New Technologies

Eye Am Not Creative

Sergi van Ravenswaay   Development, design
Daan van Westerlaak   Development, design
Daniëlle Verburg   3D art, level design
Masaaki Okuda   Concept art, UI
Mijs-Max Brouwer   Design, Documentatie

Experiment 1: Eyesketch

start
collectables
finish
start
finish
start
finish

EyeBalls
EyeDraw
EyeRoll

EyeRoll

Max Mijs Brouwer

| | Finish |
	Ball
	Collectible
	Obstacle
	Lines that the player draws
	Regular platform
	Path to follow
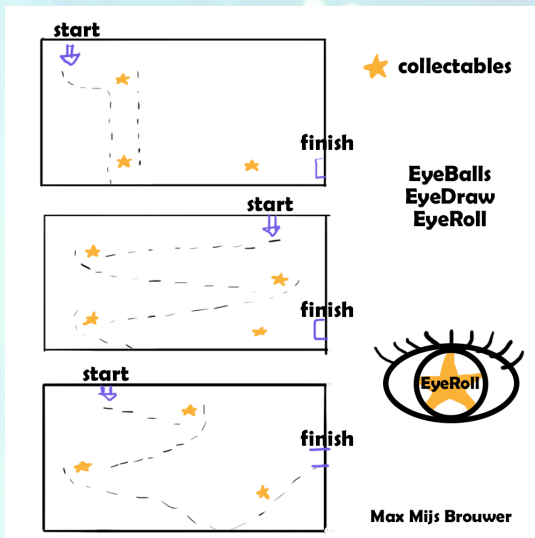
Description

In this game the goal is to get the ball to the other side of the screen. But, at some spots there are collectables which gives the player extra points if the ball hits those spots. Before the ball will fall into the screen the player has the possibility to draw lines. These lines will steer the ball in the right direction. The player can draw lines by pressing the left mouse button and looking with his eyes. When the button is released there will be a line. If the player is content with his drawn lines the player can press play and the ball will fall. The game would ideally consist of lots of levels ranging from levels with just a few very easy collectables to difficult levels with weird physics, things the player may not look at and other features.


Points: 0
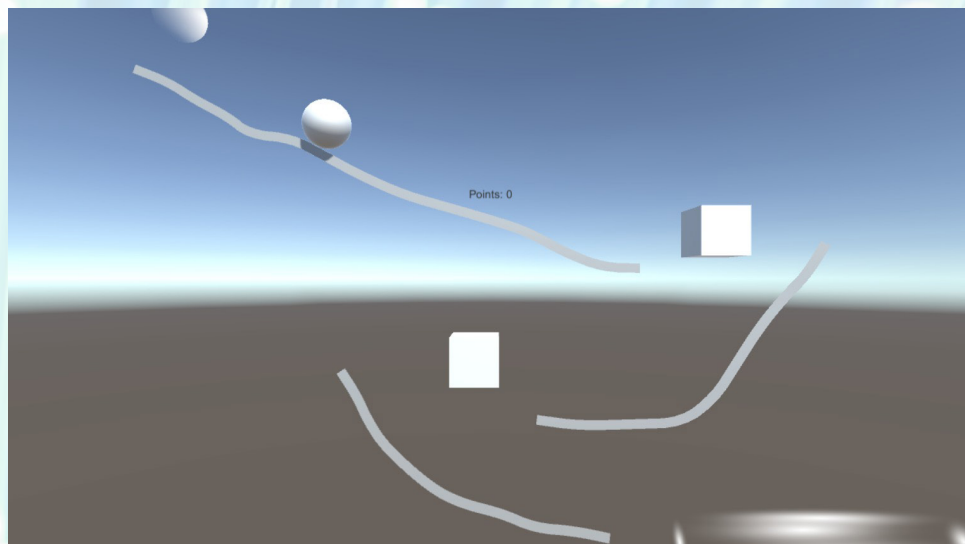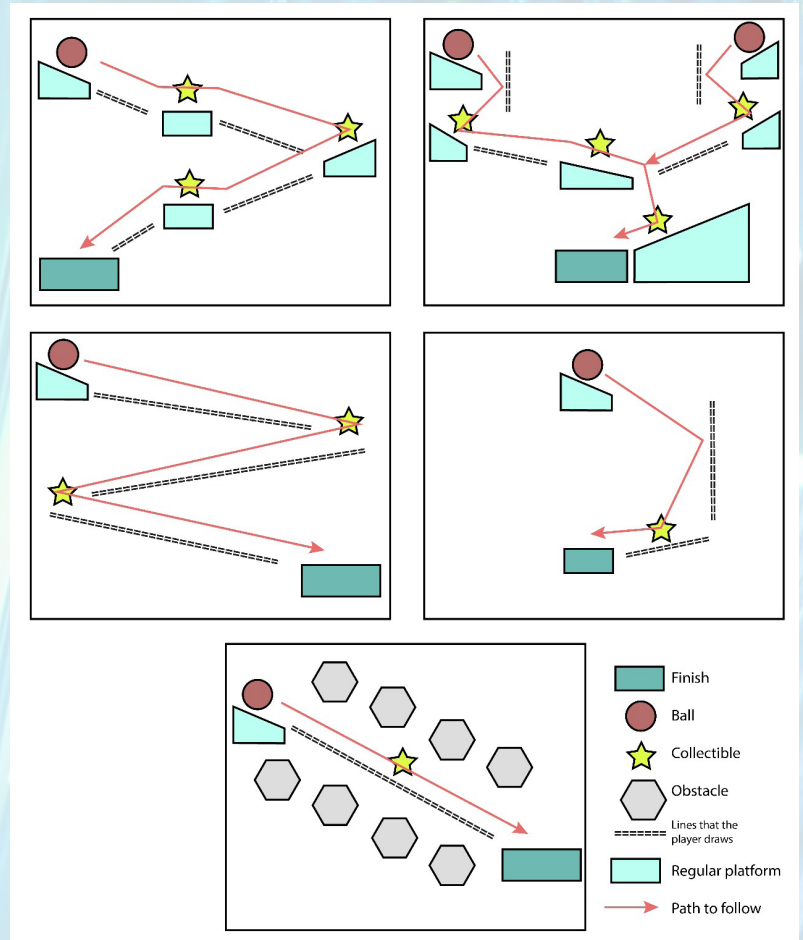
Design/technical choices

We chose to experiment with the Tobii Eyetracker because we were all very new to this technology. Some of us even never heard of it, so we immediately had a strong urge to choose this hardware. After we officially chose the device we all came up with several concepts that we could try to make. One of the ideas was to make a program like Paint with the Eyetracker in which you can draw with your eyes. We chose this concept because when we researched what was already done with the Eyetracker we saw that drawing wasn't something that was broadly explored. When we made the first prototype the developers had chosen to make this concept in a unity 3D environment because working in 3D space seemed to be easier and faster to develop.

The first prototype was so simple and made in such short time that we iterated on the concept. Now we wanted to use the drawing as a game mechanic. Soon we came up with EYESKETCH. The artists could now make interfaces and level designs. After making the prototype for the draw game we playtested with several people. Despite some technical issues the feedback was positive. We noticed that for the most testers it was the first time they were in contact with a Tobii Eyetracker, so it took some time to get used to it. That is also why our game is a bit difficult at first. Most people took about 8 to 9 lines to complete the level, while our goal was set to 3 lines.
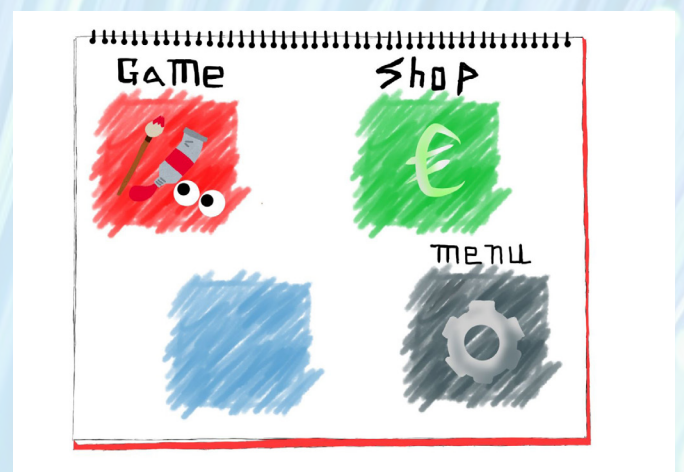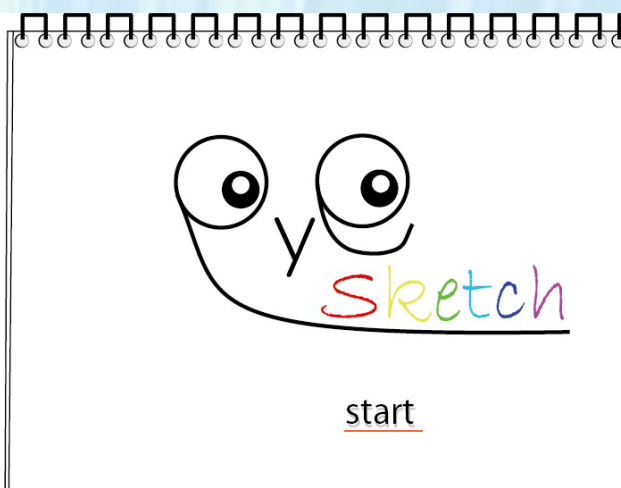
conclusion

Fortunately, most people still eventually completed the level and liked the concept, so we felt like it was a successful experiment. The drawing with your eyes certainly has potential as a game mechanic. If we had more time to expand on the first concept we would definitely make many more levels and experiment with other little things to add to make it more fun, like different physics and things you cannot look at.

Experiment 2: Fallingbirds
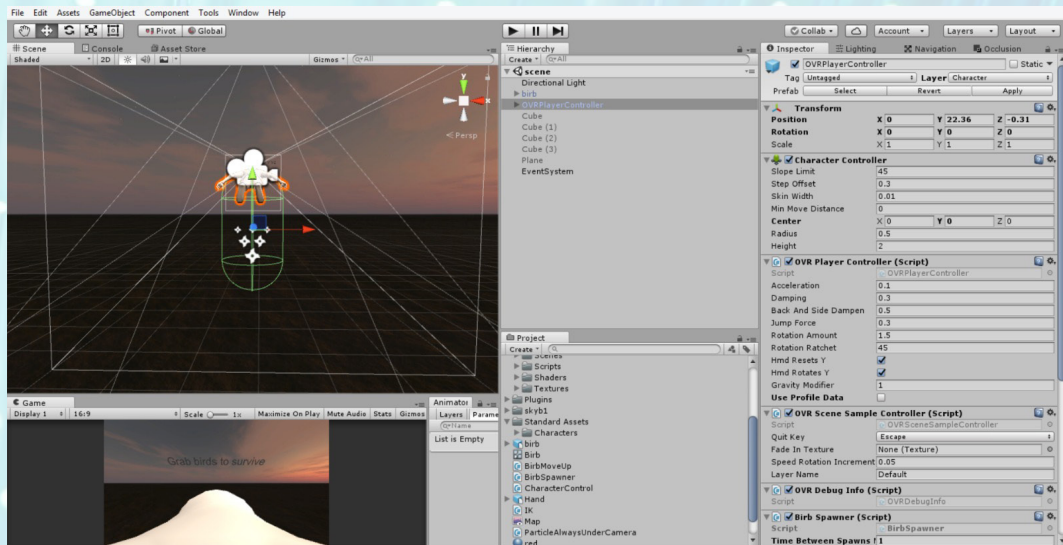

Hardware: VR (Oculus rift)

In this game the goal is to catch as many birds as you can while you are falling. The idea is that you experience the feeling of falling. You can see a map underneath which is getting closer and closer while you fall. Eventually you see a dartboard sign where you should land. You can steer during the fall by putting your arm together in front of you.
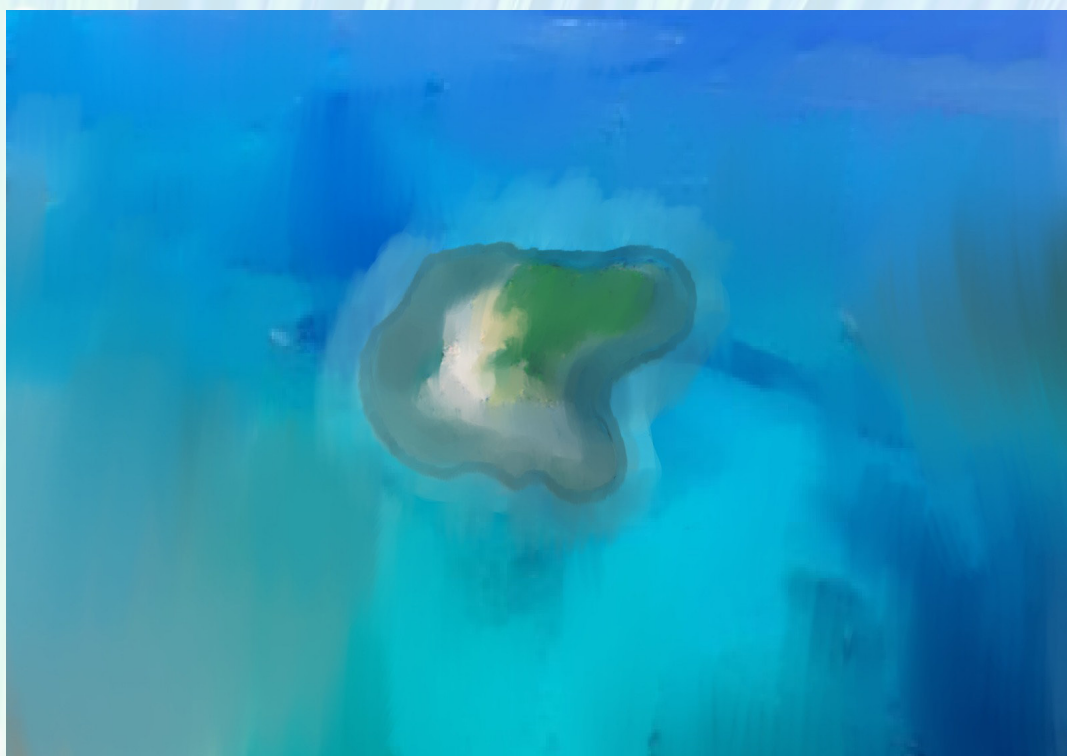
Design/technical choices:

For the second experiment we did not know what to do for a long time. Due to limited time we had left, we chose to experiment with a simple concept of falling and to experiment with the VR experience. Although it seems you are falling, you actually are not. Everything is going up, while your character stays at the same height. We did this because floating point precision would not be a problem anymore. Because you can move, everything spawns around the player so that you cannot go 'out of bounds' and will always see something.

During this experiment we noticed some interesting things. First, if you only see the birds passing by, you do not really experience the feeling of falling. Therefore, we added a particle system that simulates wind during the fall. This was already way better but still it missed some things. We continued with adding clouds and a skybox so the player sees the sky and clouds during his fall.

Still it didn't really feel like falling. This could also be explained by the fact that the player is standing up instead of physically falling. Besides, your neck hurts when you have to look down all the time during the game. So, we put some chairs in the room where the player can lay down on. This way the player is horizontally when he is falling. This was not that comfortable either. Ideally, we also want to set up some ventilators to simulate 'real' wind and added sound in the game. Also, it would also be nice if the player hung in some ropes to the ceiling. So you are hanging horizontally and you can float a bit.
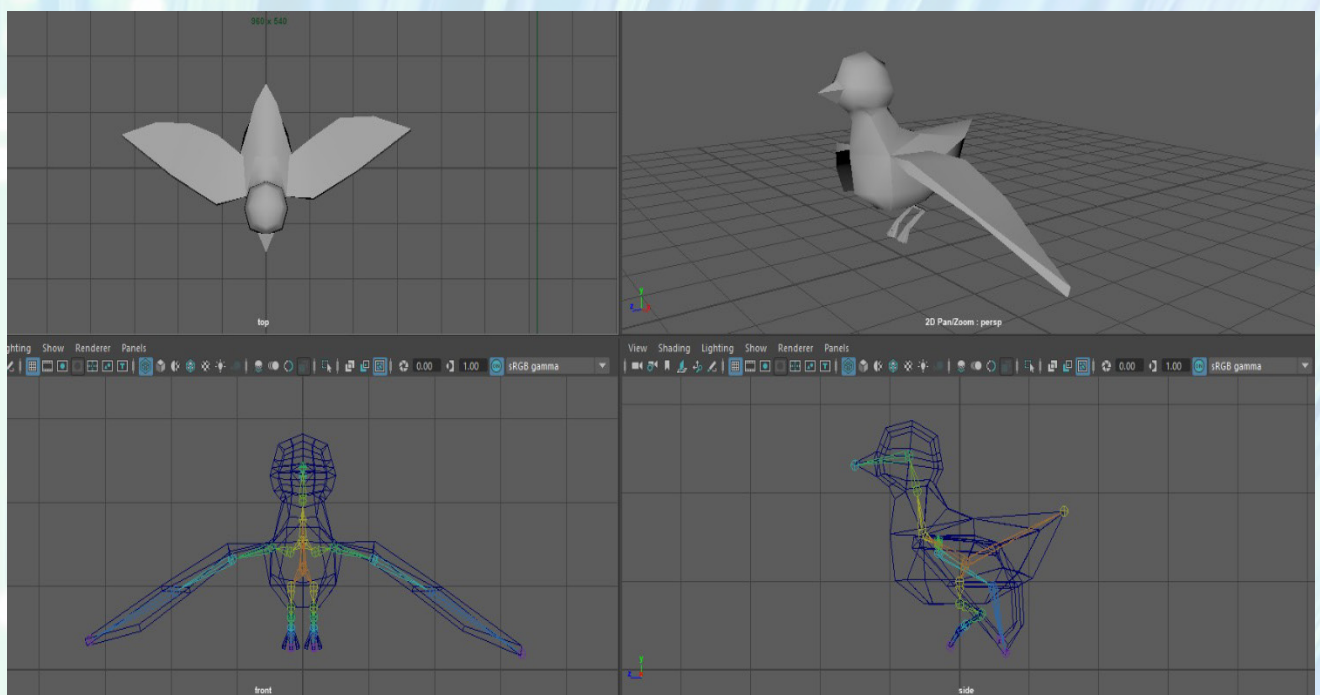
Conclusion

This experiment was not as successful as we thought it would be. Falling in the sky is hard to simulate because firstly, nobody of our team have experienced that in real life and secondly, it is hard to simulate the physics because if you fall in the sky, the wind presses hard to your skin and it is harder to move. We did not know how we could replicate this feeling. It would be easier if we could test this concept at those skydive simulators where you float above this giant ventilator.

If we had more time we would change our concept a bit and instead of falling we would let the player experience a rollercoaster. So maybe this way it is easier to simulate due to the position of the player and the physics.