sdmay18-02: Augmented Reality Mechanical Design Solution
Week 8 Report
November 5 - November 12

Team Members

Bhimesh S. Chauhan — *Graphics Developer*
Vaibhav Malhotra — *Backend Engineer*
Cole Chapin — *UX Designer*
Ryan Luck — *UI Developer*
Cal Vert Wong — *Software Developer*

Summary of Progress this Report

1. Implementation of design on OpenGL
2. Conversion of cad model into stl formatted file
3. Understanding of binary and ascii formatting of the file for memory management.
4. Coordinate System implementation of OpenGL

Pending Issues

1. Interface between OpenGL and OpenVR.
2. Understanding of conversion from binary to ascii format for each coordinate.
3. Data Structure to create the models (quad-tree models)

Plans for Upcoming Reporting Period

1. Research on Quad-Trees
2. Research on ways to communicate between two API's (OpenVR and OpenGL) or find a C++ OpenVR wrapper.
3. Research on relative camera position and changes in relation to object under consideration.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Bhimesh S. Chauhan	Wrote code to render object on the headset. Coordinate system for the two varying surface using origin coordinate correction and offset detection.	8	71
Vaibhav Malhotra	Researched on OpenVR setup and HTC Vive setup and implementation of various models to optimize memory management.	7	56
Cole Chapin	Setup IDE, Setup GitLab account, research on UX of various application.	1	48
Ryan Luck	STL parser and binary correction on data parsing.	7	55

Cal Vert Wong	STL Parsing and file error check and UI for error management.	7	56