They Make Sounds : Risk assessment

Vertical rope and ziplines

Presentation of the feature

In our game, players can traverse terrain using two primary methods:

- **Ziplines** for horizontal movement.
- **Vertical ropes** for climbing up or down.

If the player has enough rope, they can aim and place an **artifact** that determines their traversal point. A preview system shows how the artifact will be positioned and the rope length required. Once confirmed, the player can instantiate the artifact and move to their desired location.

Presentation of the risk

The artifacts needed to detect collisions correctly so that the player could instantiate them when they had enough rope and to not clip through the walls. For the vertical rope we needed to check the collisions for both the ceiling and the ground so that the player wouldn't collide through the ceiling and through the floor. There was also the issue for the zipline to not allow the player to create one at a certain angle and for the vertical rope to not create it on a vertical wall.

The player needs to be able to understand the preview's location on terrain so that they can understand where they will travel to. The problem for the vertical rope is that the player can't look both at the ceiling and at the ground at the same time and therefore cannot see if they will actually be able to jump and grab the rope.

Solution we applied

Zipline Adjustments

- Initially, the zipline's end was placed exactly where the player aimed, which made it difficult to judge if they would hit a wall and fall.
- To resolve this, the zipline's endpoint was raised slightly to prevent unintended collisions.
- For further clarity, we added a **preview model** of the player at the zipline's endpoint, using the same material as the zipline preview.

Vertical Rope Adjustments

- We experimented with a **two-step placement process**:
    1. The player aims and places a **temporary preview** of the rope.
    2. The preview remains visible, allowing the player to reposition their camera before confirming final placement or cancel the process entirely.
- While this improved placement accuracy, it added extra steps to the player's workflow, making traversal feel cumbersome. Ultimately, we abandoned this approach.

Solution we considered

For the vertical rope we had multiple ideas and for the final product we will test them to see what gives us the best result :

First the easiest one : pull the camera back when aiming and add dithering/transparency to the explorer's model so that it doesn't block the view.

Instead aim at the floor and not the ceiling but it may bring player confusion and for certain cases where you want to go down instead of up will pose the same problem we currently have of not being able to see in both directions.

Have another camera somewhere on the HUD that is looking at the bottom of our rope. That could however clutter the HUD and lead to performance issues depending on where the camera is placed.

It would be interesting to do more **playtests** centered especially around this feature so that we could get more feedback and information to allow us to iterate.