

ECE 492 Weekly Report MAY 1607 Week 3 (1/23/2015-1/29/2016)

Advisor: Jaeyoun Kim

Client: Honeywell, FM&T

Members (roles): Gregory Kuhn (Weekly Report), Noah Bergman (Team Leader) Michael Kelly (Key Concept Holder), Garret Hembry (Webmaster)

Project Title: Microscope Embedded Display for Assembly Work Instructions

Weekly Summary: This week was a compilation of two meetings. One in the TLA with our group and one with Bob Dearst, our Honeywell associate. Each one will be discussed in greater detail below.

1/29/16/Group Meeting in TLA

Duration: 120 min **Members Present:** All

Purpose and Goals:

There were two main objectives of this meeting. The first was to design a mechanism to hold the two lenses in place, the second was to determine which lenses to implement and what distances the two should be placed at in order for our optical system to function correctly.

Achievements: 1) We were successful in this regard, and managed to create a mechanism in the TLA that would hold the two lenses, while allowing them to be adjusted if needed.

2) In this effort we were not quite as successful. We used a software known as WinLens3d which is a software that models how lenses affect light. We used this software for several hours with limited success. Fortunately, our academic advisor Jayeoun Kim is familiar with the system and has agreed to explain to us how to properly use the software.

1/28/16/Group with Bob Dearst

Duration: 30 min **Members Present:** All

Purpose and Goals: This was a brief and simple meeting. Our objective was to inform Bob of how we changed our design concept by implementing the optical lenses inside of the eyepiece of the microscope. We also informed him of our plans for this semester, which were to have successful prototype and have a new projector circuit built.

Achievements: Bob Dearst approved of all of our purchased and has submitted the requisite paperwork needed to order the materials. Furthermore he approved of our design concept.

Pending issues

- 1) Use the WinLens 3d software to model how the optical system will perform.
- 2) Begin to build the circuit with multi-sim software.
- 3) Acquire the desired lenses to be used in the eyepiece lenses.

Plans for next week

For next week, our main objective is to model our optical lens system successfully using the WinLens 3d software. We would also like to begin to design the projector circuit.

Individual Contributions (this week)

Gregory Kuhn- Researched the properties of lenses to Display the image in the microscope, and built a case to hold the lenses.

Noah Bergman – Researched the properties of lenses to Display the image in the microscope, and built a case to hold the lenses.

Garret Hembry- Researched the properties of lenses to Display the image in the microscope, and built a case to hold the lenses.

Matthew Kelly- Researched the properties of lenses to Display the image in the microscope, and built a case to hold the lenses.

Total contributions for the project

Noah Bergman-36hrs

Gregory Kuhn–36hrs

Matthew Kelly–36hrs

Garret Hembry-36hrs