ENG 4000

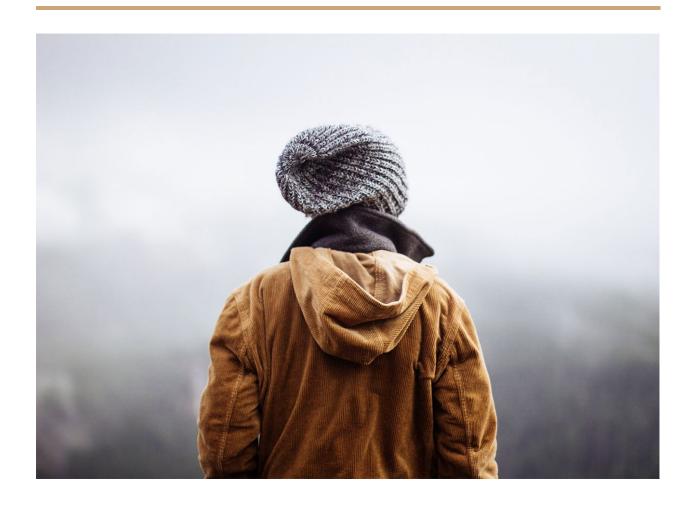# Sprint 1 Review
AMD 2

Yahya Ismail

Chris Posca

Max Munits

Sean O'Brien

Manmeet Singh

Sprint Review Plan

The sprint review was conducted in just under 90 minutes. Each of the group members were delegated approximately 12 minutes of time for presentations with commentary from the team, with 15 minutes reserved for stakeholder discussions of the next sprint, for a total 75 minute duration. However, this being the first sprint, we were not perfectly economical with our use of time and some discussions pushed past 15 minutes. Manmeet acted as the stakeholder during this sprint, and Yahya as the Scrum Master.

Yahya performed language recon and established that OpenCV (C++/Python) or MATLAB would be a good starting point for computer vision, and that lower level languages like C may be beneficial to use with hardware. There is a definite favourable crossover in compatibility OpenCV (C++ variant) and C for hardware, but this gave us many paths to work with in the future.

Chris detailed the conditions that could impair the calibration procedure, such that a focus of the project could be obtained. Many issues such as luminance, precipitation, physical interference (dirt or dust) and geolocation were discussed. Sensors were described to combat some of these issues, but solutions were not complete or fully realized. In the future these topics will continue to be discussed and explored, as theoretical models were proposed but no real testing could be done.

Max conducted research on available sensors on the market. The sensors were analysed to understand issues that could possibly arise during data collection. This research was strongly focused on optical devices.

Sean was responsible for describing the impact that sensor de-calibration could have on the data sensors reports. This included immediate impact of effects and dangers of long term issues. Sean's research relied upon the work that Chris did, but because of group delays and lack of resources, much of this work was speculative.

Manmeet explored possible solutions to problems from a mathematical point of view. This included sensor calibration and computer vision algorithm tweaking. While much of this research is speculative at this time, a wide array of possibilities was proposed.

To conclude the sprint, Manmeet reviewed the performance of the group. The verdict was that many of the tasks were completed sufficiently, although they were not realized to their fullest. Mathematical models were desired at this point, however descriptions of these models were supplied as alternatives.

Scrum Record

Team Member	Task	Week of 22 Oct	
		Monday	**Thursday**
Yahya Ismail	Specify Sprint #	1	1
	What did you do previously?	Language Recon	Language Recon
	What Will you work on next?	Edge-Finding Algorithm	Edge-Finding Algorithm
	Do you have any obstacles you need help with?	No	No
	Any Important Lesson learnt that you want to share with the team	Included in my Language Recon Document	Included in my Language Recon Document
Chris Posca	Specify Sprint #	1	1
	What did you do previously?	Condition Identification	Condition Identification
	What Will you work on next?	Edge-Finding Calibration Recon	Edge-Finding Calibration Recon
	Do you have any obstacles you need help with?	No	No
	Any Important Lesson learnt that you want to share with the team	Included in my Condition Identification Recon Document	Included in my Condition Identification Recon Document
Max Munits	Specify Sprint #	1	1
	What did you do previously?	Signal Recon	Signal Recon
	What Will you work on next?	Signal Recon	Signal Recon
	Do you have any obstacles you need help with?	Heavy school load	Heavy school load
	Any Important Lesson learnt that you want to share with the team	None at this time	None at this time
Sean O'Brien	Specify Sprint #	1	1
	What did you do previously?	Sensor Specification	Sensor Specification
	What will you work on next?	Sensor Specification	Sensor Specification
	Do you have any obstacles you need help with?	Heavy school load	Heavy school load
	Any Important Lesson learnt that you want to share with the team	None at this time	None at this time
Manmeet Singh	Specify Sprint #	1	1
	What did you do previously?	Response Specification	Response Specification
	What will you work on next?	Response Specification	Response Specification
	Do you have any obstacles you need help with?	Heavy school load	Heavy school load
	Any Important Lesson learnt that you want to share with the team	None at this time	None at this time

Sprint Retrospective Plan

 The overall expectations of the first sprint were low as the meeting with the stakeholders was late into the second week. This only allowed for a scrum on the 22nd and 25th of October, and pushed our review back to the 27th.

The sprint seemed to flow quite well as everyone had a properly delegated task that was significant to the project. Research was properly done, and presented in a timely fashion. As many aspects of our project were still up in the air at this point, our review extended a bit past our deadline, but was nonetheless effective. The usefulness of a communal document to record the work of our group was shown quite well this sprint, as members were able to build off of others without sacrificing time and efficiency.

Some problems that were highlighted in the review was the overlapping of tasks and poor scheduling. The tasks delegated at the start of the week were moderately generic, and two team members were relying on information provided from another member to broaden the scope of their task. The late meeting with the stakeholders put a great deal of stress on the team. Ideas that had been in the works were thrown out, and new ideas came to fruition. Having this so late into the sprint required the team to be very flexible around their solutions.

The group used this sprint as an opportunity to highlight the necessity of delegating non-overlapping tasks such that no member is reliant on others. It was understood however that at this point information and resources were limited and only small tasks were taken on in hopes that the research acquired would be of value in the future. Looking forward, tasks will be stream specific so that no member is dependant on another. Information and meetings with stakeholders will be planned earlier than later in a sprint cycle, so that team members are not met with any confusion mid-sprint. It is also essential that the full two weeks is utilized. Scrums were short and to the point, as desired, however the loss of two scrums made meeting deadlines a bit of a challenge.

Sprint Plan

Starting this week, we will be including a Sprint Backlog and Product Features tables as we begin to move from ideation into implementation, as well as accruing unfinished tasks.

Product Features Monitoring

Feature Goal	Associated Sprint #	Duration		Story Points	Release Status
Edge-Finding Algorithm Implement a simple edge finding algorithm with manual calibrations.	Sprint 2	Oct 29	Nov 11	Medium	Started

Sprint Tasks Monitoring

Sprint #2						
Priority	**Feature Goal**	**User Story**	**Success Criteria**	**Owner**	**Duration**	
High	**Edge-Finding Algorithm** Implement a simple edge finding algorithm with manual calibrations.	Medium	The algorithm should be able to detect edges with rudimentary manual calibration.	Yahya Ismail	Oct 29	Nov 11
High	**Edge-Finding Calibration Recon** What are best practices for calibrating edge finding algorithms.	Medium	A document specifying some best practices, methodologies, tips and tricks and other useful information in manually calibrating edge-finding algorithms.	Chris Posca	Oct 15	Nov 11

Sprint Backlog Tasks

Sprint #2						
Priority	**Feature Goal**	**User Story**	**Success Criteria**	**Owner**	**Duration**	
High	**Sensor Specifications** We must show how sensor performance is reduced under specific conditions.	Small	Owner should be able to mathematically describe five ways sensor performance degrades under different conditions.	Sean O'Brien	Oct 15	Nov 11
Medium	**Response Specification** Determining what operational parameters can be adjusted to improve performance.	Small	Owner should find five responses currently being utilized and describe their operation.	Manmeet Loungia	Oct 23	Nov 11
Medium	**Signal Recon** Research signal properties of the sensors.	Small	Owner should mathematically describe the signal properties of Cameras and LIDAR	Max Munits	Oct 15	Nov 11

Self-Evaluation

Criterion	Self-evaluation ranking	Justification
Sprint Review	Meeting Expectations	We explained the process that took place during the sprint review, and examined which tasks from the previous sprint have been completed. We discussed the challenges we faced and how they impacted our ability to complete the tasks.
Sprint Retrospective Plan	Meeting Expectations	We used the review session to evaluate how effective we were at meeting the goals from the previous sprint. Using this process and the feedback from the agile roadmap review, we improved our sprint design and implemented these in our next sprint plan.
Sprint Plan	Meeting Expectations	We established the goals for the current sprint and assigned the team members to them. We moved the unfinished tasks from the previous sprint to the product backlog. Each of the tasks is assigned to a team member and given an appropriate completion time. The decomposition of the tasks is left up to the member responsible for the task.