

The Rift of Wall Street

The Idea:

This was the clean up prototype; the final project idea we came up and the one that ended up being a combination of every [major] idea we had left on the drawing board. We wanted to try working with positional tracking on the Oculus Rift (not of the person, but the device itself) since Oculus VR talks about wanting to include that technology into the final version. We also wanted to work with using a second screen that holds different information than the the Oculus display; our hope was that this would create tension in the user as they would have to juggle time between both screens. And finally we wanted to use the Oculus as an in game object; something the user would have to manipulate with their hands while looking at the second screen. All of these ideas combined to become 'The Rift of Wall Street'.

Gameplay:

You are in a square surrounded by building, this is a our 'Wall Street'. When the game begins coins and gavels will start flying into the square from the right and left. You must collect as many coins as you can while avoiding the gavels. If you hit a gavel you will lose all the coins in your wallet. Your wallet contains all the coins on your person, it is represented by 15 circles on the Oculus's screen. You can only have 15 coins at a time.

Once you have 15 coins or as many as you feel comfortable carrying you need to deposit them at the RiftDAQ building, the large black building in the front of the square. To deposit the coins you need to step forward to the edge of the square, take off the Oculus, hold it over top the second monitor, and shake. You should hear a coin dropping sound. Coins deposited into the bank will not be lost when you hit a gavel.

The second screen will update every time you deposit coins into the bank. This screen keeps track of the different values of each coin. The 4 different coins will become less value the more you collect them (in relation to the other coins). This means that if you focus on collecting a specific color, it will diminish in value, while the other coins increase in value. It's important to remember that you only have 3 minutes until the market closes again and the game ends, so use your time wisely.

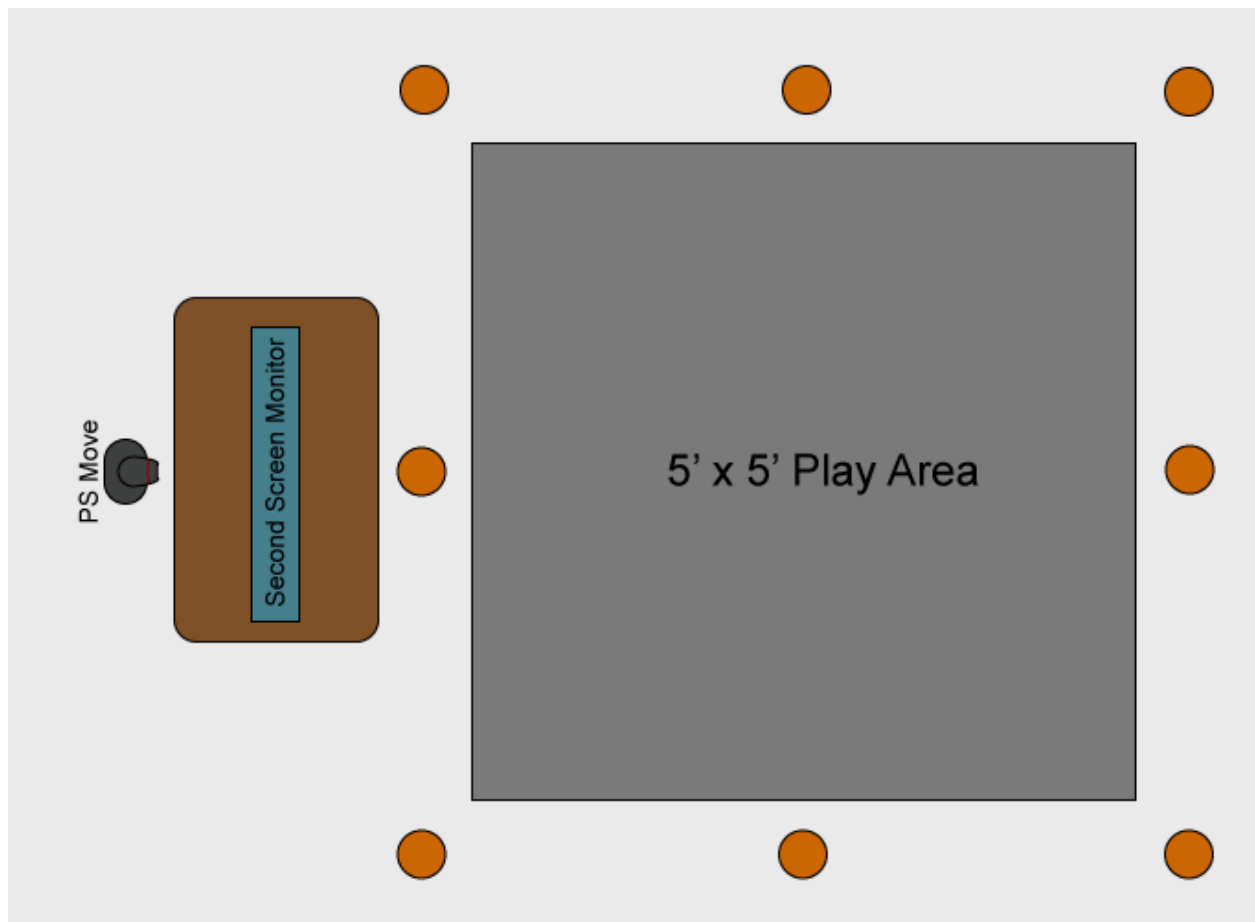
Equipment Required:

- PC
- Oculus Rift Development Kit
- PS Eye
- 2 PS Moves
- PS3

Running the Prototype:

1. Connect the Oculus Rift as specified in normal operation
 - 1.1. This game requires two screens, one being the Oculus and one being your monitor
 - 1.2. Make sure both screens are set to 1280 by 800 resolution
 - 1.3. Make sure your monitor is your main display
 - 1.4. Make sure your monitor is to the right of the Oculus in the display settings
2. Setting up the PS Eye and Play area
 - 2.1. Place the PS Eye facing a clear section of the room
 - 2.2. Raise the PS Eye to chest level and tilt it slightly towards the ground
 - 2.3. The front of your play area will be about 60 inches away from the PS eye
 - 2.4. The back of the play area will be an additional 50 inches behind the front
 - 2.5. The sides of the play area will be about 40 inches to the left and the right of the center of the front
 - 2.6. It is a good idea to mark off this area so that you can make sure the area remains clear
3. Connect the PS3 Eye to the PS3
4. Attach one PS Move to the front of the Oculus.
5. Turn on the PS Move
6. Attach the second PS Move to the back of the Oculus.
7. Turn on the second PS Move
8. Launch the MoveMe application on the PS3
9. Calibrate the front then the back move
10. Launch the DoubleMonitorVersion.bat (The Triple Monitor version can be used if a third display is attached to the left of the oculus in the display settings at 1280x 800. It simply shows the view of the player)
11. Change the IP address and port to match that of the MoveMe Application
12. Press the connect button

13. Put on the Ocuylus while standing in the play area
14. Take some time to adjust the lenses on the Oculus Rift so that the image on screen is as clear as possible
15. Ask a friend to press the up and down arrow keys to adjust the green cube until it is about eye level
16. Press right arrow to confirm this height
17. Finally press space to start the game



The layout of the play area. The PS Move should be placed at just below eye level on a stand. The second screen monitor should be on a short coffee table.

Controls:

Keyboard Controls:

Space Bar: Starts and stops the game

Up Arrow: Raise calibration cube

Down Arrow: Lower calibration cube

Right Arrow: Confirm the Calibration height

Oculus Rift Controls:

Move around the play area to collect coins and dodge gavels.

Once you have collected some coins move so that your head is just above the black topped building. Take off the Oculus and shake your coins into the bank. Notice how the second screen updates the value of the coins.

Conclusions:

The first portion of this prototype went over very well. Adding position tracking to the Oculus, even just to the device itself works well and adds a distinct degree of immersion. More importantly users were able to move around the world comfortably. There was an initial feeling of imbalance, but once they realized they were able to walk around normally they felt at home in the Oculus world.

Our second idea was to have a secondary screen that would hold information that wasn't available on the Oculus screen. This worked in so far as it had the effect of encouraging users to occasionally remove the Oculus in order to read the extra info. Some of our users, about two thirds, were playing as we had planned and were carefully juggling their time between the Oculus screen and the secondary screen. The other third ignored the extra info altogether and just collected coins. We believe this is for two reasons. One the information we presented on the second screen was not paramount to the success of the user. And secondly, some users felt that taking off the device broke their immersion and they preferred to stay in the Oculus world. For the latter group, we think that the L.B.E. (location based entertainment) industry might have the fix. If you had a room themed to look almost exactly like the virtual world (or maybe on it a past version of the other) it would hold the immersion and possibly add the experience.

The final idea we were working with was the idea of the Oculus as an object. This was a mixed bag. Many users, especially the ones who 'protested' the second screen mechanic were content to hold their head of the 'RiftDAQ' building and shake their around until the coins were deposited. Our biggest issue with this mechanic was that Oculus

needed to have two PS Moves taped to it in order to gain positional tracking. This made the device unwieldy and uncomfortable to remove and put on quickly.

We could see each of these mechanics being successfully implemented into a game. Though we do think that special care needs to be taken so that each mechanic is meaningful and there is actual motivation for the user to utilize the mechanic.