Design document:

Underwater facility escape game (VR)

The game is about an asian cleaner, who is hired to clean in a mysterious underwater facility. Following his entrance to the facility, the underwater building is hit and starts to leak. The cleaner needs to get out.

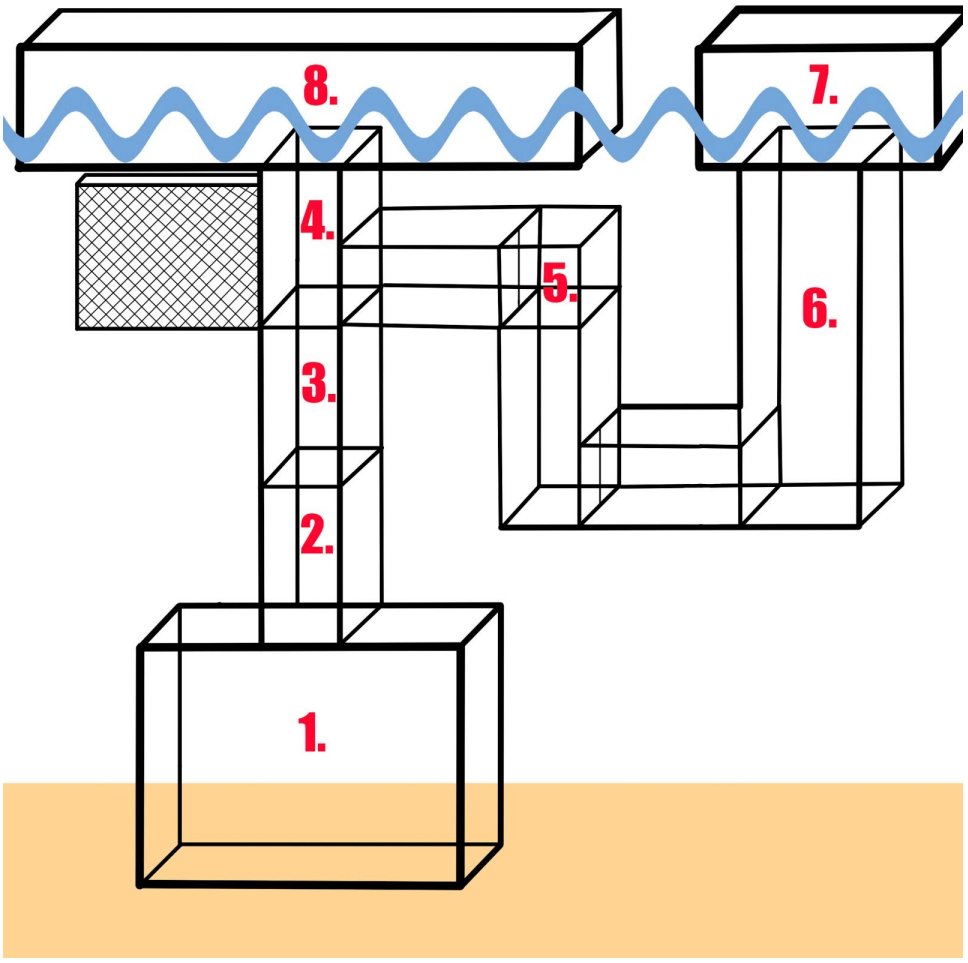

Figure 1. Overall of the game area

1. The base at the bottom of the sea. This is where the player starts from. Also includes an industrial melter, sub hangar, and a corridor with with few office spaces, Janitors quarters and a greenhouse.
2. & 3. The two lowest rooms of the maintenance tower that the player needs to go through to get to the top.
4. Experimentation room. This is where the company experiments with octopus communication. There is also a door to elevator in this room.
5. Elevator that can take you between the experimentation room and the second maintenance corridor.
6. Specimen tower. Rescue waits on top.
7. Warehouse or something. This is where the game ends.
8. The surface facility. This area is not accessible during the game.

The puzzles

#1: Escape the base on the bottom of the sea

- Only way for the player to escape the base (room 1) is to climb up to the maintenance corridor. There is a ladder, but the lid to the corridor is locked. Player needs to open the lid.
    - The remote control / a hidden switch that opens the lid is protected by a metal case. The case door is jammed shut.
    - A broomstick fits the jammed door perfectly, but breaks.
    - The player needs to strengthen the broomstick.
        - There is an pool that melts metal, turn it on, and when the metal is liquid, tip the broomstick into it.
    - Open the jammed door and press the button.
    - Exit to room number 2.

#2: Reach the ladder

- In the second room the player finds a hanged corpse of a previous janitor. There is a lid hatch in the ceiling, but the ladder going up is broken. Player needs to reach the hatch.
    - Get a knife from a closet in the corner and cut the rope. Get the rope from the poor old Jeffrey's neck.
    - Get an instruction manual (and not the screwdriver [too light] or old divers helmet [too heavy]) from the closet, tie it to the rope and throw it through the last loop in the ladder.
    - Tie the ends of the rope to a pipe, climb up and through the hatch.

#3: Open the hatch

- As the player climbs through the hatch (to the room 3) the rooms underneath break down and water starts to enter. The room starts to fill. There is another hatch on the ceiling but it's covered with a lid and a lock. The ladder is also broken, again. Player needs to float up with the water and open the lid + hatch lock.
    - There are couple wooden boxes on the ground as well as a closet in the corner (like in the room below). The wooden boxes begin to float.
        - Find a lantern AND a usb-key from the closet and put them on top of the wooden boxes before the water breaks them. Swim up with the water before you drown.
    - Open the lid with the usb-key.
    - Solve the "get-the-right-pattern" puzzle on the hatch lock. Enter the hatch.

#4: Open the elevator doors

- In the experimentation room (room 4) the lid blocks the water. There are two doors out of the room: elevator door (to room 5) and a door to the surface facility (room 8). There is also a control panel, set of five screens, and a window through which the player can see an octopus swimming inside of a net. The player needs to talk with the octopuss to get the right keyword to open the elevator door.

- Form words by switching colors of the five screens.
- Detailed laws and mechanics of the language and the puzzle here: https://docs.google.com/document/d/1Wr6kyCy3rhC8q1Ef5L7jX_IsGb_Vr_AS3qLYOa7fBkA/edit

#5: Climb up the second maintenance tower

- The room 6 is a badly damaged tower that the player needs to scale. Relocate pieces of junk to build bridges and extra layers and use the acrobatic VR features (like climbing cracks on the wall, pieces of ladders, ropes and such, as well as swinging and "throwing" yourself from one platform to another) to proceed.

- Test animals inside glass containers on the sides
- We have a water bear in a glass container, a really large one which we have created with our science

The graphics

The graphics are done using Blender to create 3d models and Photoshop to create textures. Because the processing limitation related to VR the 3d meshes are left somewhat low poly and textures kept quite minimal.

The aesthetic inspiration is drawn from 60s era interior design, futuristic technology and low poly, (cel shaded) game graphics like Mulaka and Never Alone & Counter Spy.

THE SOUND DESIGN DOCUMENT

1. Music

- Mostly electronic and ambient music to fit the sci-fi/mystery atmosphere, more subtle and restrained, don't distract from puzzle solving.
- The base: relaxing or quiet when the player is working, a hopeful song might play when he gazes outside the window for a long time, drum and bass with huge drop when transforming, mysterious when investigating
- Second room: quiet when dark, dark and ominous after discovering our friend Jeffrey
- Third room: aggressive and panicky after the water breaks in. It would be nice if the song can be filtered through a low-pass filter to create an underwater effect everytime the player ducks underwater.
- Forth room: mysterious, even more futuristic sounding as its science time, happy music for the music box
- Fifth room: fast pace and action packed for platformy gameplay, maybe bittersweet, since we's close to escaping and can see the light above, but also it's the end of our

journey, saying goodbye to the octopus and Jeffrey, and seeing all those other mutated animals

2. Sound effects

- Generally pretty quiet, only loud in panicky situations
- The base: ~~transformed footstep, explosion, error when try to operate computer screen, doors open and close,~~ ~~drawers flap, melter's buttons pressed, weak broom breaks itself, strong broom breaks lock of jammed door, button pressed and opens the lid, lid opens, -~~box being dragged on the floor
- Second room: ~~button to turn light on~~, ~~closet opens and closes, young blood can drop, boxes stack on each other,~~, ~~Body sounds, throw objects to ladder~~
- ~~Third room: usb key plugs in, hatch lock puzzle, hatch opens,~~ different can dropping sounds and objects thrown at ladders sounds
- Fourth room:~~ colored buttons pressed, octopus button pressed, hologram appears and disappears, box opens and closes,~~ octopus squirming and general animations, door opens after getting the correct keyword
- Fifth room: grabbing stuff, jumping or swinging, test animal sounds, broken sounds both electronic and mechanical parts

Throw-object-ladder
Throw-object-collision
Door sounds

MISSING / UP NEXT:

- The intro / tutorial room / menu
- Transformation
- Seabed
- Door animation
- Lighting; placing the lights
- Test the objects running on the conveyor belt for extended periods of time
- Reset systems; every key object should be able to be re-recovered
- Optimizing; controlling what meshes are rendered and when
- Maybe add dust in the lower levels, and no dust in the OctoRoom
- **Melter room**:
    - more parts to broom. If broom is dipped into lava fast, darkens, when held under for few seconds, darkens more, and if held under more than 3 seconds, burns away.
    - Melter roof
    - Barrier before elevator to melter; no objects to melter for safety precautions
    - Stairs to melter; too narrow to carry objects (the broom) / elevator
    - Siren to melter

MEETING SCHEDULE spring 2020:

Monday: 13-18 lunch first probably

Wednesday: 13-18 same

RECALLED STUFF:

- The main idea behind the facility:
    - To build a facility that a) keeps the sea clean by itself, b) maintains itself
    - Teaching different animals and plants to work on different tasks inside the facility
        - Bonsai: maintaining oxygen levels
        - Octopus: running the melter (melter room's function is to melt scrap found from the seabed)
        - In the Specimen Tower there'll be a tardigrade and a sea shell
        - Plankton could be a fun one.
- Menu / starting screen is the home of the main character. Mechanics present in the home / starting point:
    - Letter of acceptance into the job and a letter of accepting the job
    - Home starts from the bed in real laying position
        - Story, setting

        - Backpack hangs on the clothing rack, possibly grab backpack and put it to your back so it gets attached there (tutorial)
        - Start the game by opening the door.
        - Seeing glimpses from the car, sub, airlock.
- Bonsai room: managing the oxygen levels of the facility
    - Screen showing a map of the facility:
        - Red areas: no / low oxygen
        - Blue areas: yes oxygen
    - Similar console to the Octo-console, connected to the plant lights.
        - Control the oxygen levels of the BR, Cor, JR, MF, MR, ME
- Final tower:
    - Multileveled puzzle, requiring climbing and going to different floors to enable progress in others
- Chorals outside the Base Facility measure water temperature and cleanliness.
- Possibility to destroy things along the way for no apparent reason.
- Maybe have a good/bad ending slightly altering the item on the final boat or something.

- May 2020: Melter
    - **Lift** down to melter. The lift doesn't allow the player to take any stuff down (as a safety measure).
    - Melter room gets a **3D-printer**, which can make brooms (a limited amount of material, maybe up to 4?) and additionally can print parts of the unit (circuits)
    - The melter buttons are replaced with **a pc interface** which is command based
    - The interface could contain a previous command history which the player could scroll to find out the commands.
- Octopus mute animation (shh finger)
- Add toilets.

- Main Facility:
- Terminals can be used to activate keys to open certain doors
    - Key-activator machine attached into the Command Tower desk, and needs to be controlled with a console.
- Possibly many empty keys available with different clearance levels.
- Gotta make sure players can't get locked out or at least not too easily.
- Doors need to close after opening to keep the oxygen level system functioning.

Save system:

- Static checkpoints, announced by the facility speaker system.
- No manual systems.
- Start menu?
    - "Continue": jump out the window
    - "New game": walk out the door

- “Exit”: put your head into the toilet and flush, also microphone is a must. You need to scream “I DONT WANNA CLEAN ANYMORE!” simultaneously flushing the toilet.

Fuse and oxygen systems:
https://docs.google.com/spreadsheets/d/1eyLr0XU4cyGkaPQRyNWyDHpbTlWyxpm_wYGyvb_SX7Q/edit?usp=sharing

The Octopus documents:
https://docs.google.com/document/d/1cho0NTuxirAG8iUkTlpTmUk3keWu8-hcszVq6IZCI18/edit?usp=sharing

Natasha’s interview:

https://drive.google.com/open?id=1fgS011OrVHST7GNK_Y5Qkqv7KrJ1o59l