**Motivations**

- Existing controllers use analogs stick but are not as fast and accurate as a mouse for targeting.
- Valve created a new touchpad controller for targeting, could it be faster and more accurate than an analog stick?
- Are there other designs that could also be faster and more accurate?

**Our Solution**

- We developed a trackball controller that we believe will perform better than the analog stick due to the increased precision of the trackball.

**Evaluation**

- We compared an Xbox 360 controller, a Steam Controller, and our trackball prototype controller in 2 different tests in a typical console setting.
- The first test is Fitts’ task, implemented in GameMaker: Studio, which we used to determine throughput of a controller. Higher throughput and lower error rate indicates higher accuracy.
- The second test is a real-world trial of the controller using the timed training course from the video game *Counter-Strike: Global Offensive*. Lower completion times and lesser ammo use indicates better control.

**Resources Used**

- http://www.yorku.ca/mack/FuturePlay1.html

Special thanks to Max Falkjar for helping to manufacture the prototype controller.

**Results Text**

To Be Posted Here

**Results Graphs**

To Be Posted Here