EE/CprE/SE 491 WEEKLY REPORT 01
Sept 20th, 2024 – Sept 26th 2024
Group number: 25-34
Project title: Laser Scan Readings for Propeller Measurement
Client &/Advisor: Linden Propeller (Gary Linden) / Dr. Mani Mina

Team Members/Role

Name:	**Role:**
Alan Whitehead	Testing
Elias Colsch	Client interaction
Spencer Rudin	Schematic Design
Denny Dang	Individual Component Design

Past Week Accomplishments

Name	**Past Contributions**
Alan Whitehead	Helped set up meetings and looked at specific IR sensors to meet project specifications.
Elias Colsch	Set up meetings with Gary Linden and Mani Mina. Attended meetings and took notes. Started preliminary research on IR sensors
Spencer Rudin	Worked on laser solution with teammates, overall brainstorming, and ideas involving using IR sensor and what that would mean as a measuring tool.
Denny Dang	Provided concept ideas for measurement device replacements. Provided information on current IR sensor technology.

Weekly Summary:

This week we met with Mani Mina to discuss our plans. We decided to check with ETG, the design building, and the nondestructive testing lab to see if they had any IR/3D scanners available for us to get a grasp of what we need. We also started our proof of concept using a

simple IR scanner provided by ETG and an Arduino, also supplied by ETG. This will allow us to generate an idea and find any immediate flaws in our design. We also did some research into potential scanners and sensors. The options we found included the Creaform HandySCAN 3D, the ModelMaker H120 and MCAx S System, and the Magnescale BS78 Laserscale. All of these items were out of our price range, but they did provide some insight on what we can expect in terms of quality and price.

Name	Individual Contributions	Hours this week	HOURS Cumulative
Alan Whitehead	Wrote an email to the nondestructive evaluation about potential IR sensors and scheduling a tour. Went to ETG and helped check out an Arduino.	3	6
Elias Colsch	Discussed industrial sensors with ETG. Researched alternative 3D scanners and IR sensors. Started work on proof of concept.	4	7
Spencer Rudin	Worked on design concept sketches for 2 scanner setups.	3	5
Denny Dang	Received an IR sensor and Arduino from ETG to set up a proof of concept for the overall design.	3	5

Plans for the upcoming week

Name	Future Contributions
Alan Whitehead	Will host a senior design meetup to discuss future plans. Will help build proof of concept.
Elias Colsch	Will test proof of concept. WIll continue to research alternative scanners within our price range.
Spencer Rudin	Will help build proof of concept. Will look into other areas of Iowa State to find viable IR/3D scanners.
Denny Dang	Will help research alternative scanners and design concepts. Will also program proof of concept.