2024-12-07

Andre Chen & Nathan Hendrickson :3

I have an initial idea for the game: it would be a 3D game where the player controls a submersible torpedo-like thing under the ocean surface. The player will go through rings under the water, which will reward them in some way. Unlike the flight sim, I envision that the entire space of orientations is available to the player, and they would have to figure out how to control the submersible and keep their bearings.

Thus, one of the aesthetic goals we are going for is to create a game where the player is challenged to master control of the submersible.

Aesthetic Goal 1: Challenge The player should feel a desire to master control of the submersible and gain a skill level that allows them to play the game quicker. We are intentionally making the controls hard to support this. We will have succeeded in this goal if the controls are difficult at first, but can be mastered with practice over time. We will have failed in this goal if the controls are so hard or counterintuitive that the player isn't able or willing to master them, or if they are so easy that even a beginner has all the skill required to master the game.

Currently, all I have for the core loop is as follows:

- Move around
- Find an underwater ring.
- Travel toward the ring while avoiding mines.
- Orient oneself to go through the ring and go through it
- Repeat.

To help the player orient themselves in what would otherwise be a blank world (besides the sparse target rings), there are mines scattered around the world.

We are not sure about the other aesthetic goal yet.

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Andre Chen

I have implemented the player's avatar and their controls, and made the camera smoothly follow the player, and things are going well. The submersible is currently represented by a capsule, and the only controls are thrust, roll, and pitch. Unlike in the flight sim, the player requires some forward velocity in order to actually orient the sub, and the controls become more sensitive the faster the player goes forward, to simulate real-life control surfaces. The lack of yaw makes piloting the submersible quite difficult, which is intended because to be challenging was one of my aesthetic goals. The next step is to add additional drag perpendicular to the player's heading, to simulate how the submersible is more aerodynamic when going forwards.

One place where I struggled is familiarizing myself with the axes of the player. While Unity has descriptive names ("up," "forward," and "right"), I was unable to figure out how to make the capsule render so that its long axis was forward, so I had to change everything to treat the up axis as forward, forward as up, and right as left. Terrible. I hope to have this figured out later but for now, everything works.

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Andre Chen

Added sideways drag. Everything works! This allows the player to more confidently take tighter turns knowing that they only need to orient the submersible and it will naturally resist sideways motion (drifting).

2024-12-07

Nathan Hendrickson & Andre Chen

We've decided upon a goal for the game. Instead of just mindlessly going around getting rings, the player, as a torpedo, should have some target that they are trying to hit. However, the target is far away and the player should collect fuel along the way to be able to keep up. We can add visual fog to the game and have the target make noises, so that the player can track him. Then, the player will actually feel like a dangerous hunter.

Aesthetic Goal 2: Fantasy We want the player to get into the role of an assassin missile trying to hit its target while surviving by collecting fuel along the way. We will have succeeded in this goal if there are visual and audio cues that immerse the player in the experience, and they engage in order to perpetuate the fantasy. We will have failed if the visual or audio cues go ignored and the player is focused on winning

the game only for the sake of the win screen.

This also changes our core loop:

Core loop - Listen for the target's sound cues and/or visual appearance on screen. - Move toward the target, avoiding mines. - Determine if the target is reachable without fuel. - If not, find fuel along the way. - Detour to collect the fuel, still avoiding mines. - Otherwise, move toward the target and collide with it.

2024-12-07

Nathan Hendrickson

I have created the missile object for the character. I used a free model from the internet, but it imported weirdly, so I had to manually adjust the position of each of the fins to make it look good. It also didn't have an exhaust so I had to create one for it.

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Andre Chen

I have implemented the target, which will move randomly around the player and get destroyed upon player collision. After testing it myself, I got tester feedback on the missile controls, fearing that it would be too difficult to hit the target. The testers suggested inverting the pitch controls to simulate how the yoke on an aircraft works, as well as increasing the angular drag to reduce the "slidiness" of aiming the missile. After these changes, the missile was significantly easier to pilot. I believe this does not contradict the goal of the "challenging" aesthetic because it is still skill-based, but now less of the skill is about counteracting the "slidiness" which would be annoying. Instead, I could now make the target smaller/faster, so the challenge comes from chasing (which was the intention).

2024-12-08

Nathan Hendrickson

We have added major finishing touches to the game to turn it into the final product. First, we added fog to the camera to add to the spooky effect, making the player feel like they are hunting a target on the run. Next, we created a flat seafloor terrain to both orient the player and create a bound in the world to prevent the chase from happening forever. Finally, we added a fuel system, where the player needs to collect fuel items to prevent them from running out of fuel and dying of starvation.
