
Bat VR
Experience

# Description

It's making the echolocation more understandable for humans.

People can't recognize a space from sound.

**VR-Installation:**

You're guided around in a black room.

Can emit sounds with the help of a button.

Through the sound you get a light feedback from the walls.

# Ideas

- First:
  Person has bands around the arms/ head with lights attached. They control it with a switch to turn them on and off. Nearby objects, will light up as well.
- Second:
  VR with only Sound. You could send out a sound and receive sound back from your surrounding.
- Third:
  A combination of sound and light in VR. **To orientate oneself you emit a sound by clicking a button. As feedback, the objects will be illuminated, thus creating a spatial perception.**

# Why the third idea?

No obstacles from the real world.
You need less space since you don’t "walk" around yourself.
No need of a real dark room where you could fall over something.
The headphones are already included into the VR headset.

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**Why sound and light?**
Because bats do not “see” as we do.
They emit creates a spatial perception of their surroundings.

**Sound:** to indicate to the user when they’re sending out a signal, a "shout".

**Light:** to give a feedback humans understand, since we originate ourself mostly with vision.

# Project progress

Decided to use the third idea with sound and light, we thought about the how.
Research possible ways.

Choose a sphere, which is invisible, to define the “range” of the emitted sound.

To detect whether the sphere "hit” another object we had to use scripts.
For the material emission, which is a kind of a light for material.

IF the button is pressed:
- the bat call is played.
- the sphere animation is played once.
- the sphere is hitting another object; the material emission will be turned on max for 2 seconds.

# Project progress

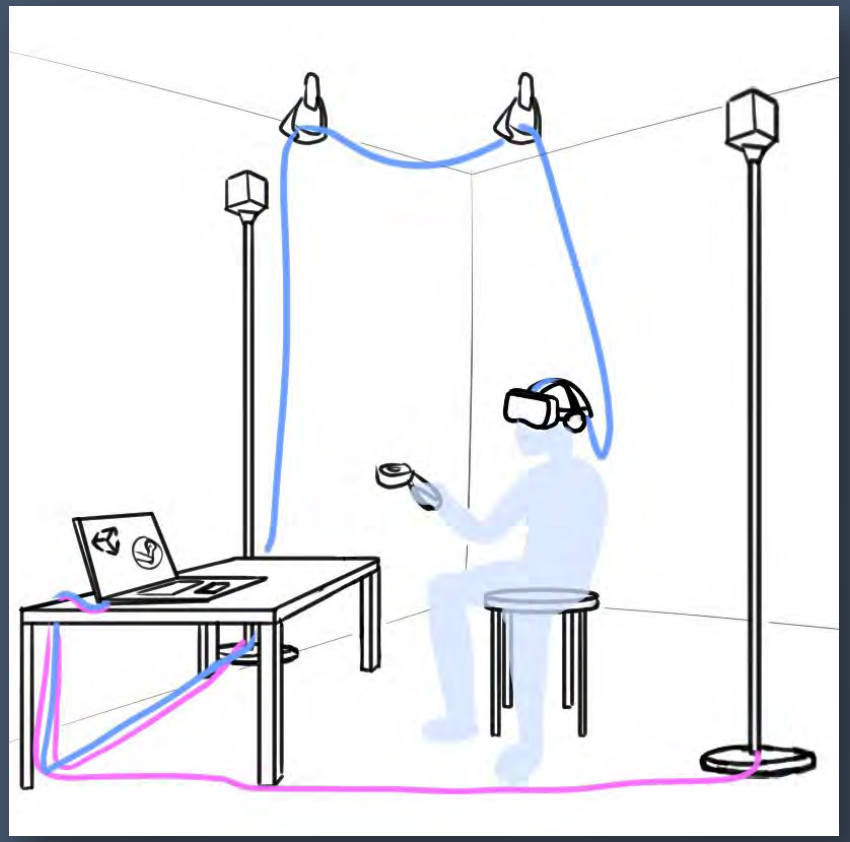
After the HOW, we started modelling the surroundings and 3D models.

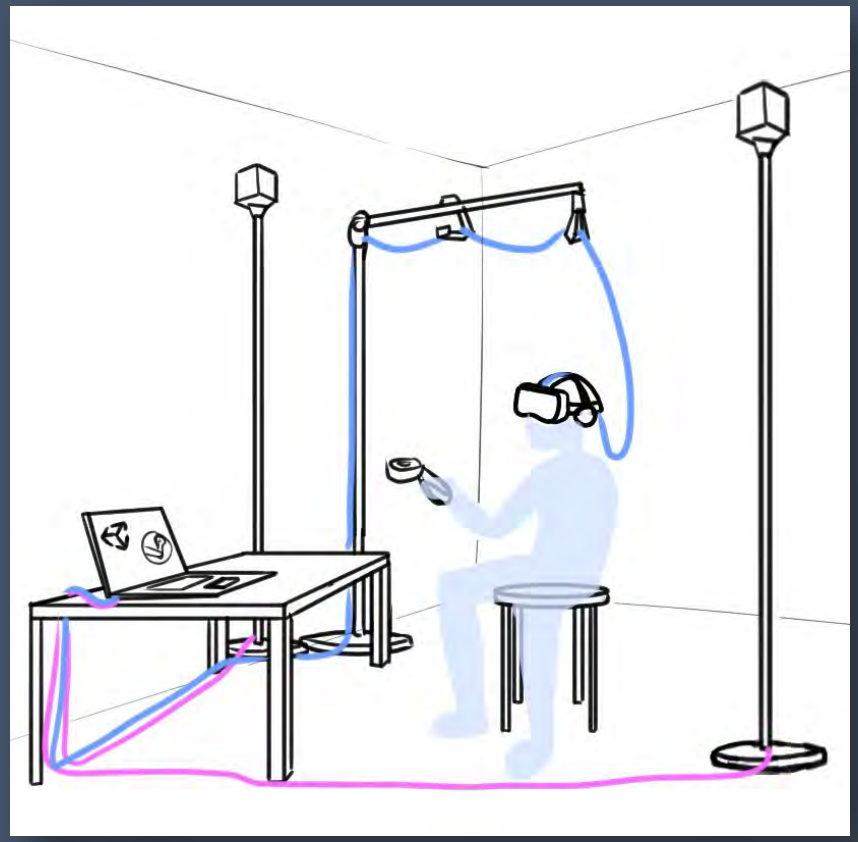
At first just a cube and straight walls etc.

Edited some curves and imperfections.
To make it livelier we added a bats and a simple insects.

For the movement we first thought about walking yourself
Decided to make the person follow an animated pathway.
Since the main part is to show how a call works.
Maintaining the option to look around and to trigger the sound with the sphere.

# Outside Installation

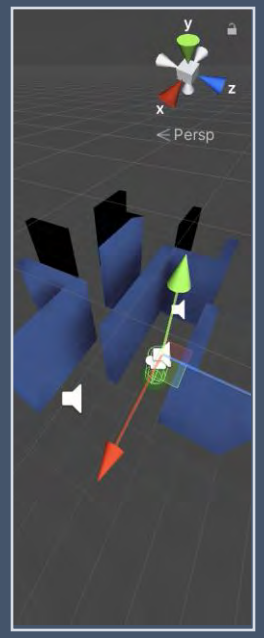


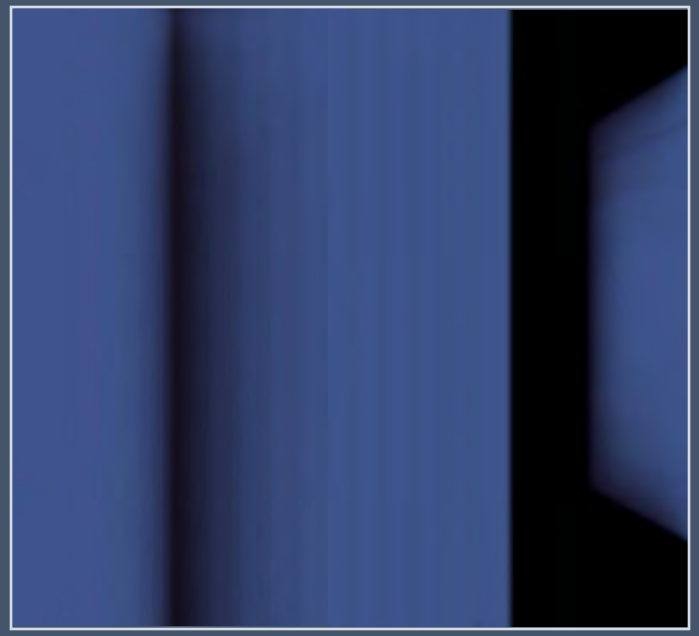


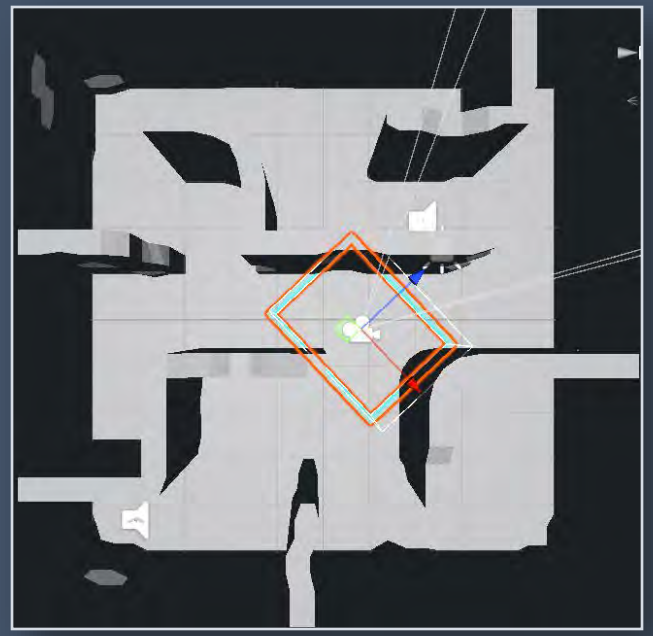
# Inside Installation

Guided around inside without moving yourself.
Can look around as you want.

To “see” something need to push one button on the controller.





# How it works

After the experience is started, you will follow an animated path through the room.

While moving forward you can look around and by using the button on the VR-controller you emit the bat call.

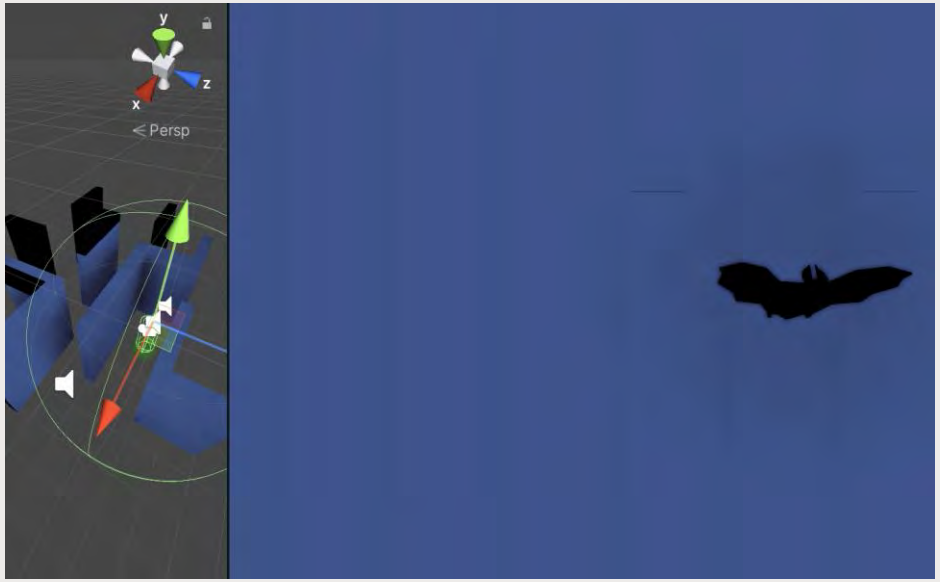
Button:

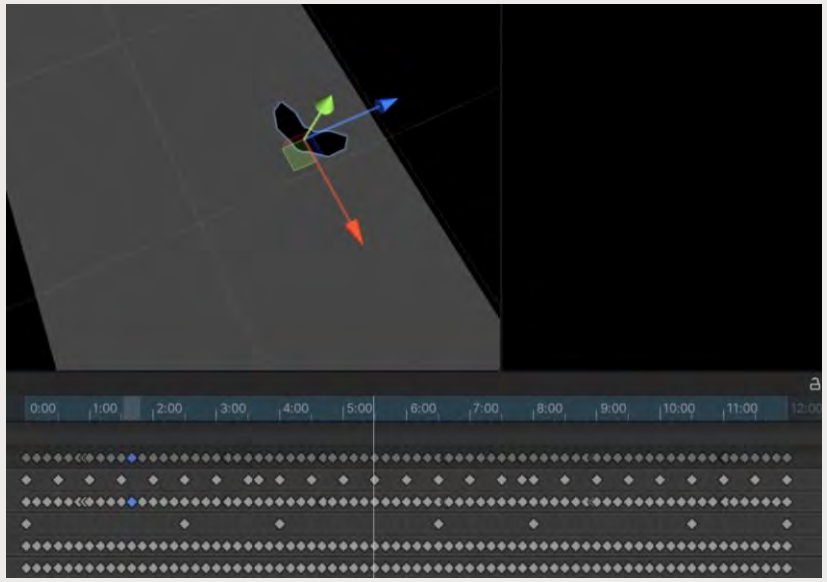
- Plays the bat call sound.

- Starts the animation of the sphere, thus the objects hit by it will light up.

The person follows an animated pathway they can focus more on looking around an experimenting with the sound and surrounding.
Since the path is looped you can look around as long as you want.


Thanks
for the attention



# Description

It is about making the echolation of a bat more understandable for humans. Because people can't recognize a space from sound, it's hard to imagine. In our installation in a VR world, we want to s how this.

You are guided around in a black room and can emit sounds with t he help of a button. Through the sound you get a light feedback fr om the walls, which is supposed to represent the recognition of t he noises like a bat would get something back.

# Set-up

Hardware:
- chair without backrest
- Table (shelf for Pc, controller and VR glasses)
- Mount for cables (VR cable boom or ceiling mount)
- Laptop (with Unity and Steam)
- 2x motion trackers
- VR glasses with headphones
- Controller (tied to prevent stealing?)

Software:
- Unity and Steam