INTERACTIVE AIR HOCKEY

Final Presentation

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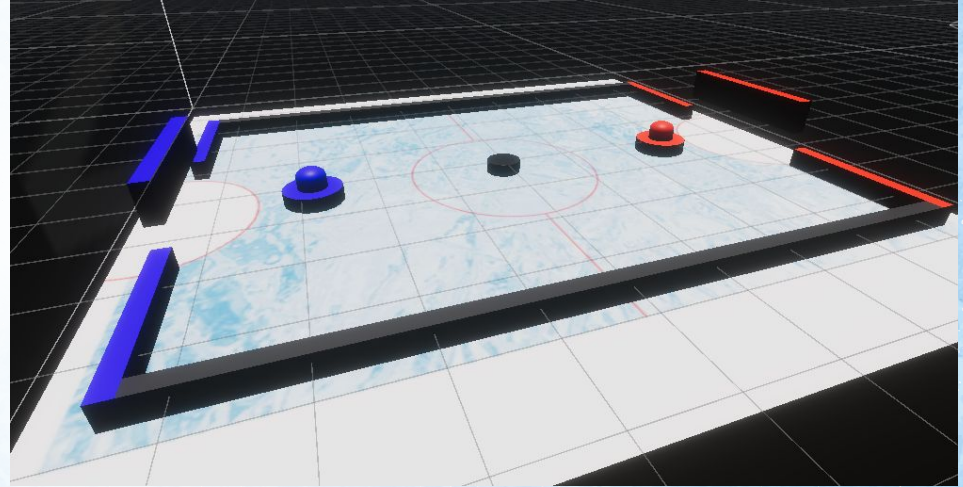
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INTRODUCTION

[1]

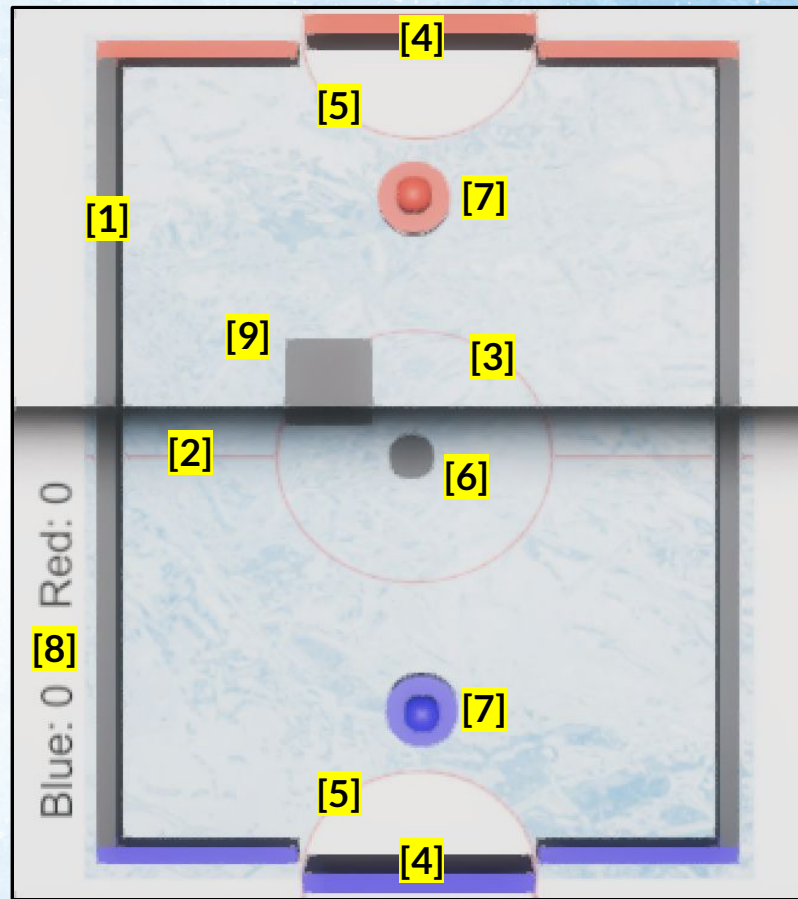# VIRTUAL ENVIRONMENT: ELEMENTS

[5]

1)
Air Hockey Pitch
- Table **Edges** (playing limits) [1]
- **Halfway Line** [2]
- **Halfway Circle** [3]
- **Goals** [4]
- Goal **Areas** [5]

2) Disc (puck) [6]   **3) Sticks (mallets)** [7]

4) Scoreboard [8]

5) Special Ability Activation Plate [9]

4

VIRTUAL ENVIRONMENT: SOUNDS

SOUND EFFECTS
- Disk colliding with the walls and the sticks
- Disk entering the goal and whistle sound when scoring
- Game music (background)
- Sound when the ability is deactivated
- Victory sound

SPEECH SOUNDS
- Which ability is enabled and which player owns it
- Which player has won the match
- New game notice

GAME RULES: DYNAMICS

GAME START   - Start with the disc in the middle of the halfway circle

SCORE A GOAL   - Players hit the disc until someone scores a goal
- When one player scores a goal, the disc goes to the middle

GAME ENDING   - The first to score 5 goals
- A new game starts in 5 seconds

GAME RULES: SPECIAL ABILITY

-A black square appears in a random position on the pitch every 15 seconds after the ability finishes.
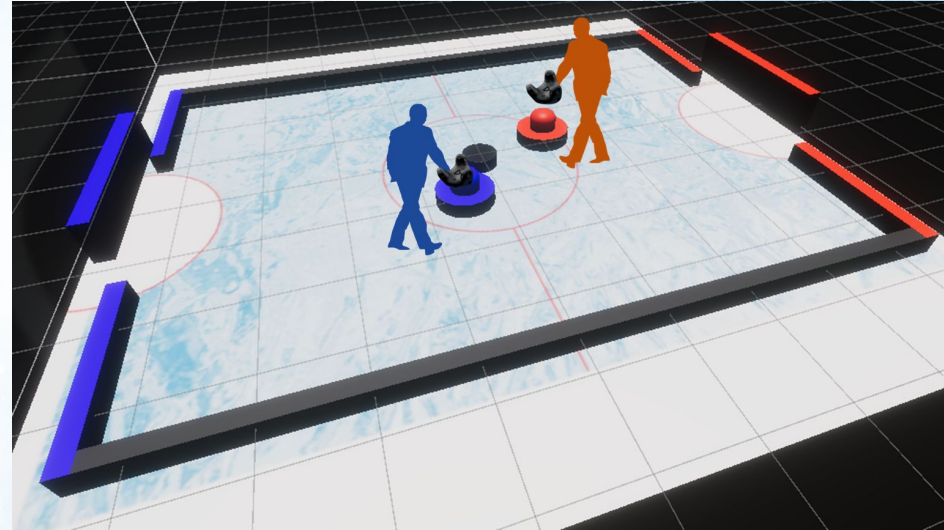
-The player who collides first with the square, gets one of the three special abilities, randomly chosen, for 15 seconds.
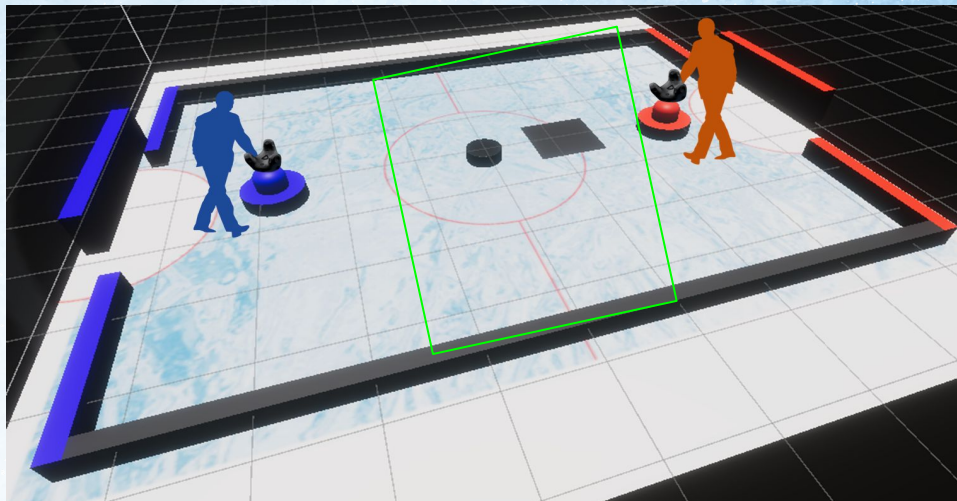
Three Special abilities:
- Double goal
- Smaller goal
- Barrier object

STORYBOARD

- The game starts (disc in the centre of the Halfway Circle)
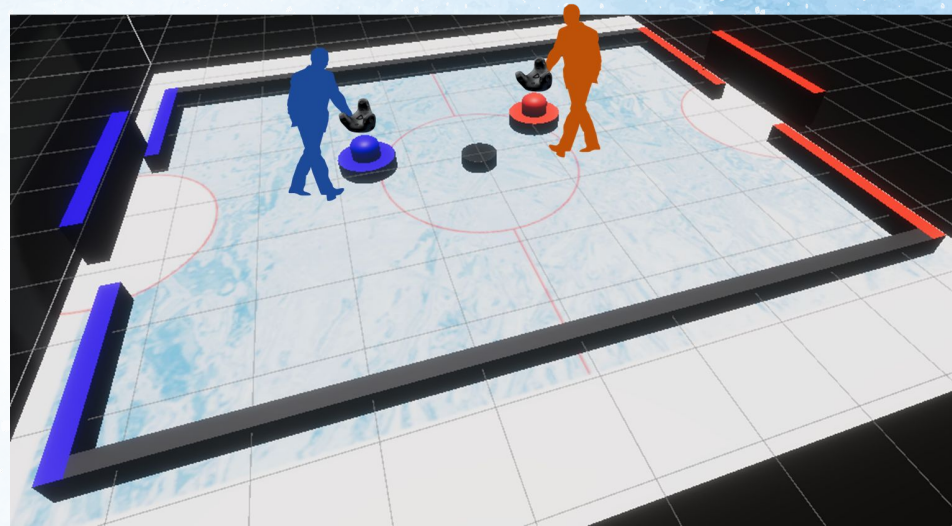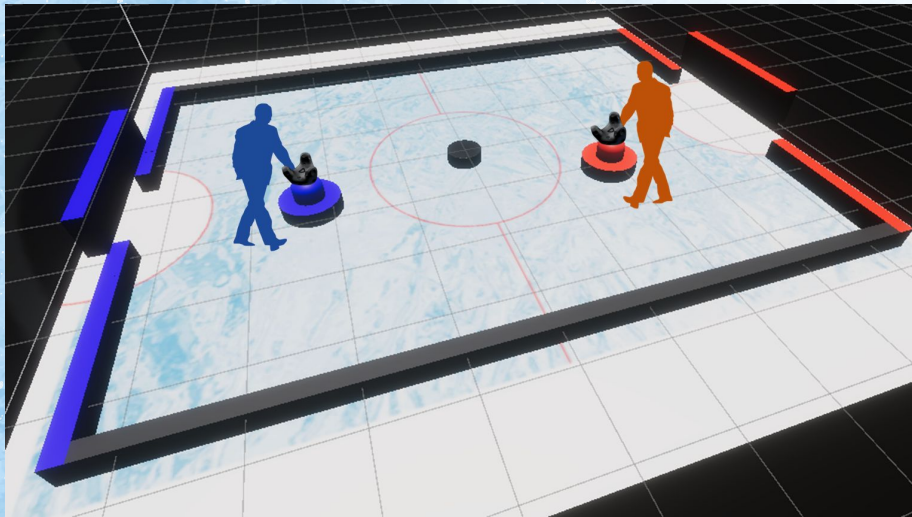
- A new ability activation area appears

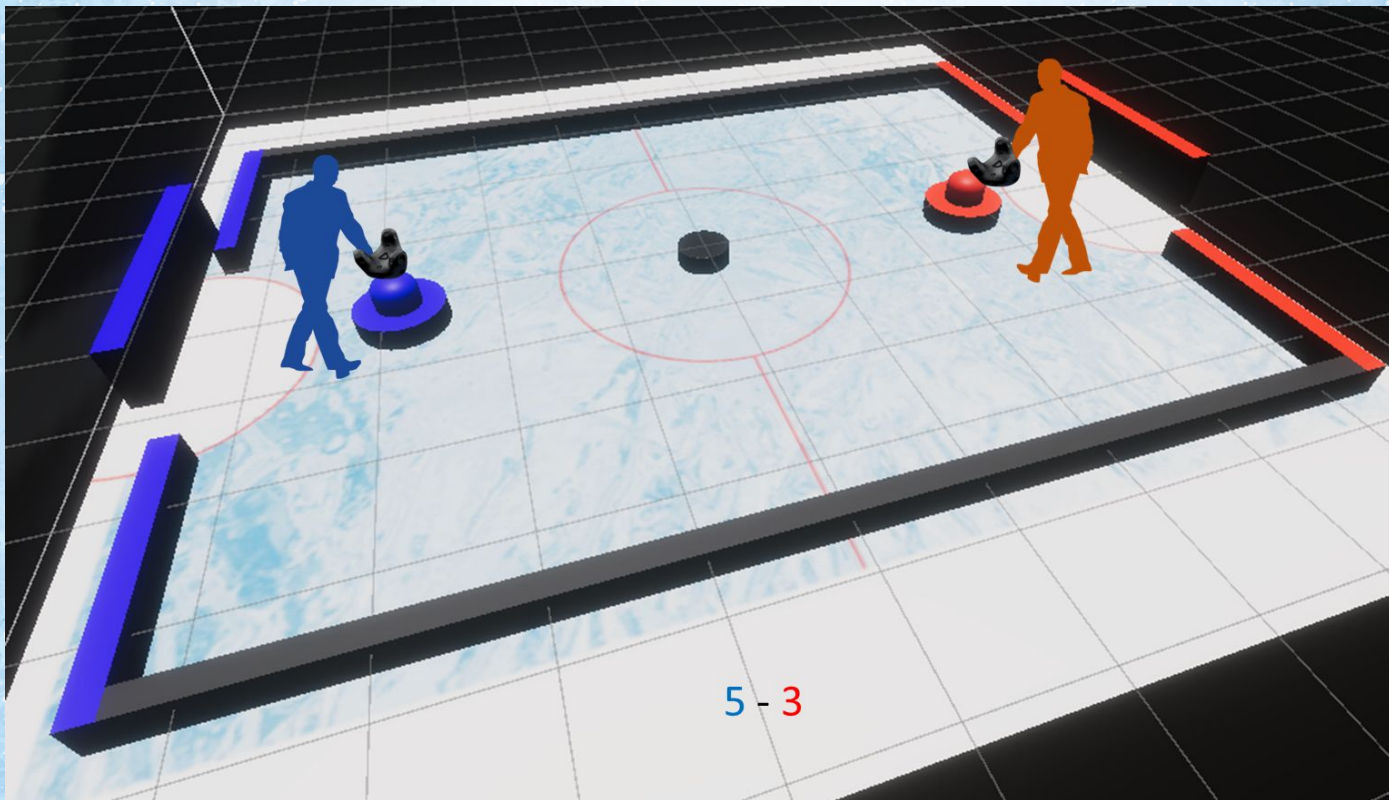- The blue player activates the special ability. In this case is double goal.

● Reduce goal Ability

● The red player activates the obstacle (barrier object) ability

4 - 3

- The blue player scores and win the match. The game will restart in 5 seconds

FULL-BODY INTERACTION PROPERTIES

Air Hockey mallet [3]

HTC Vive 3.0 tracker [4]

MAPPINGS

Mapping scale: 1:1

One-to-Many

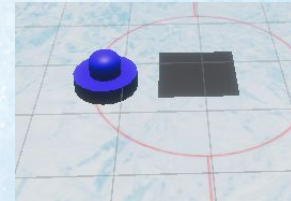Physical Interface

1 Input data –> position sensor

Digital Interface

Moves stick

Activates
special ability

GAME DEMO

REFERENCES

[1] Mainstreet Classics 22-Inch Table Top Air Hockey Game. (n.d.). Amazon. https://www.amazon.com/Mainstreet-Classics-22-Inch-Table-Hockey/dp/B004138162

[2] What Is Hockey Rink Glass? (n.d.). Athletica Sport Systems. https://www.athletica.com/what-is-hockey-rink-glass/

[3] How Does An Air Hockey Table Work? Gamequarium. https://www.gamequarium.com/how-does-an-air-hockey-table-work/

[4] HTC VIVE. (s. f.). VIVE Tracker (3.0) | VIVE European Union. https://www.vive.com/eu/accessory/tracker3/

[5] (18th August 2018). Air Hockey Table Glossary | GameTablesOnline.com. Game Tables and More.

https://www.gametablesonline.com/blog/best-air-hockey-glossary/

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Thank you for your attention!