



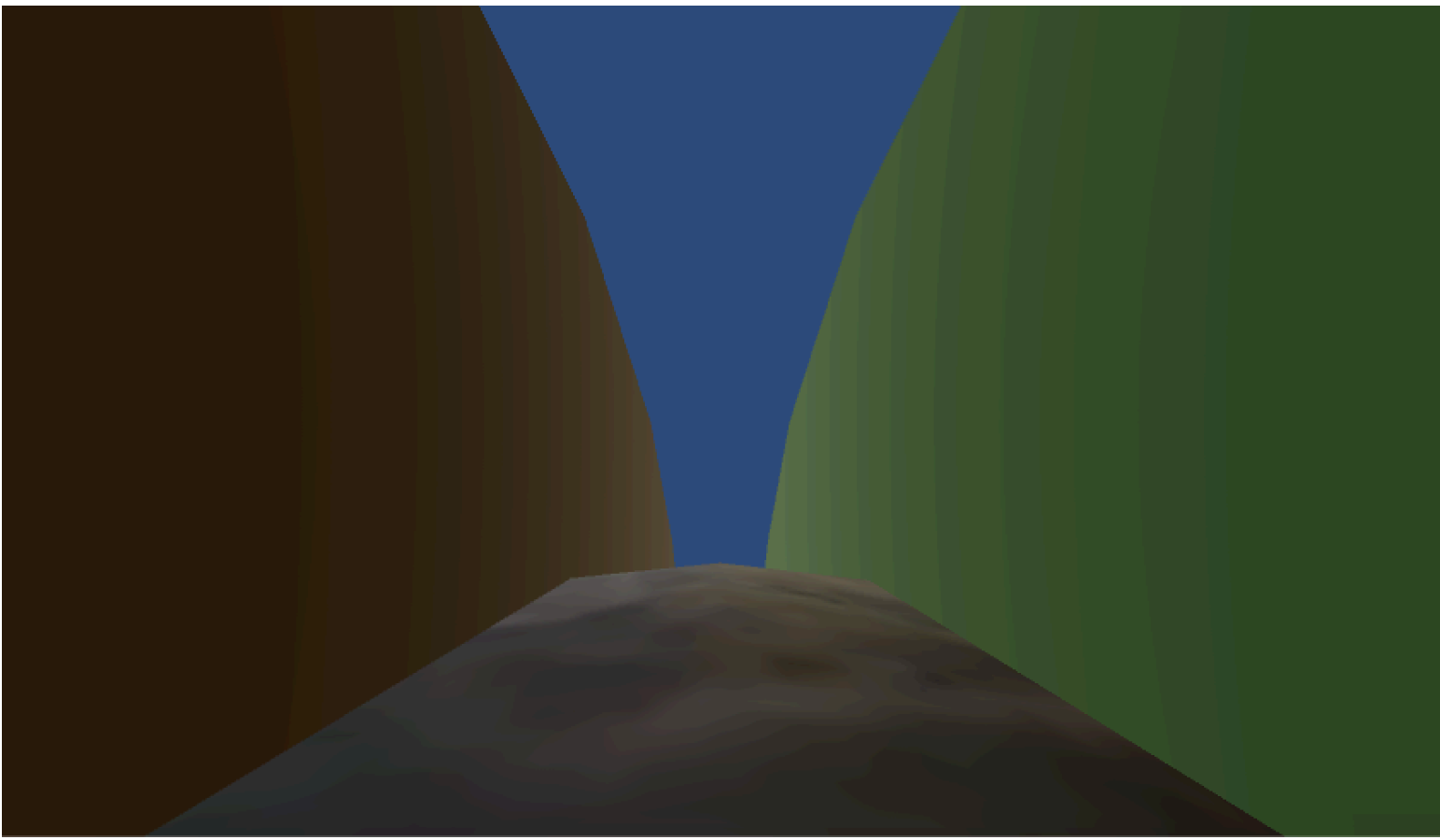
In VR No One Can Hear You Scream



Mysterion
Tyler Wojak and Robert Langworthy

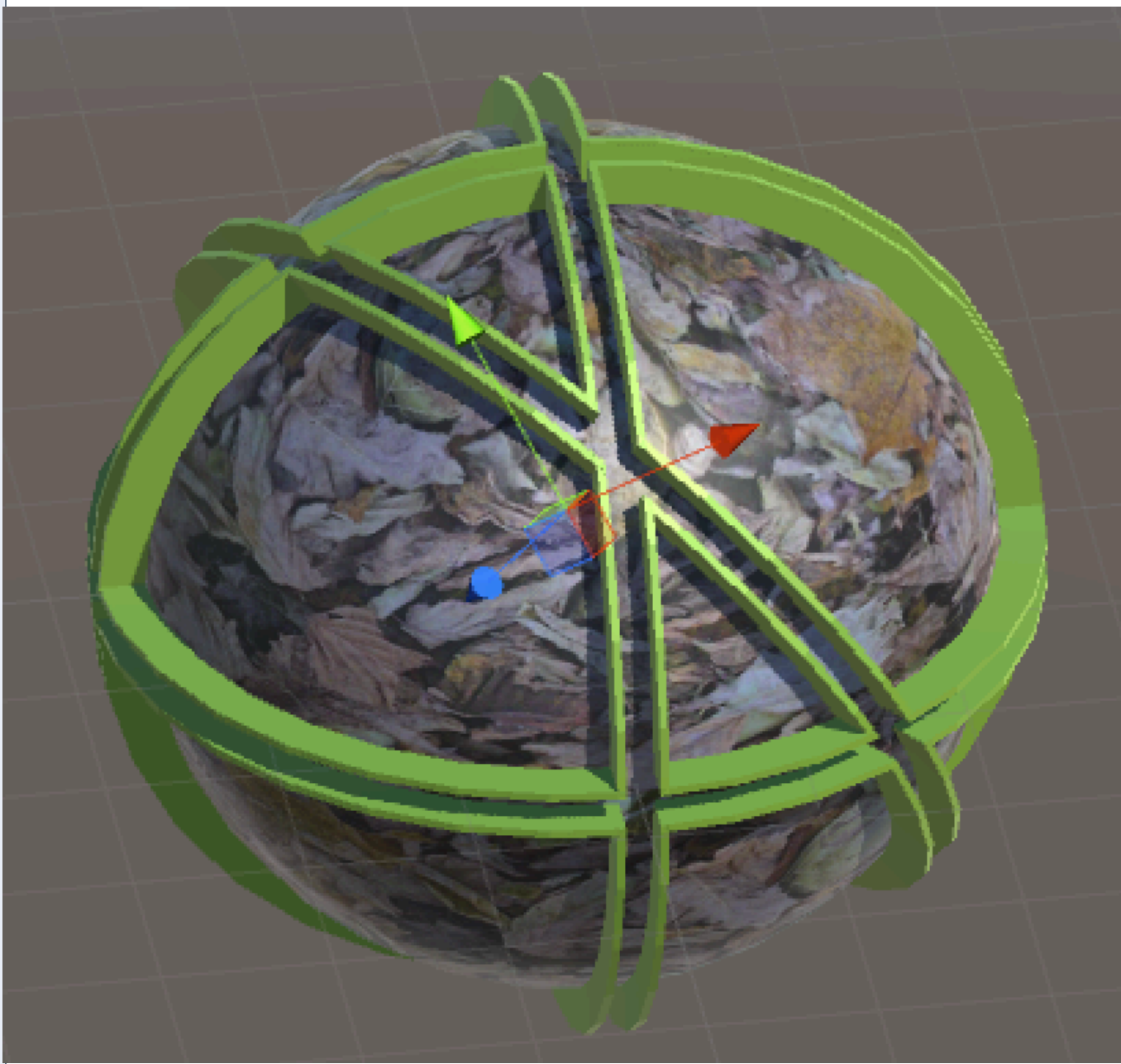
VR Can Make Great Horror

Traditionally the hardest part of making a scary game has been immersion. First person virtual reality, however, can take something that would be okay or even great on a desktop and make it expensive haunted house terrifying by keeping the player moving through the world in a physical and interactive way. Even more important is the ability of VR headsets to engage the players haptic senses giving the game designer even more control over the user experience. The hope is that VR will allow better horror by truly brining the player into the environment and making the environment more reactive and immersive than in traditional games. Tight spaces, dim lighting, and close sounds are even more frightening when you’re in the middle of them and can’t look away.



Making the Game

The core idea was to make an atmospheric horror game featuring non-Euclidean geometry as a way to further confuse players and extend the replayability of the game. The non-Euclidean aspect was achieved by making a maze in the shape of a sphere in Blender based on intersecting paths and channels of great circles. Both narrow connecting hallways and slightly larger open areas exist in the maze due to the combination of positive and negative walls. The neat thing about this map shape is that even with a real haunted house or corn maze it is impossible to achieve the kind of unintuitive complexity that comes with unfamiliar geometry.



Map Maze

The second important feature is sound and camera motion. The player needs to feel a sense of movement as they navigate the maze, this involves primarily footsteps and breathing noises that mimic panicked exasperation. The immersive quality of VR will help the player mirror the anxiety of the player object. Semi-random sounds are also useful for throwing a player off guard and distracting their attention.

Third is a chaser object. Two available ones are at the top of this poster, the blue ghost and scarecrow. Rather than have them specifically chase the player they randomly teleport around the map, chasing the player if they get close enough to them. This unpredictability is important for keeping the player on edge and giving a sense of urgency to their exploration.

The final aspect of game design is mostly aesthetic for the purposes of immersion. Making the maze look like an outdoor corn maze with a skybox and getting the main source of light to be a flashlight type light coming from the player character for example. One last touch would be having the player leave a trail of blood so that they know where they’ve been. This combined with a difficult to navigate maze would induce a sort of constant paranoia and feeling of being lost that enhances the horror experience.

Afterthoughts

Understanding Unity well enough to implement movement and realizing that Blender was necessary to create a maze were both unexpectedly difficult hurdles that slowed down production a lot and cut into time needed to make the game ‘pretty’. Even gravity on a spherical world proved difficult to implement.

That being said there is great potential in the idea to make a fantastic game all things considered. The core game mechanic relying on just one button to move forward, stop, and readjust direction was a great idea that just needed a little fine tuning as far as feedback from collision detection.

Once the maze creation in Blender was figured out, the next natural step is randomized mazes based on intersections of different pathways and corridors in different ways and in different orders. This would greatly enhance the replayability of a game that, like all horror games, loses its edge if it becomes too predictable.

Lastly there should be some concrete way to win, probably involving reaching a certain point or collecting a certain number of items. Both of these would be best implemented as part of a script to generate a random map.

Tools, Assets, and Packages

Game Environment: Unity

Asset Creation: Blender

Scarecrow: True Horror - Scarecrow (PBR)

Ghost: Ghost Party : Blue Lady

Vocal Sound Effects: Horror sfx

Footsteps: Sound_Effects_Footsteps

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