Headless Horseman

The Idea:

Headless Horseman is a game inspired by the Headless Horseman character of "The Legend of Sleepy Hollow". The headless horseman is often depicted carrying his head, a pumpkin, in his hand. We were struck by the idea of what it would be like to move your head around and get new perspectives on the world and felt that the Oculus Rift was a great way to explore this concept.

Gameplay:

You play as a 'headless horseman' a creature who holds his head in his right hand which is represented by the PS Move controller. You use your ability to raise and lower your head to look around the world and over obstacles. This helps you solve puzzles and navigate through the dungeon. The second power you have is the ability to aim and throw your head around the environment. This is useful as it allows you to see over tall walls and activate triggers that your body can't get to.

You must use both of your powers to tackle each of the puzzles in your path. You ultimate goal is to pass through the dungeon and escape.

Equipment Required:

- PC
- Oculus Rift Development Kit
- Playstation 3 (PS3)
- Navigation Controller for PS3
- Move Controller for PS3
- MoveMe, an app for PS3
- PS3 Eye

Running the Prototype:

1. Connect the Oculus Rift as specified in normal operation
    1.1. Make sure the Oculus is mirroring your main display by checking in the screen resolution settings of your PC

2. Make sure both the PS3 and the PC have internet access
3. Turn on both the PC and PS3
4. Connect the PS3 Eye to the PS3 and make sure it is facing a clear area of floor space
5. Start up the MoveMe application on the PS3
    5.1. In the upper left corner in the MoveMe application is an IP address and a port. These will needed to connect the PC to the PS3
    5.2. Turn on your Navigation and Move Controller
    5.3. The Move Controller will need calibrated at the beginning of each play session. This is accomplished by pointing the Move controller at the PS3 Eye and pressing the move button.
6. Make sure the Oculus Rift can extend into your cleared play area and that it is on
7. Start the executable
8. Take some time to adjust the lenses on the Oculus Rift so that the image on screen is as clear as possible
9. On your PC monitor you should see an IP address and a Port. Adjust these values to match the values seen in the MoveMe application and click connect

Controls:

Move Controller Controls:
Square Button: Calibrate Move controller location.
Position Tracking: The placement of the move controller in 3D space affects the view the player has in the world.
Trigger Button: Throw/ Retrieve head

Navigation Controller Controls:
X(Cross) Button: Next page in the introduction
Circle Button: Open door when close
L1 or L2 Button: Show predicted head landing location if thrown. Changes operation of Analog Stick from movement to adjust throw vector.
Analog Stick : Movement/ Adjust throw vector (depends on L1 or L2 Button activation)

Conclusions:

The reason we decided to make ‘Headless Horseman’ was our desire to push Oculus Rift users to experience something unlike any other game in existence. We wanted to find out if users would be able to play a game that involves, literally holding your head in your hand, and throwing your head around the level. Those two functions rapidly alter the

perspective and position of the in-game camera, which were we concerned would cause users far too much discomfort to ever be enjoyable.

Our concerns, as it turns out, were valid. We found that some users were unable to play our game, especially the first time they played our game and those that were unfamiliar with the Oculus. We also had to alter our ‘throwing’ mechanic so that the head would not bounce. Bouncing the camera off of objects after each throw made the game unplayable to pretty much everyone including the development team. Once the throwing mechanic had been toned down we found more players who were able to enjoy our game and the ability to toss the in-game camera across the level. This is what we were hoping for. And it made it clear that some Oculus users can tolerate a great deal before becoming uncomfortable. Unfortunately, that’s not a statement that is true for all users. In truth, it’s a sliding scale, some users can tolerate a great deal and a game like ‘Headless Horseman’ is perfect for them. For others, simple demos are too much.