Networked Exercise Game for Preventing ACL Injuries

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Project Overview

- Build an interactive, networked game to help prevent ACL injuries in female athletes.
- Analyze student athlete survey data.
- Develop the first networked game: Paddle.
- Validate the game movements for Paddle.
Objectives

- Previous Work
- Survey Data
- Paddle Game
- Movement Validation
- Future Goals
- Questions
Previous Work

Two previous exercise games: Happy Tiger and Simon.

Student survey data collected from high school athletes.
Student Survey Data

Student survey data was analyzed to determine, categorically, the types of games that students like to play.

This information can be used to produce a game that is appealing to the target audience of high school athletes.
This type of information could not be found in current literature and could be useful for future research.

Began work on a paper with Doctor Dale Fitch and Mr. Joe Griffin.

Analyzed survey data and looked for trends.
Student Survey Data

Male & Female Data

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<tr>
<th>Genre</th>
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First networked exercise game, Paddle.

Two player game that has players controlling paddles that bounce a ball back and forth in an arena. Players gain points by getting the ball past the other player’s paddle.

Game is controlled by leg lifts and has mobile versions for Android and iOS as well as a MS Kinect version.
Three subjects were instructed to move the paddle around the arena, moving it to the top of the arena at least once.

Two subjects had data within the desired range, one did not. This could be due to vague instruction.

Further validation would be helpful and should involve more subjects.
Game Demonstration
Future Goals

- Add a virtual agent to the Paddle game to allow for single-player use.
- Finish survey data paper and begin work on exercise game paper.
Questions?