Goals and Requirements

IPFW Senior Design team 5

Fall 2016

T. Avery Eich

Asad Ashur

Daniel Johnson (Lead)

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Name** |
| 09/01/2016 | 1.0 | First draft | Daniel Johnson |
| 11/9/2016 | 2.0 | Midterm | Daniel Johnson |

**The overarching goal of this project is to obtain a comprehensive view of VR technology and tools, and explore development techniques.**

* Survey available VR applications/experiences, collecting relevant data.
* Gain knowledge and experience using Oculus and Android SDK packages.
* Organize data in a relational database and design access tools to perform queries.
* Apply learned concepts of Human Computer Interaction to a simple data-entry application.
* Adhere to industry standards for relational database design.
* Deploy and test applications on Gear VR platform, using Oculus Utilities and Unity Engine.
* Design and implement an educational VR experience in collaboration with IPFW’s VCD department project.

**Requirements to show the realization these goals are as follows:**

* Create survey artifacts and collect data in central repository for analysis (database).
* Exhibit proficiency debugging and deploying Unity Applications.
* Desktop application for research data entry should meet the following requirements:
  + Windows platform (Dot NET 4.5)
  + Storage of data in a local database file.
  + Intuitive data entry and display on a per-application basis.
  + Flexible search feature.
* Deploy a scene to the Samsung Gear VR platform with the following key properties:
  + Controls and mechanics that ensure user comfort (no motion sickness).
  + Creative use of available mechanics that utilize strengths and consider weaknesses of the target VR platform.
  + Maintain smooth head-tracking throughout entire experience.
  + Eliminate technical glitches that could break immersion.