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| University of sussex |
| Game Design Document |
| A Space Simulator Game for the Oculus Rift Virtual Reality Device |
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| **Author - Alex Flight (77525)** |
| **Supervisor - Marco Gilardi**  **20/09/2013** |

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| Game Design Document detailing the preliminary design of A Space Simulator Game for the Oculus Rift Virtual Reality Device. |

Contents

# Section One – Game Overview

## Working Title

A Space Simulator Game for the Oculus Rift Virtual Reality Device

## Genre

Space-Simulator / Action / Flight-Simulator / Virtual Reality

## Intended Audience

All ages, focus on past fans of similar games. Gaming experience expected.

## Setting/Plot

The player takes on the role of a pilot of a powerful armed spacecraft that is tasked with destroying various targets and enemies within a space environment. The player themselves will be present in a cockpit which fully surrounds them thanks to the Oculus Rift, allowing them to fully appreciate their surroundings from any angle as if they were really inside a spacecraft.

## Gameplay

The player directly controls the spacecraft using a familiar joystick and throttle input that control the craft as any normal aircraft. In addition the craft may translate along the x, y and z axis much like any spacecraft equipped with RCS thrusters, thus allowing full six degrees of freedom to navigate through their environment.

A typical level will consist of a variety of asteroids and obstacles that the player must fly through in order to seek out and destroy enemy targets, all the while allowing independent head movement through the tracking abilities of the Oculus Rift to provide a sense of immersion for the player as if they are really inside a cockpit.

Emphasis should be placed on the ‘feel’ of the player being inside the spacecraft by providing as convincing an environment as possible, taking full advantage of what the Oculus Rift has to offer.

## Environment

A space setting that includes background elements of stars and possibly a nearby planet as part of the skybox. The primary star of the current solar system should provide the main light source for the environment. Additionally the environment may include:

* Nebulae clouds that the player is currently inside
* Small particles that move past the windows of the cockpit to give the player a sense of speed and movement
* Asteroid and rocks that provide hazards and navigable environments that the player must contend with to reach their targets
* A basic, yet fully realised cockpit modelled for the player to look around to include windows, support structures and beams as well as instrument panels, control device, information panels and a Heads-Up-Display of some kind (HUD)
* 3D model of the player ship itself at least in areas where visible from the cockpit