"CS 386 HoloLens Project" by Stephen White, Jack Garrard, Colton Nunley, Daniel Williamson, and James Todd

Github Link: https://github.com/Swhite9478/CS386-HoloLens-Project

CS 386 Software Engineering, Spring 2017 Instructor: Marco Gerosa

Deliverable 2.1: Vision

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1. Introduction

The HoloLens is a new and exciting piece of technology that holds endless possibilities of creativity. For example, imagine a 3D "paint" where you can draw your own hologram, save them, and place them in your own augmented world. Or a holographic game where you are in the middle of the game interacting with it at a level you never thought possible. At a more professional level, how about having the ability of design what you are working on in a 3D model that you can interact with in an augmented world. In conclusion with the HoloLens, there are infinite possibilities to explore, and we are eager to explore them.

2. Positioning

2.1 Problem Statement

[Provide a statement summarizing the problem being solved by this project. The following format may be used:]

The problem of	Developing applications for Augmented Reality
affects	Companies and or people that invest their time developing said software

the impact of which is	Furthering developer knowledge on how these applications should be developed and understanding the possibilities of Augmented reality.
a successful solution would be	To demonstrate the capabilities of the Microsoft HoloLens through the development of basic software, to communicate with the users of said software and obtain their input on what was written, along with restructuring our software to fit their needs.

2.2 Product Position Statement

[Provide an overall statement summarizing, at the highest level, the unique position the product intends to fill in the marketplace. The following format may be used:]

For	Everyday people who use Augmented Reality
Who	Stakeholders who are in need of a way to integrate their life through Augmented Reality
The (product name)	Is an application/manifestation of software that utilizes augmented reality software
That	A demonstration of the capabilities of the holoLens
Unlike	Magic Leap
Our product	Not simply an application. It's a demonstration of the capabilities of augmented reality. It allows the user to make use of the holoLens

[A product position statement communicates the intent of the application and the importance of the project to all concerned personnel.]

3. Stakeholder Descriptions

3.1 Stakeholder Summary

Name	Description	Responsibilities
Microsoft	The massive computer company who developed hololens.	Their main responsibilities is to provide a method of distribution for the hololens. Along with being the initial developer of the hololens
End Users	The end users of the final program.	The end users are essential as they are the target audience and have to buy the product.
Developers	The developers of the program (us)	They need to design and construct the program for the hololens
Other Developers	Other developers for the hololens	They want to see a demonstrations of the abilities that the hololens is capable of performing.

3.2 User Environment

The working environment for the target user mainly consists of being indoors while using the hololens. In the future as augmented reality becomes more of a commonplace technology the user environment will become a users regular surroundings and will seamlessly blend in. With these developments many users will be able to interact using the same holograms to create a more immersive experience.

4. Product Overview

4.1 Needs and Features

[Avoid design. Keep feature descriptions at a general level. Focus on capabilities needed and why (not how) they should be implemented. Capture the stakeholder priority and planned release for each feature.]

Need	Priority	Features	Planned Release
To implement a suite of applications for the hololens.	High	To demonstrate the capabilities of the device.	End of Semester.
Spatial Awareness	Medium	Allows the hololens to know what is around it.	End of Semester.
Voice Control	Medium	Allows the user to use voice commands to verbally speak to the hololens.	End of Semester.
Gesture Recognition	Medium	Allows the user to use their hands to command the hololens.	End of Semester.
Holograms	Medium	Being able to see 3D images in augmented reality.	End of Semester.

5. Other Product Requirements

[At a high level, list applicable standards, hardware, or platform requirements; performance requirements; and environmental requirements.
Define the quality ranges for performance, robustness, fault tolerance, usability, and similar characteristics that are not captured in the Feature Set.
Note any design constraints, external constraints, assumptions or other dependencies that, if changed, will alter the **Vision** document. For example, an assumption may state that a specific operating system will be available for the hardware designated for the software product. If the operating system is not available, the **Vision** document will need to change.
Define any specific documentation requirements, including user manuals, online help, installation, labeling, and packaging requirements.
Define the priority of these other product requirements. Include, if useful, attributes such as stability, benefit, effort, and risk.]

Requirement	Priority	Planned Release
Hardware - Microsoft Hololens	High	February
Platform - Unity	High	February
Environment - Microsoft Visual Studios	High	February
Performance - Must be able to handle the needs described previously.	Medium	End of Semester.
Robustness - Must be able to handle the tasks described previously.	Medium	End of Semester.
Usability - Must be usable by any.	Medium	End of Semester.