Curl Clash

Experience Curling with XR and Interactive Systems

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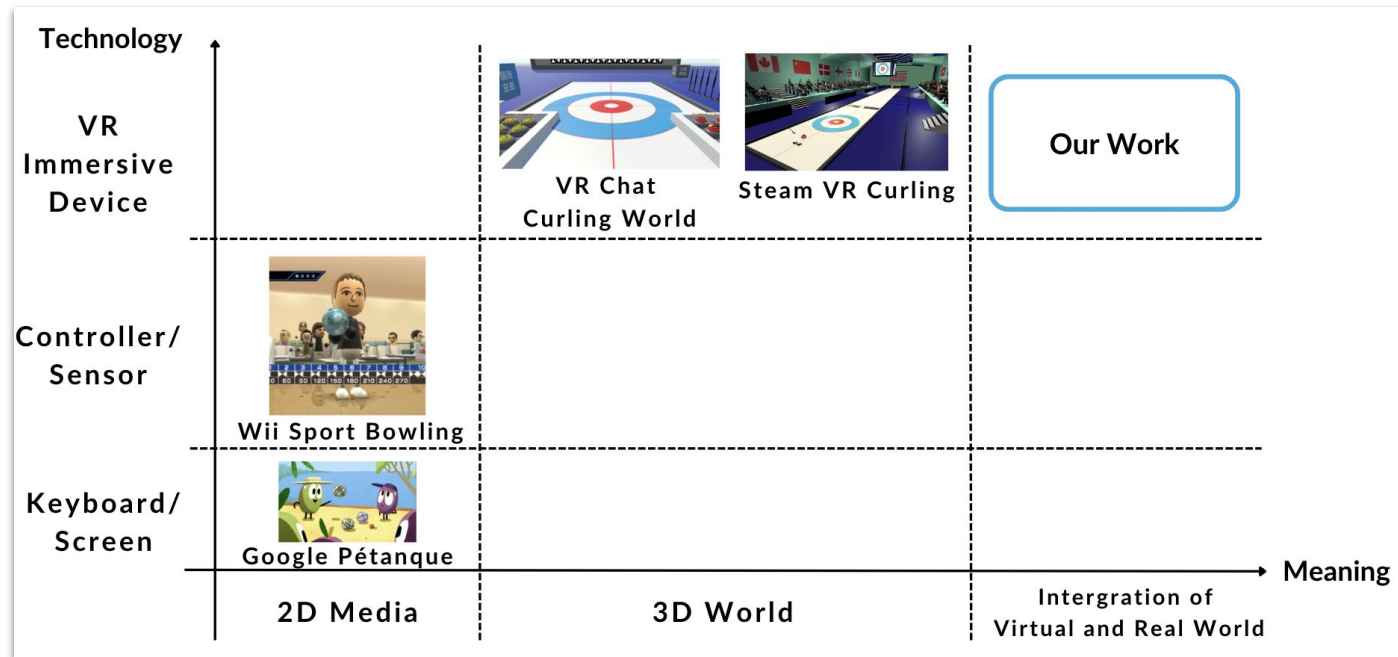
Introduction

Motivation

- Promote curling sport

  - Curling is only popular in high latitude regions

  - Most people don't know this sport or only see it on the Internet

- Climate and arenas

  - Subtropical climate in Taiwan

  - Lack of ice arenas

Motivation

- Equipment
  - Real curling stone weighs 19kg, and many equipments are needed (e.g. broom, shoes)
  - These equipments are expensive and hard to obtain
- Safety
  - The danger of moving on ice
  - Falling and slipping

Design Space

Technology ↑

VR Immersive Device — VR Chat Curling World, Steam VR Curling, **Our Work**

Controller/Sensor — Wii Sport Bowling

Keyboard/Screen — Google Pétanque

Meaning →

2D Media | 3D World | Intergration of Virtual and Real World

Target

- **Target user**

  - The group that has not been exposed to this sport.

  - The demographic unfamiliar with this sport.

- **What we want to deliver**

  - To help users learn and engage in the fundamental activities of this sport

  - Sliding、throwing stone、sweeping

Design and Implementation

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Hardware

- Vive XR Elite
- Vive Wrist Tracker * 2
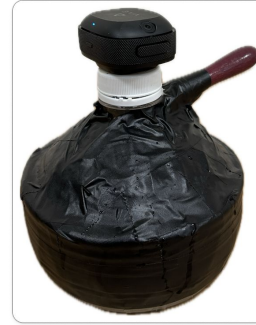- Vive Ultimate Tracker * 2

Vive XR Elite

Vive Wrist Tracker

Vive Ultimate Tracker

Hardware

- Curling Stone Props

- Curling Broom Props

- Sliding Mat * 4

    - Simulating ice surface

Curling Stone Props

Sliding Mat

Curling Brush Props

Level Design

- Level 1 : Teach users how to throw a curling stone

- Level 2 : Teach users how to sweep with a broom.

- Level 3 : Combining throwing and sweeping skills.
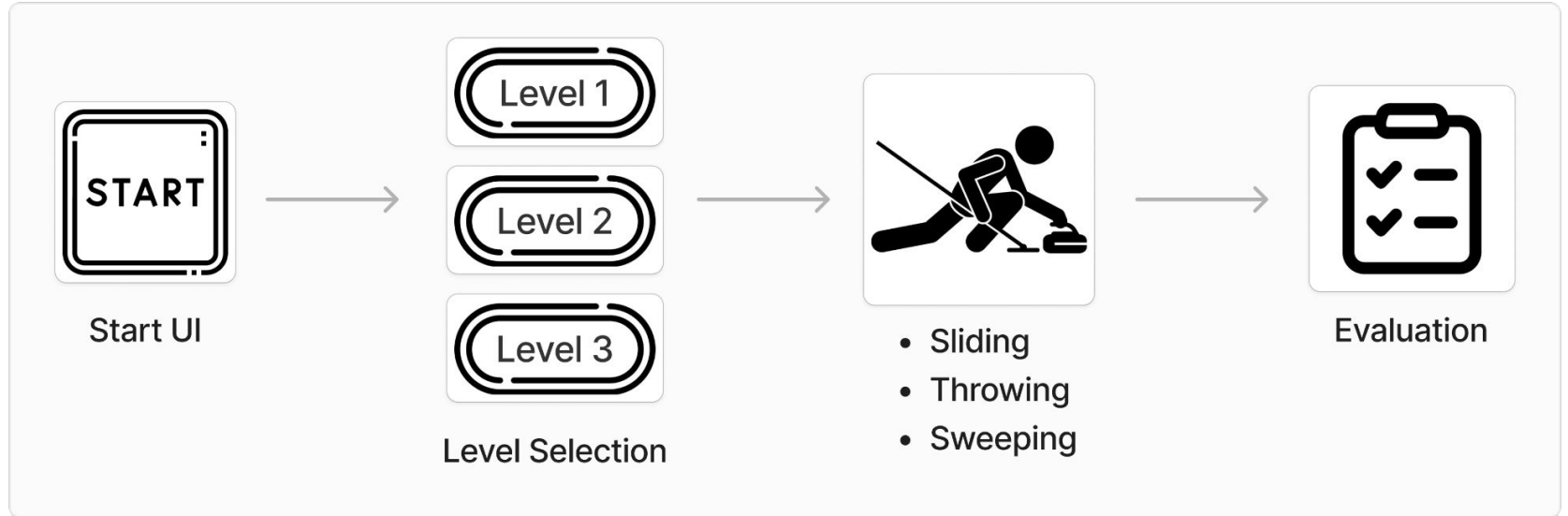
- The goal is to let users **experience** this sport.
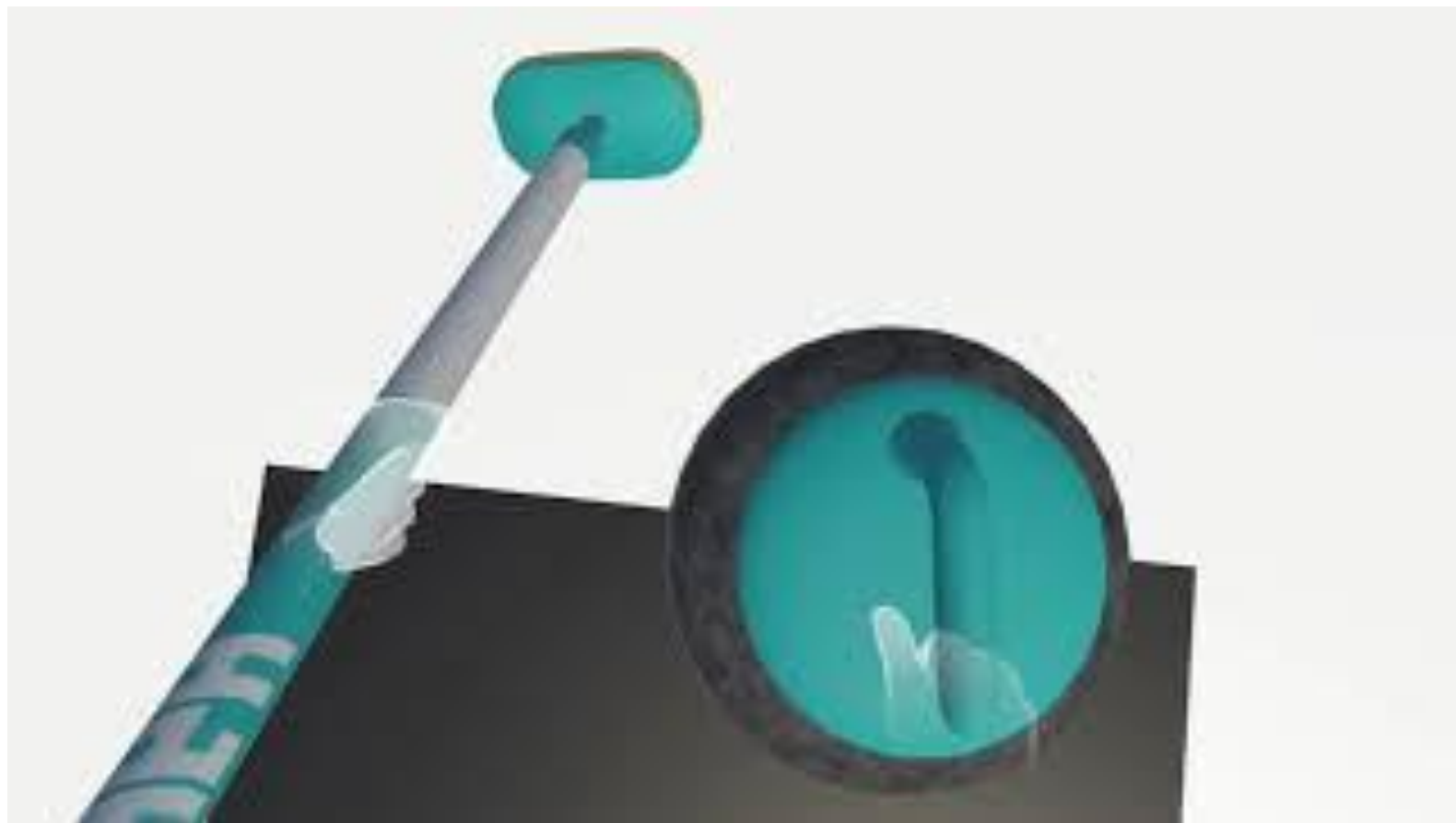
Application

Interaction

- Hand tracking - UI interaction

- Wrist trackers - hand tracking

- Ultimate trackers - tracking props

Game Flow

START — Start UI

Level 1
Level 2
Level 3

Level Selection

- Sliding
- Throwing
- Sweeping

Evaluation

Discussion and Future Work

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Discussion

- How to reduce the uneasiness of sliding?

- Equipment

- Relate works (literature)

Future Work

- Expand the system to include rules explanation and tactical training.
- User study.