes made by the user within the environment
 - Dissolution of surfaces
 - Alteration of background/asset coloration
- Achieve illustrating a clear/cohesive story through-line
- Creating and importing abstract (but still believable) assets to simulate famous artwork and environmental element within the scene
- Raise awareness about air pollution utilizing a famous painting (Starry Night)

Key Features

- Hallway that leads to the Starry Night painting at the end
 - Hallway contains various abstract representations, “paintings,” about the history of air pollution (air pollution during different time periods)
- Start → grab an “audio tour” headset
 - It equips and starts narrating directions to user
 - Tells you to stand in front of different images/paintings to explain the history of air pollution as you walk down the hallway
 - At the end you get to the Starry Night, and it tells you to “step into it” once you are ready
 - Step in, and painting dissolves around you as you step into the surrealistic environment that is the Starry Night
- Surrealistic Starry Night world
 - Background: Blue swirls and stars found in the Starry Night painting
 - 3D models: Mountains, houses, rocks, metahumans
 - PCG: Ground flooring, trees, bushes
- User interacts with objects in surrealistic environment that simulate causing changes in air pollution, which triggers action events to alter the entire environment around them

more in depth explanations of specific aspects of the space in the visual description slides

Technical Implementations

Unreal Engine Techniques

- PCG of altering environment
 - Ground Floor
 - Assets on 3D models
- Asset Creation/Importation
 - 3D Models
 - Materials & Textures
 - Images
 - Metahumans
 - Dissolution of Surfaces
- Trigger interactivity
 - Grabbable Objects
 - Event Play
 - Level Sequencers
- Adding audio
 - “Audio Tour” Narration

VR Development Considerations

- Delimitation in between/within realistic and surrealistic environment
 - Dissolution of surfaces
 - Technical aspects and desired time for changes in surrealistic environment after an event play is triggered
- Desired/Forced perspectives
- Agency of player
 - Spaces user is (not) allowed to enter
 - Grabbable objects
 - Interactability

Visual Style Descriptions

Realistic Portion

- Museum
 - User starts at one end of long hallway and is directed to walk down the hallway that has images on both sides of the wall
 - Images will depict abstract representations of the history of air pollution (air pollution during different time periods)
 - At the end of the long hall, there will be the actual Starry Night painting by Van Gogh
 - Users will be directed to “jump into” the painting by sticking their hand in
 - This will cause a dissolution of the surface and allow users to enter into the Surrealistic portion of the experience



Visual Style Descriptions

Surrealistic Portion

- Starry Night w/ Air Pollution
 - User will enter into the Starry Night painting, where they will be able to interact with grabbable objects
 - Interactions with the objects will trigger event plays, simulating changes in air pollution
 - The scene around them will alter based on their actions/interactions



Visual Style Descriptions

Surrealistic Portion

- Starry Night w/ Air Pollution
 - Image to the right depicts the type of background we are inspired to create for the background of our walls
 - The environment will consist of four walls that users can walk around within
 - The material on the walls will solely be the background of the Starry Night painting



Visual Style Descriptions

Surrealistic Portion

- Starry Night w/ Air Pollution
 - Image to the right depicts the type of 3D assets we are inspired to create within the navigable space
 - The environment will consist of different abstract assets we create (mountains, houses, humans, pcg flooring) to make the navigable environment more engaging/interesting



Visual Style Descriptions

Surrealistic Portion

- Starry Night w/ Air Pollution
 - As the user interacts with objects in the space, the textures of the environment around them will change
 - Some changes will be more drastic than others



The background of the slide is a landscape painting featuring a winding river in the foreground, rolling hills and mountains in the middle ground, and a large, bright sun setting behind a cluster of palm trees in the distance. The sky is filled with soft, swirling clouds in shades of blue, yellow, and orange.

Project Timeline & Milestones

- Week 1: Oct. 23rd
 - Set up github for project use
 - Create “museum” hallway/portion of project
 - Add images in
 - Rough narration script
- Week 2: Oct. 30th
 - Dissolution of back painting
 - Finalize narration script
 - Record narration
- Week 3: Nov. 6th
 - Make metahumans
 - Add metahumans to landscape
 - Make main background walls
- Week 4: Nov. 13th
 - Create 3D elements in main scene area
 - Initial draft of entire environment
- Week 5: Nov. 20th
 - Create any additional 3D elements
 - Add triggers/interaction functions
- Week 6: Nov. 27th
 - Add triggers/interaction functions
 - 1st final draft of entire environment
- Week 7: Dec 4th
 - Complete environment with full interactivity components