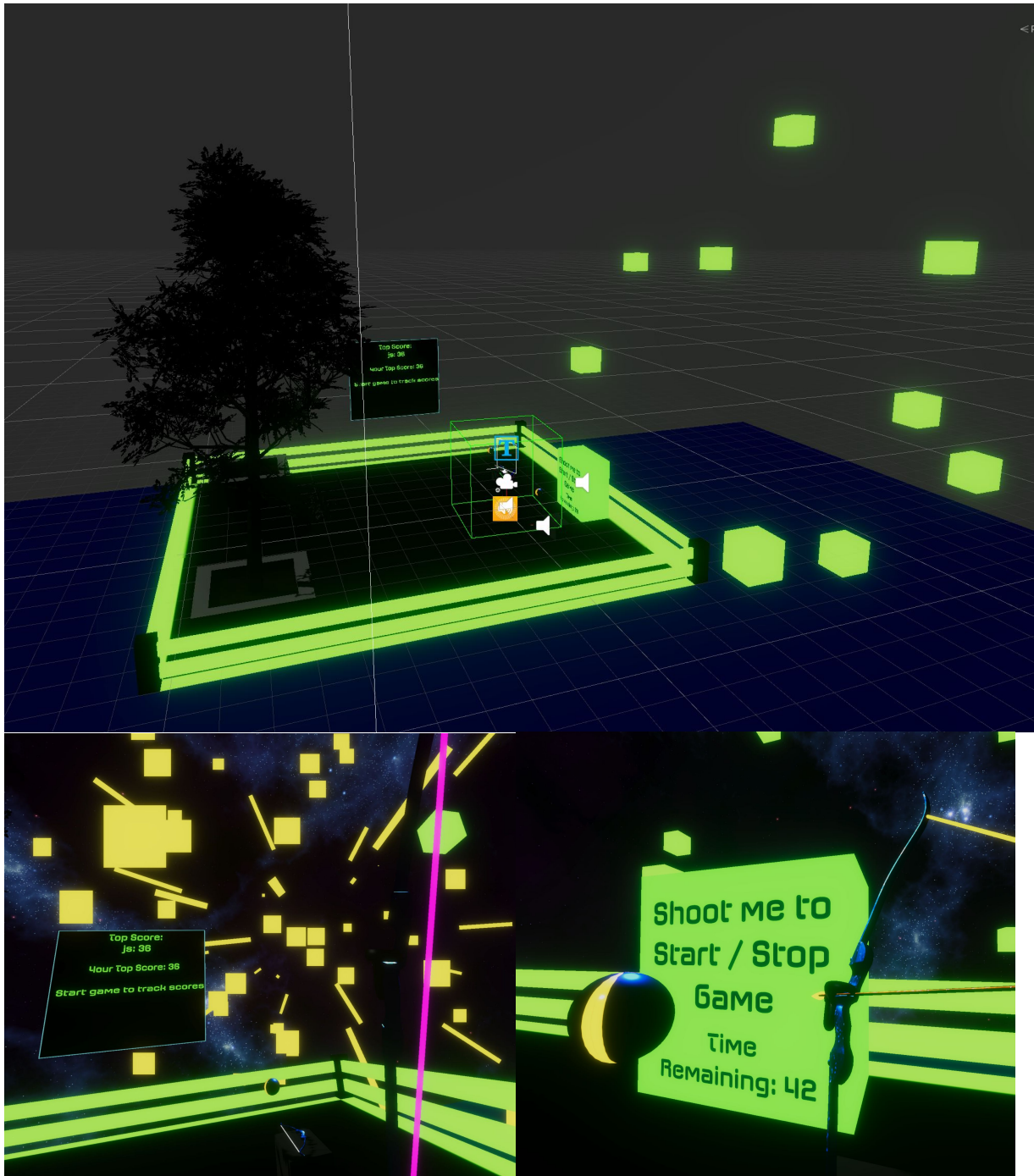


Archery - Game Design Document



Initial Concept Art



1.0 Overview

1.1 Game Summary

This mini-game is designed to show off how VR can be used to play an archery game.

This game is designed to play with friends or solo and the core idea is to hit all of the targets (moving and static) within the specified time period.

1.2 Desired Experience

Before the game is started the user is encouraged to familiarise themselves with the experience and mess about.

When they are ready to start the game the mood will change to serious/competitive as there will be a clock ticking, the music changes and the user who shoots the most targets wins.

1.3 Desired Player Behaviours

The desired behaviour before the game is to explore how each of the items available work and is fairly relaxed.

Whilst the game is in progress the user is encouraged to compete against the clock and any other players present.

1.4 Actual Mechanics

1.4.1 Pick up arrow

The user grabs a new arrow from their quiver.

A new arrow is instantly spawned in the place of the old arrow.

1.4.2 Load arrow on to the bow

The arrow must be placed on the bow in the same way a real bow works.

1.4.1 Pull bow

When the arrow is on the bow and the arrow/string is pulled the amount of pull exerted on the arrow will change the force of the arrow simulating how a real bow works.

1.4.1 Fire arrow at the target

When the arrow is released the arrow will fire in the forward direction with the force determined by the amount of pull.

1.4.1 Target changes state

If a target is hit the target will change colour or be destroyed to signify that the target has been hit and is no longer available.

Each target can only allocate 1 point to a single user, the first user to hit that target will gain the point.

1.4.1 Clock

When the game starts the game timer will begin.

This time is shown to the player to encourage haste and competition.

1.4.1 User hits counter

This will show the players how many targets each player has hit since the start of the game. This is designed to spark competition.

1.4.1 Hits Per Second value

A hit per second value is a good overall performance indicator even when playing in a multiplayer environment.

1.4.1 Visible High score (Hits / Sec)

This score is present to encourage the player to try to beat it.

1.4.1 Music change in-game

The music changes are designed to hype the players mood in-game

1.4.1 Random targets spawning

At the start of the game, the targets will all be spawned at once in random positions within the range. Some will be moving and some will be static.

1.4.1 Variable target count

The number of targets in the game will depend on the number of players present in the room.

1.5 Controls

- Fire arrow at the start button to start the game
- VR Grab - Pick up and move
- VR Grab - Pick up arrow
- Release VR Grab on the bow to place the arrow
- VR Grab - Start pull/release arrow
- Standard player movement, walk and teleport also available.

2.0 Style and Feel

2.1 Summary of Desired Audiovisual Style

Mimics reality in the bow/arrow interaction.

Colour/neon explosions when a target is hit.

Neon sci-fi themed level with a lot of glow effects.

2.2 Desired Visual Style

Following the neon theme of the game.

This is an open air experience under the stars.

2.3 Desired Audio Style

Synthwave arcade following game theme

A shorter Hype track for when the game is active.

2.4 User Interface

Distant panel for displaying the scores.

A closer object for start/cancel game

2.5 Camera Controls

Uses the standard room VR Player

3.0 Game Flow

3.1 The Game Minute

Player 1 enters the room and then player 2 enters the room after.
They have a quick chat and play with their bow and arrows just messing around shooting things.
Now they are comfortable with the experience they start to play the game.

Player 1 shoots the special start game target, the music changes and all the targets come alive.

It's game on to try and beat your friend's score and win the game. Your friend beat you by 2 points which are shown on the big floating UI panel. This also happened to be the top score for the game so now your friends name and score is on the scoreboard. You call a rematch and you shoot the special start game target.

The game plays again but for some reason, you need to cancel the game. You shoot the special Start/cancel target and the game stops.

3.2 Game Flow Diagram

<https://drive.google.com/file/d/1AYrQx7tNorfEfLFXFrzXVQDD-eBeKHRe/view?usp=sharing>

4.0 Target Audience

Same as main GDD

5.0 Asset List

5.1 3D Assets

Player (hands, avatar, head, hand menu)

Quiver

Targets

Bow

Arrow

Standing platform

Lower ground platform

Scoreboard

Start / Stop game trigger item

5.2 Audio Assets

Pull sound

Arrow movement sound

Target hit sound

UI sounds

Background music - Chill

Background music - Hype

6.0 Interactions Table

Hand - Arrow (hand grabs arrow)

Arrow - Bow (Arrow attaches to the bow)

Hand Bow (Hand grabs bow)

Hand - String (Hand pulls and releases string)

Arrow - String (Arrow moves with string pull)

Arrow - Start / Stop item (starts and stops game)

Arrow - Target (Arrow hits targets)

Arrow Hits all other objects and locks to their location

Additional Images

