Project Plan
House of Hazards

The Capstone Experience

Team Auto-Owners

Matt Drazin
Brian Wong
Kenneth Stewart
Frederick Lee
Kevin Nickolai

Department of Computer Science and Engineering
Michigan State University

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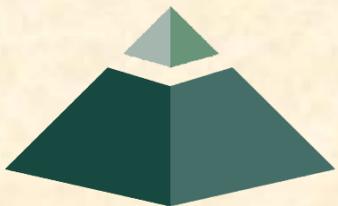
From Students…
…to Professionals

Functional Specifications

- Educate employees on home safety using virtual reality (VR)
- Competitive yet fun environment
- Prototype for future VR projects

Design Specifications

- VR-object interactivity

- Game environment for user

- User interface to review performance at round end

Screen Mockup: Difficulty UI

Screen Mockup: In-game UI


Score: 200

Time Remaining: 1:23

Hints: 3

Technical Specifications

- C# Scripting

- Auto-CAD 3D models

- Unity game engine

- Oculus Rift & peripherals

- Oculus Runtime

System Architecture

Senses Motions

Renders Game

Oculus Rift Headset

Transfer data

Oculus Sensors

Game Engine

Senses Motions/
Controller input

**Oculus Rift
Touch Controller**
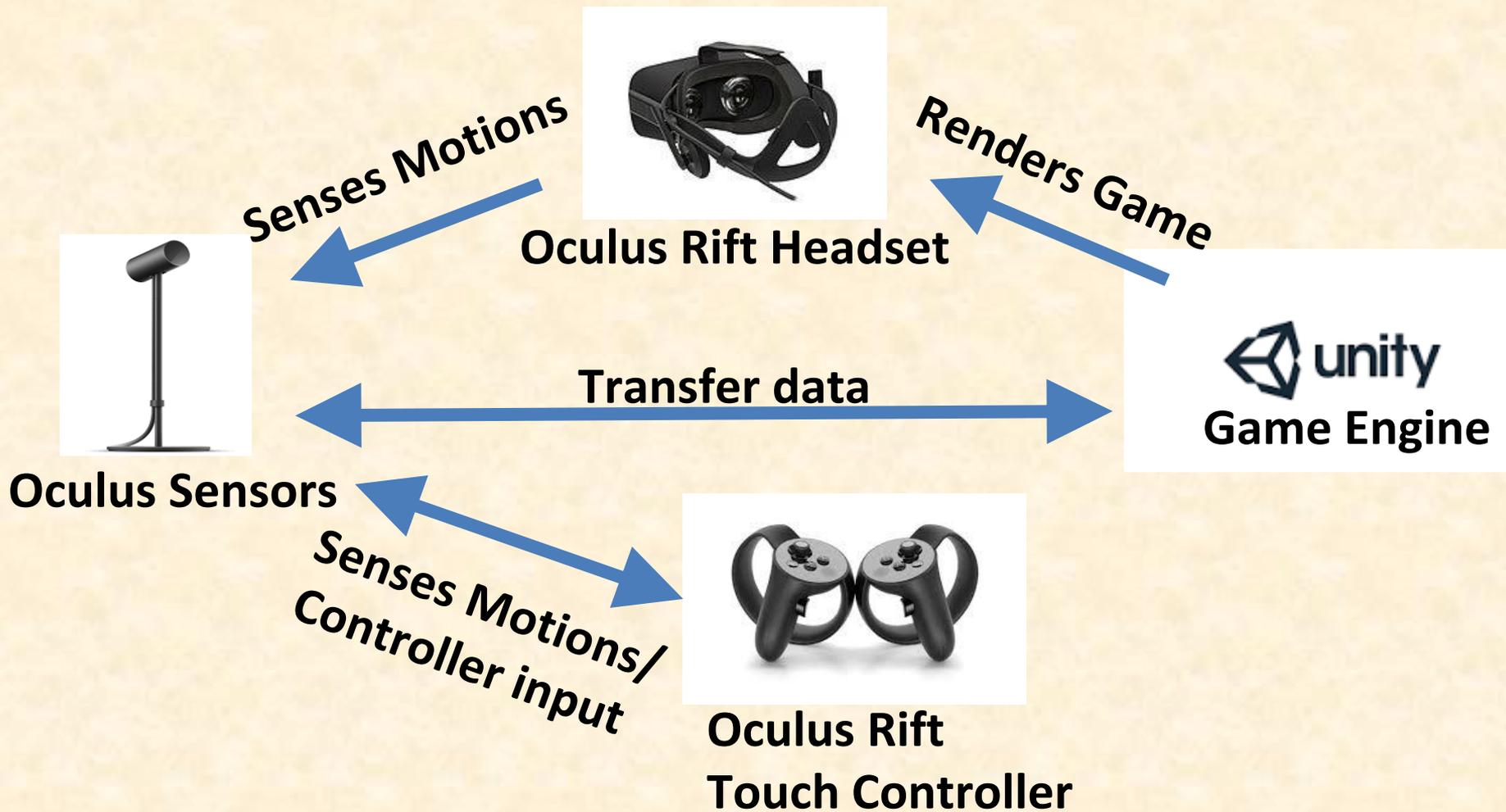
System Components

- Hardware Platforms
  - Oculus Rift headset
  - Oculus Rift sensor
  - Oculus Touch controllers

- Software Platforms / Technologies
  - Unity
  - Visual Studio 2017
  - Oculus Runtime

Testing

- Verify object placements
- Scoring unit tests
- Collision detection
- Hardware validation
- User experience tests

Risks

- Risk 1
  - Adapting prefab scripts with current Unity version
  - Code review scripts
- Risk 2
  - Motion sickness
  - Check Oculus documentation for solutions
- Risk 3
  - Movement with Oculus in physical space
  - Brainstorm safe way to manage Oculus cables
- Risk 4
  - No available Unity assets for some objects
  - Model assets

Questions?

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