

## Are We There Yet: Sprint 3 Postmortem

### **Planning Meeting**

During the planning meeting, we constructed a back log from the items listed in the Budget Rubric that still need completing. From there, we assigned a perceived difficulty on a scale of one to five with one being trivial.

Task	Perceived Difficulty
Budget Preparation	5
Formatting	4
Requirements Traceability	4
Parts Order	2
Begin Prototyping	3
Risk Analysis	4

- We found that our research and initial budgets have been going well. We need to pick up the pace a little in order to have a good submission for 10/7
- We discussed what commitments we proposed during our postmortem. We have implemented a plan as to how we will meet our commitments. We also discussed how to improve the quality of our work.
- We discussed what we did wrong. We continue to recognize that we didn't meet as often as we should.
- We discussed what we did well during the last sprint. We agree that we should try and meet more. We also found that we do need to improve some in the quality of work we have submitted.

## Stand up logs

Date	Meeting Highlights
10/2	<ul style="list-style-type: none"> <li>• Sprint planning</li> <li>• Responsible for: <ul style="list-style-type: none"> <li>• Alex: line following sensors, wheels</li> <li>• Brian P.: camera, chassis, claw</li> <li>• Brian S. : DC motor, linear actuator, servo</li> <li>• Michael: Microcontroller, battery</li> </ul> </li> </ul>
10/3	<p>New:</p> <ul style="list-style-type: none"> <li>• Michael: Microcontroller and Batteries progress on equations</li> <li>• Alex: Line Following and Movement progress decision matrices</li> <li>• Brian S: Motors decision matrices</li> <li>• Brian P. : Requirements traceability started for camera</li> </ul> <p>Issues: Format needs to consistent across all sections</p> <p>For next meeting: Common format for all sections and risk analysis</p>
10/4	<p>New:</p> <ul style="list-style-type: none"> <li>• Michael: Risk analysis done for microcontroller</li> <li>• Alex : Risk analysis done for lin following</li> <li>• Brian S. : Risk analysis done for DC motors</li> <li>• Brian P: Risk analysis done for camera, arm</li> </ul> <p>Issues: Make sure deadlines are met. Some sections are behind on their expect progress.</p> <p>For next meeting: All of the budget sections need to be submitted to Brian P. for final assembly.</p>
10/6	<p>New: All sections (Decision matrix, risk analysis and requirements traceability) have been completed for each component.</p> <p>Issues: Formatting. Formats wildly vary from section to section. All tables need lead ins and captions.</p> <p>For next meeting: Rough draft of budget needs to be done so that revisions can be made before submission on 10/7.</p>
10/7	<p>New: Budget has been assembled into one document. It needs a lot of reworking in order to be ready for submission tonight.</p>

	<p>Responsibilities:</p> <ul style="list-style-type: none"> <li>• Brian P. - Make sure the claw, chassis and camera have equations to show quantitative analysis. Formatting</li> <li>• Michael - Battery calculations need explaining. Make sure all sections of the microcontroller and battery have equations.</li> <li>• Alex - Line following sensors and wheels need calculations.</li> <li>• Brian S. - Decision matrices for linear actuators.</li> </ul> <p>Issues: Budget was not prepared in time. We need to learn better.</p>
10/9	<p>New: We have the ability to re-submit budget. Each member needs to take their section and revise it.</p> <p>Issues: From the initial submission, these need fixing:</p> <ul style="list-style-type: none"> <li>• Battery calculations need explaining</li> <li>• Page numbers aren't correct</li> <li>• Consistent captions</li> </ul> <p>For next meeting: Have sections ready to go.</p>
10/10	<p>New: Sections that still need fixing:</p> <ul style="list-style-type: none"> <li>• Battery</li> <li>• Actuators</li> </ul> <p>As a group we'll go over what needs to be changed in these sections and why.</p> <p>Issues: Need to submit the budget tonight. Needs to be proofread.</p>
10/14	<p>New: Dole out prototyping responsibilities:</p> <ul style="list-style-type: none"> <li>• Brian P: computer vision</li> <li>• Michael : Simulate IEEE on Etch-A-Sketch</li> <li>• Alex : Line following</li> <li>• Brian S. : Arm design</li> </ul> <p>Issues: No issues to report.</p> <p>For next meeting: Report on initial prototyping research</p>

## **What Went Well**

During Sprint 3, communication amongst our team went well. We all knew when the meeting were and what was to be discussed during the meeting. After the meeting, we all left knowing what needed to be done and when the due date was.

Additionally, our team frequently updated GitHub. This allowed us to all have current documents for editing and revisions. This showed us the progress that had been made, and allowed us to track progress on large tasks. By doing so, it allowed us to better plan for the budget in the coming weeks.

## **What Could Use Improvement**

While we knew that style and format needed improvements from the last sprint, we failed to plan for it in this sprint. For larger documents, we need to plan for common formats and styles during the beginning stages so that merging parts isn't as much of a hassle.

We managed to iron down meeting times and meet many times during this sprint. There were times however, when we need to realize when a stand-up meeting with a time-box versus a work meeting is necessary as to not waste time.

Although we did plan a schedule for delivering the budget artifact on time, we vastly underestimated the work of formatting and proofreading the entire document. This needs to be considered for future artifacts.

## **Our Commitments This Next Sprint**

Since we have now placed our parts order the next step is the prototyping process. We will each be taking a section of the robot and creating a working prototype in the upcoming sprint. The prototype responsibilities are as follows:

- Brian P. - object recognition/detection
- Michael - Etch-A-Sketch simulation
- Alex - line following
- Brian S. - arm prototype

As prototyping will consume most of the next sprint, it is what we have most of our time allotted to.

Additionally, we will be committed to maintaining our effective communication skills that we exhibited during this sprint. We also need to plan better for what is coming due. This was a large lesson learned, and one that will not soon be forgotten.

## **Retrospective**

Looking back to Sprint 2, we have met most of the commitments that we proposed. During Sprint 2, we began to focus more and hone in on one design, which helped in guiding us towards the correct parts to use. During Sprint 3, we were able to refine the design proposed in

Sprint 2 to help with a more concise budget and parts order. The budget and parts order has guided us towards the prototypes that will be needed during this next sprint. This is due to the fact that some of the parts that we had initially thought may work, did not turn out as expected when performing our decision matrices.

As noted in Sprint 2, for the most part, we were able to submit all documents on time and with quality we are proud of. As we noted, we lagged a little with our budget document, but we have learned from this mistake and we will not make that error again. Additionally, we still need to improve meetings. This is especially true as we move into prototyping. This is because as we begin to get into prototyping, we will need to rely on each others skills and abilities more, thereby making the frequency with which we meet an important factor to improve upon.