

# MEETING MINUTES

## Topic: Week 4 Task List

Monday, September 18, 2017

2:00pm – 4:00pm

Minutes recorded by Kalli Albright

Meeting called by Kaitlyn Barr

Attendees: Kalli Albright, Kaitlyn Barr, Dustin Branges, Daniel Johnson

Please bring: Completed assigned tasks

### Executive Summary:

This reports serve the purpose of recording the minutes of the first official team meeting for the DASL UAV Antenna. The team recapped topics discussed with their client Dr. Shafer including, an in depth review of the project, customer needs, engineering requirements, and budget. The team then formed customer needs and engineering requirements based on notes taken in the client meeting. The team then divided tasks to complete in the near future including black box model, functional model, house of quality, and research. Attached in Appendix A are the Gantt charts planning the semester, and an in depth view of assignments needed from the preliminary report.

Table 1. Record of meeting.

<b>2:00pm - 2:10pm</b>	<b>Recap of Last Meeting/Plans for Today</b> <ul style="list-style-type: none"><li>• Met with Dr. Shafer</li><li>• Assigned tasks and composed semester Gantt Chart<ul style="list-style-type: none"><li>o Kalli - Background - Done</li><li>o Daniel - Customer Requirements - Done</li><li>o Dustin - Engineering Requirements - In Progress (waiting for response from Kellan Rothfus)</li><li>o Kaitlyn - HoQ - In Progress</li></ul></li><li>• Review to do list in Oman's email (sent on 9/18)</li></ul>	EGR 108
<b>2:10pm - 2:30pm</b>	<b>Client Interaction Summary</b> <ul style="list-style-type: none"><li>• Review project objectives</li><li>• Review customer needs<ul style="list-style-type: none"><li>o Dr. Shafer does not believe in customer needs, only engineering requirements. It will be up to the team to review all existing project related documents and from customer needs for the project.</li></ul></li><li>• Review engineering requirements<ul style="list-style-type: none"><li>o All engineering requirements were transcribed by Kaitlyn during the meeting and can be referenced</li></ul></li></ul>	EGR 108

	<p>in her notes. Additional requirements pertaining specifications of mass will be obtained from Kellan via Daniel.</p> <ul style="list-style-type: none"> <li>● Review budget <ul style="list-style-type: none"> <li>○ Budget should be between approximately \$300-\$500, but if appropriate reasoning arises, the budget can be extended to \$1000.</li> </ul> </li> <li>● Other Notes <ul style="list-style-type: none"> <li>○ Dr. Shafer recommends starting Arduino usage now for a better understanding.</li> <li>○ Tour of DASL lab and equipment available for our usage. (Saw housing our device will be mounted to)</li> <li>○ Dr. Shafer will be gone for 2 weeks. Kellan Rothfus will be our primary contact for the customer during that time</li> </ul> </li> </ul>	
<p><b>2:30pm - 3:30pm</b></p>	<p><b>Customer and Engineering Requirements</b></p> <ul style="list-style-type: none"> <li>● The team decided the customer needs to be as follows <ol style="list-style-type: none"> <li>1. Simple</li> <li>2. Maintainable</li> <li>3. Modular Design</li> <li>4. Multiple Modes of Movement</li> <li>5. Relay Information to User</li> </ol> </li> <li>● Engineering requirements for the project include (Note: many exact requirements will be provided by Kellan in our meeting with him on Thursday) <ol style="list-style-type: none"> <li>1. Size - fits on pre-existing modular housing (exact drawing dimensions to be provided by Kellan)</li> <li>2. Mass - must be compatible with UAV payload capabilities (exact mass allowable will be provided by Kellan)</li> <li>3. Rotational Capability - the antenna shall pitch from 0-60 degrees at a minimum</li> <li>4. Multiple Angle Modes - the system shall be able to rotate in 2 modes: 1) to a specific angle 2) operate on a continuous "sweeping" mode</li> <li>5. Communication - the system must be able to communicate exact angle to the user via connection to a raspberry pi (BAUD rate and connection type to be provided by Kellan)</li> <li>6. Power Consumption - the device shall operate on 5V or less</li> <li>7. Budget - ideally \$500 but may cost up to \$1000</li> <li>8. Linkage - the device must contain less than 4 linkages</li> <li>9. Part Installation - Replacement of damaged components shall take no longer than 1 hour</li> </ol> </li> </ul>	<p>EGR 108</p>
<p><b>3:30pm-3:50pm</b></p>	<p><b>Assign Action Items</b></p> <ul style="list-style-type: none"> <li>● Must be completed by class on Tuesday, 26th</li> <li>● More details provided in the Gantt Charts in Figures A1 and A2</li> <li>● Kalli</li> </ul>	<p>EGR 108</p>

	<ul style="list-style-type: none"> <li>○ Create functional model</li> <li>○ Research the antenna model provided by Dr. Shafer</li> <li>● Kaitlyn <ul style="list-style-type: none"> <li>○ House of Quality</li> <li>○ Schedule TA meeting for 9/25 at 3pm</li> </ul> </li> <li>● Daniel <ul style="list-style-type: none"> <li>○ Begin subsystem levels portion of report</li> <li>○ Research existing designs for subsystems</li> </ul> </li> <li>● Dustin <ul style="list-style-type: none"> <li>○ Meet with Dr. Oman to confirm Engineering Requirements fulfill meeting minutes expectations</li> <li>○ Complete black box model</li> <li>○ Research basic arduino programming</li> </ul> </li> </ul>	
<b>3:50pm-4:05pm</b>	<p><b>Plan Next Meeting</b></p> <ul style="list-style-type: none"> <li>● Scheduled meeting with Kellan for 9:30am Thursday, 21st</li> <li>● Need to discuss <ul style="list-style-type: none"> <li>○ Landing procedure/equipment</li> <li>○ Size and weight requirements</li> <li>○ Communication specifications</li> </ul> </li> <li>● As always, come prepared to the next meeting with all assigned tasks completed</li> </ul>	EGR 108

**Table 2. Tasks Assigned.**

<b>Task</b>	<b>Person Assigned</b>	<b>Due Date</b>	<b>Date Complete</b>
Begin subsystem levels portion of report	Daniel Johnson	9/25/17	
Research existing designs for subsystems	Daniel Johnson	9/26/17	
Create functional model	Kalli Albright	9/25/17	
Research the antenna model provided by Dr. Shafer	Kalli Albright	9/25/17	
Schedule TA meeting	Kaitlyn Barr	9/22/17	9/20/17
Finish Semester Gantt Chart	Kaitlyn Barr	9/22/17	9/21/17
Start House of Quality	Kaitlyn Barr	9/25/17	9/25/17
Meet with Dr. Oman to confirm Engineering Requirements fulfill meeting minutes expectations	Dustin Branges	9/22/17	

Complete black box model	Dustin Branges	9/25/17	
Research basic arduino programming	Dustin Branges	9/26/17	

**Next formal meeting: 09/21/17 Engineering Building Room 249 at 9:30am**

### Appendix A: Gantt Charts

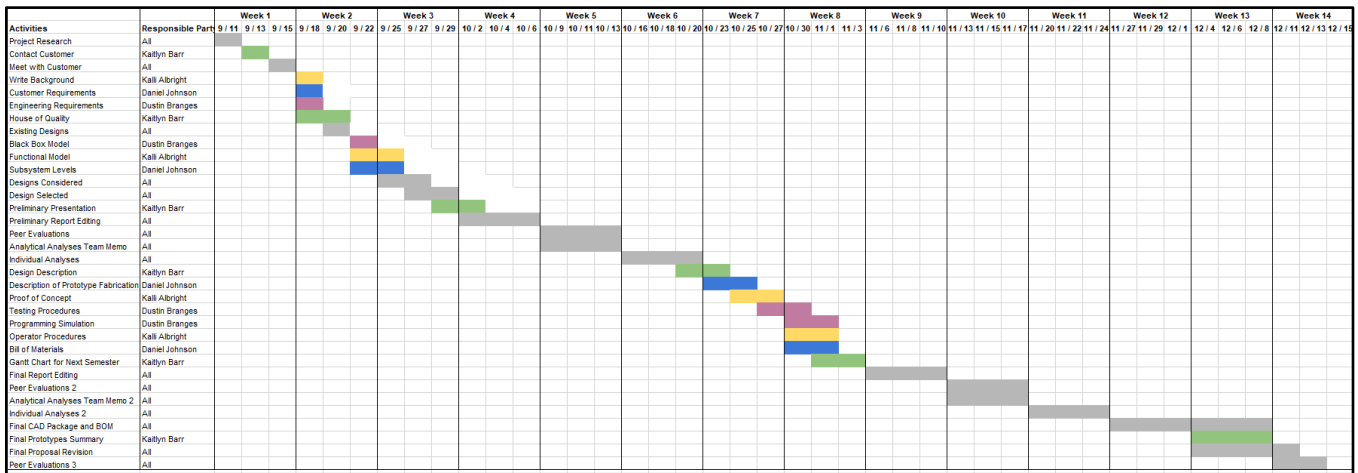


Figure A-1: Semester Gantt Chart

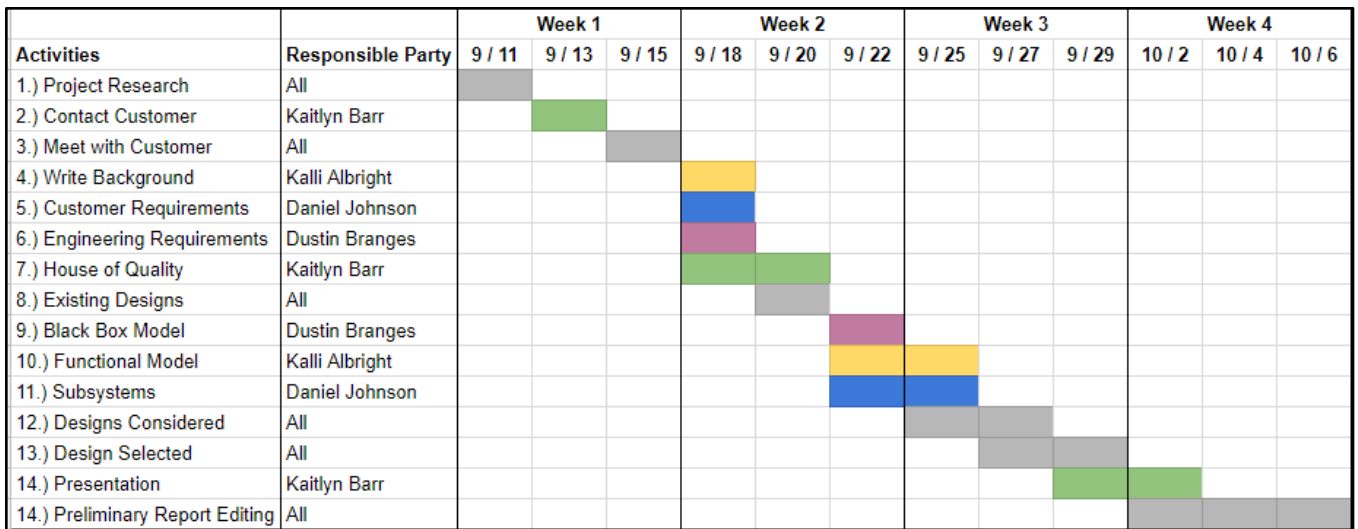


Figure A-2: Preliminary Report Gantt Chart