An Immersive Virtual World in Unity

# Claustrophobia Simulator

## Introduction

Virtual Reality has been a focused area of research for many years. With the release of some advanced tech VR headsets later this year such as the Oculus Rift [1] and Vive [2] the demand for further development in VR technology is dramatically increasing. Currently VR has been used to create some innovative practical VR applications such as Virtual theatres for Doctors to practice critical surgeries or simulated environment to diagnose and treat phobias and illnesses [3].

This assignment extends the learning materials and academic competencies taught on the SE3VR11 Virtual Reality course at the University of Reading [4]. It investigates the practicalities of using virtual reality for practical applications of a virtual reality application to support

## Background/Motivation

In order to further absorb and reinforce the course content delivered on the SE3VR11 module two assignments are to be completed. The first was an Individual assignment to design and implement a virtual world in Unity. This is initially to familiarise oneself with the Unity editor and tools and explore the mechanisms that allow a user to interact within a realistic virtual world. The first assignment was satisfied with a virtual two storey house incorporating windows, interactive doors and light switches. Textures, materials and models are also used to increase the believability and immersion of the world [4]. This assignment investigates the practicalities of an immersive virtual reality application through completion of a group project. Each of the member is expected to contribute to the overall virtual world and then document there contribution accordingly.

## Design/Requirements Analysis

At the first team meeting the team discussed the possible applications that could be developed and there purposes. After researching current VR applications and simulations the team came to the conclusion that it would design and create a claustrophobia simulator to allow a user to experience, manage and train the anxieties one might experience by introducing features and triggers into the world that trigger symptoms of claustrophobia.

Aspects such as time constraints and team member numbers also determined the team’s choice.

Essentially 5 Areas that will encompass features such as an elevtor, revolving door, basement, toilet cubicles, small cupboards.

Consider the intensity of challenge in each zone by room dimensions, lighting, narrower hallways, windows

Main two concepts hoped to achieve is restr

## Testing

If the elevator buttons are pressed continuously throughout the animation being played then the interior and exterior doors and the elevator start to operate out of synch. This can be fixed with some error handling that will prevent the user clicking more than once until animation has finished playing or an amount of time has passed.

## Results

What aspects of the project where met.

## Discussion

Other deadline priorities, time management, team communication. Team congregation

## Further Work

## References

[1] ref to VR module

[2] ref to previous individual coursework