

# Peeko's Resort

Team Hermit Crab

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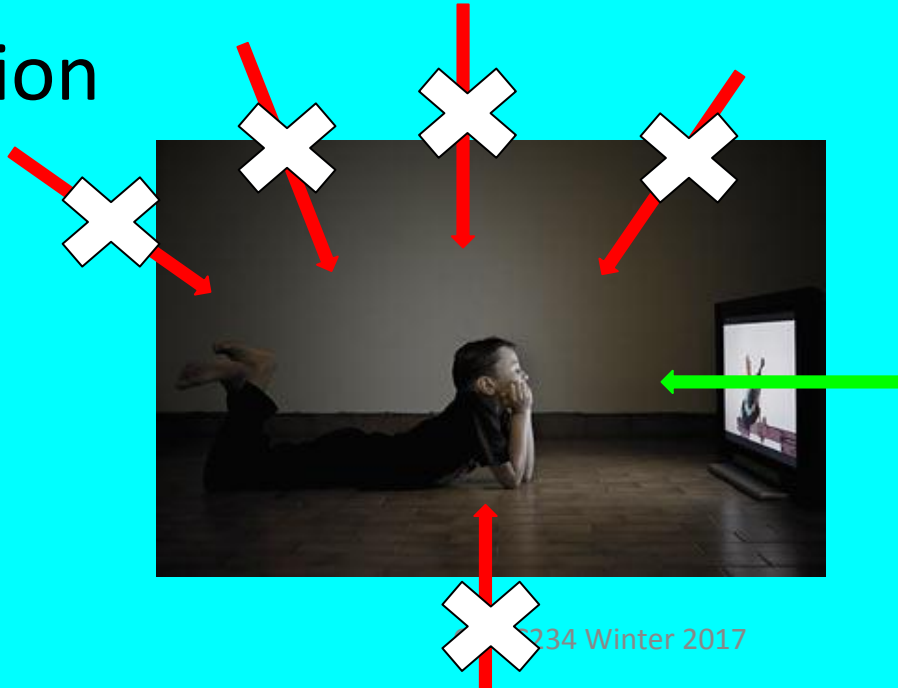
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# Our project

- Two games (Block Stack, Keep up) that incorporate Kinect motion sensor technology with virtual reality to create immersive and naturally intuitive experiences

# Refusing to compromise on immersion

- VR lacks intuitive input
- Kinect lacks visual/audial immersion



# Immersive, motion-dependent VR games

- List of VR games that require motion input in a fully immersive setting
  - Interact with 360 surrounding, different depths, etc
- The user feel completely inside the game and will be able to interact with surroundings in all directions
- Experiences only possible with VR + Kinect

# Our Strategy/Attempt

- Kinect for full-body tracking, intuitive input
- Gear VR for 3D environment
- Combine them to create a 3D environment with which you intuitively interact
- Intuitive reflex based gameplay - basic and natural gestures

# The Brass Tacks - Kinect

- Keep Up: mapping specific body parts with the Kinect and porting that info to the headset
- We chose to map certain joints to primitive objects displayed in the headset

# The Brass Tacks - VR

- Block stack: recognizing certain key gestures that induces the least lag. Jump detection worked pretty well!

# Improving Immersion (1)

- Simple graphics can give points of reference (shadows, detail)
- Positional sound with logarithmic fall off
- Clouds give illusion of height



# Improving Immersion (2)

- The closer we got to full body representation, the easier it was to find faults
- Simpler representation is more fun, gets over disbelief barrier.

# Things we'd like to fix/address

- Occasional lag in Block Stack - Kinect doesn't recognize player movement 100%
- Ball physics are a little strange and don't completely mirror the behavior of a real ball

# Future goals

- Networked and multiplayer games
  - Kinect is capable of recognizing six people but can only track two at a time
- Incorporate a game that involves more nuanced body tracking
  - Initial stretch goal was Dodgeball, which would require hand/finger tracking