

Title: Virtual Reality Game Environment for Oculus Rift, Android, and iOS Platform Using Unity 5

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EXECUTIVE SUMMARY

One of the most essential parts of a game application other than the gameplay is its environment. A game environment is where the action takes place and where the user plays the game. Many might have wondered how this environment was created before becoming a space for gaming. How much more if the concept of the entire thing is Virtual Reality, a computer-generated game environment which allows the user or player navigate inside as if he is a part of it. Hence, this paper documents the development of a Virtual Reality game environment with paragliding experience feature using Unity 5 as the game engine, Perlin Noise and Voronoi Diagram for creating and remodeling of the environment's terrain. In addition, the output of the study is compatible in three different platforms: Android, iOS, and desktop for Oculus Rift. As a collaborative project between UM-CCE and its industry partner, Maata Games, the researchers have followed the latter's specifications in the course of the development of the VR game environment. Aside from that, the researchers have also provided an additional coin collection gameplay

Keywords: Virtual Reality, Game Development, Android, iOS, Oculus Rift, Google Cardboard, VR Assets, Perlin Noise, Voronoi Diagram