360WebConf

Project Audit 1 Feedback

Capstone Project

Semester 1, 2019

Contributions from the Many Eyes Process

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Contents

1 360WebConf

1.1 Team Member Contributon

> This feedback has been generated from members of your own team.

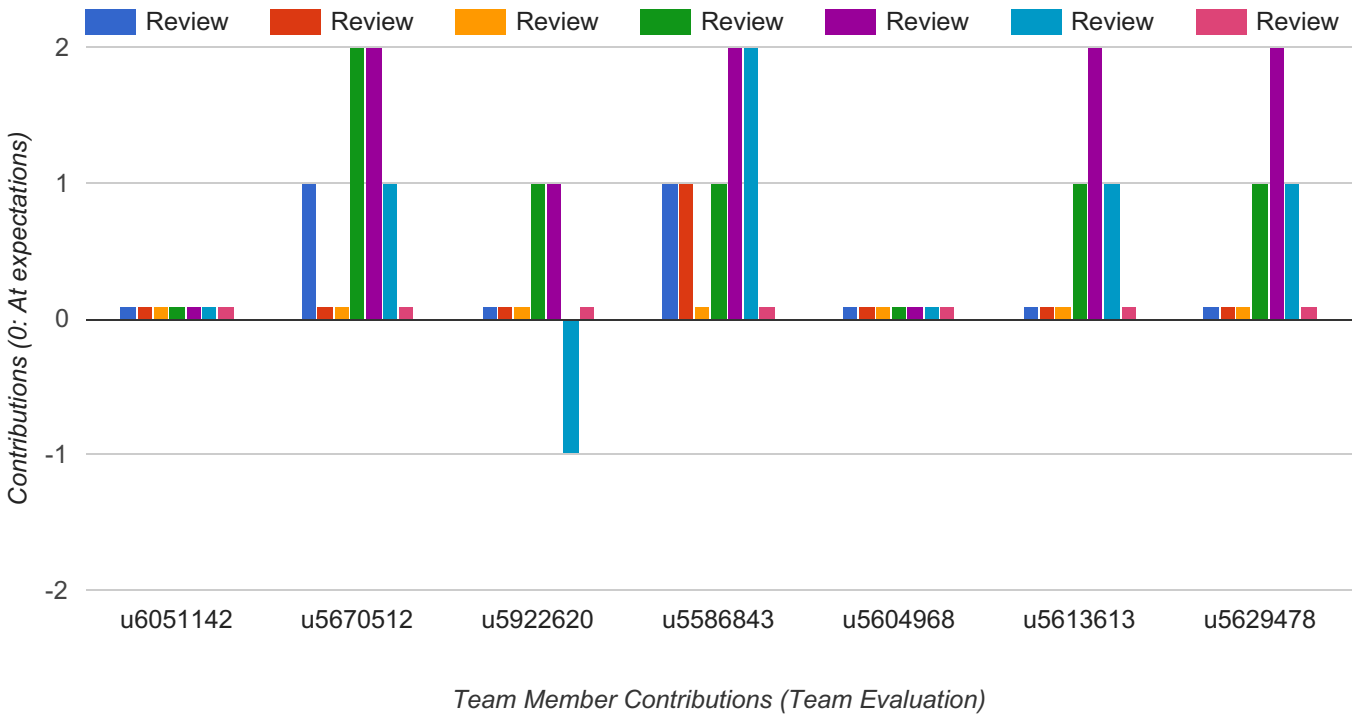

Figure 1: Team Member Contributions

> -2: Well below expectations; 0: At expectations; 2: Well above expectations

Agreement is shown with similar values within categories. Individual reviewers are shown with colours.

1.2 Text comments from Team Members

member

Well done everyone, I think everyone is taking the course very seriously, it is very easy to get things done with you guys. I am very happy with the team guidance and performance, we have been able to properly subdivide task in accordance to our different skills and interests. More than that we have been able to divide tasks that reflect the knowledge we are trying to acquire from the course.I really like the way the log are kept, the are easy to read and track progress. The atmosphere of the team really allows for everyone to be heard, so it is easy to share ideas, solutions and concerns.I think we can improve how we share some files, they can be a bit hard to find and the naming should be standardized so it is easier to access files.

member

Overall, each member is working at the expected level, with one member putting in additional work than expected and taking the initiative as a sort of lead role to the team dynamic. In terms of team performance, I think a good way to judge it thus far is based on thethe completion of the delegated tasks set at the end of each meeting, and the quality it has been completed to. Based on this factor, I believe we as a team are working well - at this stage, we have completed every goal/task we delegated prior to the first audit. My feedback would be for the team member who seems to be doing work above expectations to feel free to ask for help or share the workload with the team - we are here to help out. In regard to individuals who may not attend some meetings due to work or other class obligations, you have done great work in completing the set out task in your own time and keeping in regular communication with the team. As a team, let's continue to work hard and provide help where it is needed.

member

Everyone is doing well and the team is on track. Our team meets the client regularly, carefully consider and discuss the requirements, specifications of the project with the client, therefore, the scope of the project is well defined, it is a The small thing that can be improved is that the team regularly meets twice a week which are on Monday and Friday, but it seems that there are some small meetings which are not planned ahead. Therefore, I think its much better if we can assign everything in the regular meeting time so that everyone understands what is going on so that there is no need to plan a small meeting on short notice.

member

Currently, the team is performing well in setting up the foundation and governance for the project. Over the previous weeks, the team placed a heavy emphasis on developing a proper process and exploration of possible technical challenges.

We've made progress in developing an algorithm that allow the use of multiple cameras on a single computer. However, more development will need to be made to ensure we can produce better video output, whether this be increasing the quality of the camera being focused on and reducing the quality of others, or some other method that won't diminish the user's experience.

Currently, the Direction of Arrival (DOA) algorithm has not been investigated properly, and we're relying on an open source program that has already been packaged for users. A new line of investigation will need to be examine, to understand how the open source program work, how does it determines the direction of arrival and see if the process can be simplify for our uses.

More focus should be placed on developing the technical capabilities of the prototype, this will help balance out the project from being too governance focused.

member

So far, everybody is doing a good job and the project is on the right track.

We have very frequent communications and meetings within the team, and we will need to keep this up. However, we may need more communications with the client. Last time we introduced him with some of the potential technical issues that we are facing and we may need to provide the solutions asap to increase his confidence on us.

At this stage of the project, we did a lot of jobs landed on the governance perspectives. We have a very clear project plan and we set up contingencies for some potential risks. At the next stage, let's try to make more technical progress as we planned. According to our con-ops document, we need to achieve basic video switching

function (including a switching algorithm, input/output synchronising and so on) before next audit. It requires more development from the sound, I/O, and image processing sub-teams.

member

We are doing good so far. Maybe the communication quality for some of group tasks can be improved. It looks like sometimes not every team member understands what’s going on and makes contribution to the decision making.

member Although the workload in different aspects of the project can hardly be quantified to make a strictly even delegation, every team member has shown a fair amount of attention andcommitment to the project. The principle of work allocation is to prioritize the interests and progress of the whole group, and tasks are distributed in a way that everyone is doing what he is good at.Team members are willing to participate in group meetings and can complete assigned tasks on time with acceptable and often surprising quality.

As one of the biggest team, the good aspects is that we have a clear division of responsibilities according to the implementation approaches we planed. One potential problem could be the communication between the subteams. Currently, we have two meetings per week among all group members. However, at the later stage of the project, meetings among subteams are probably more efficient and make more sense. In that case, we need to have a clear plan of how the subteams exchange ideas and results.

2 Peer Feedback and Reflection

The quantitative data below is a representation of the average evaluations by role (self, shadow, etc) type. Bars represent the evaluation of the team, lines represent the average from the course.

When interpreting these data, the absolute value is less important than the relative difference between inputs.

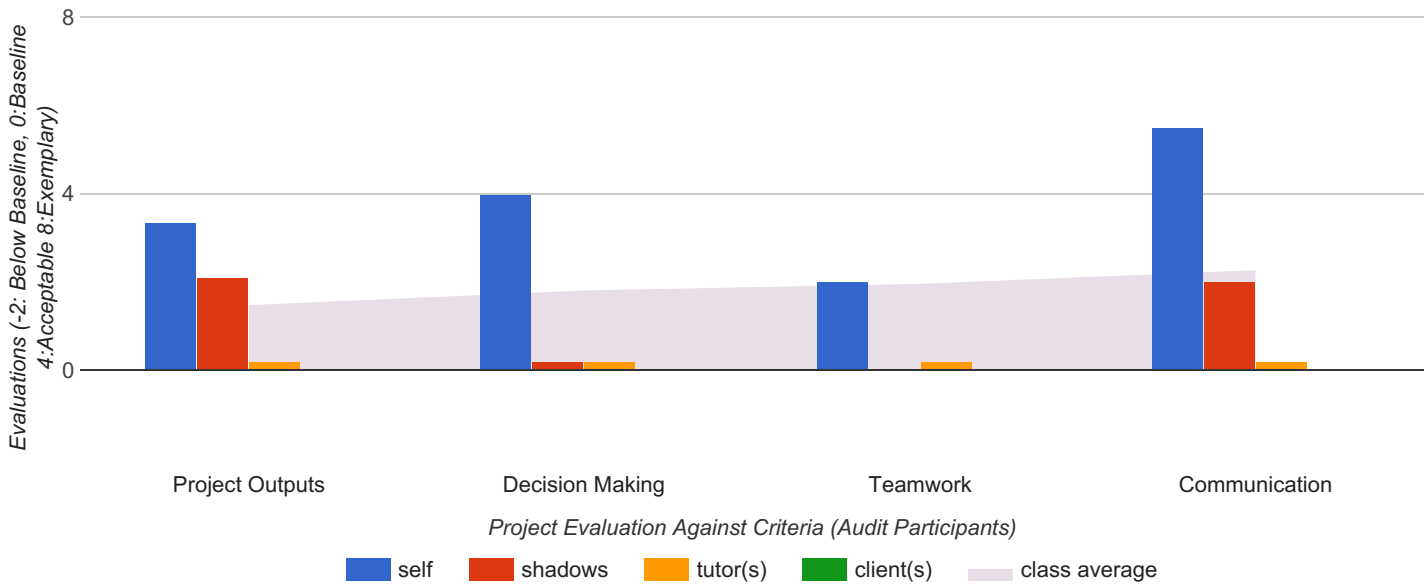

Figure 2: Quantitative evaluation of feedback

> Note on calculation: the course average field is calculated as: ave(ave(self), ave(shadow), ave(tutors) ave(client))

2.1 Project Output

reviewer

The team is on track and has made up a high-quality concept of operation document. There is also a technical drawing of the initial design, it seems that the team has a good understanding about what they are going to achieve at the end. One thing that can be improved is that the team can think about the interface of the components of the design, because the design needs a lot of signal processing and image processing, codes using different languages may be used by sub-groups, the interface between subsystems is definitely a potential risk and needed to be considered. But anyway, the team performs really well at this stage, make sure you are on track when you have the design timeline, if the team keeps high performance, they will definitely make up an extraordinary product at the end.

reviewer

The team is gong well in the early stage in terms of early-conceptual design, problem scoping, and group work presentation. The group work presentation is done very well since we prepare it for a long time and we have made a remarkable progress on the project such that we have enough contents to present.

However, The team role is still not very clear at this stage, especially the documentation part (sometimes absent). The team needs a better team role model to allocate task and schedule planning. The team execution is fair up to now.

Feedback on repository: The team uses git as their repository for both coding and documentation since this project is about programming and prototyping. The team has a private coding repository at this stage. But, the team still needs to figure out a way to do documentation that records the coding progress onto the documentation repository. And the team needs to set up a better routine for updating the repository rather than commit as it goes.

Feedback on team communication: Sometimes, not all the team members are aware of what other people is doing. The team needs to improve its management/scheduling method.

Feedback on communication with client: the meeting with client last time caused some trouble that the client really wanted something that is challenging and wanted to move it into the project scope. The team needs to give a viable plan for the client to check out, and perform any research to let the client know the practical challenges of the technical problem.

reviewer

We have very clear understanding of what we want to achieve in the end of the project. We had some conversations with our client to make sure what he is expecting from us. We understand that our client has a high expectation on the image stitching function of the webcam and he is also expecting High-resolution& real-time video output. According to his requirements, we set up a baseline goals and stretch goals. So the group understand what we have to achieve and deliver.

Once we obtained the prototype of our 360 degree conference camera, we plan to test the prototype by setting up a remote meeting with our client. The functionality of the prototype can be easily tested and optimised in this way because it is a hardware product. We can also think about some other real-world users, who are not in our team, to test the prototype and to provide constructive feedback. These real-world users can be student or experienced engineers who have regular conference meetings.

Overall I think we manage the project output very well. We just need to keep up the conversations with our client and make sure we update his latest requirements.

reviewer

While the key decisions are written down in the meeting minutes, they are not recorded in any form in the deicision log. It appears that the goals set to be achieved by Project Audit 1 have not yet been met, and require re-adjusting to allow for slip in the project. I understand that having a large group, and having different subteams that may or may not be busy in a given week allows the project to catch up to where it is currently expected to be, however the discrepancies between project progress and the ConOps document should be resolved.

Work breakdown structure looks ok, but if there’s no “Object Resource” that is relevant for anything, it shouln’t be included. Likewise, if only task only gets 1 person, then it’s probably worth combining hours and people to be person-hours, and explaining that each job only requires 1 person. What is “SE” in there anyway?

Your requirements analysis is very vague. What is the “Ranking”? What are the requirements for each requirement? “Video Output” means what? That it has one? This feels like it is a must, and not just a close second. This should really state what the video output (for example) should look like (1080p / 720p), and how the final product should be compared against this requirement. Is it binary, or is there a scale of bad to good for it?

Your repository is also a bit of a struggle to navigate easily. Consider adding a README with links to important documents in your repository (e.g. Current ConOps document, most recent meeting minutes, etc.)

reviewer

Ambitious design, I'd be looking to very much nail down the functionality and what they're looking to achieve. Careful with the 3d printing, so long as it is strong enough to hold it up without falling over. Division into subteams is an excellent idea that they should definitely carry forward into the semester. Some concerns I have technically would be the feedback from each microphone being in close proximity, it could be a reasonable idea to place them further apart from each other on the desk to reduce feedback between them. Not sure if that's a reasonable consideration, depends on whether or not the processing can handle the different audio feeds and provide a single one. I'm impressed with how far along you are with acquisition, and your understanding of the main problems that you need to solve, and some of the technology. Perhaps some advice I'd give would be if the timeline is looking too ambitious, I'd ignore the 3d printed housing unit, and focus on the technology. If necessary people can put the unit on a stack of books or otherwise. I'm still unclear on how the final output will look image wise on a computer, am I able to scroll around the image to look at different people or does the RPi show every image concurrently and then focus on the image that shows the specific person talking? Otherwise I think yuo're looking pretty good. Other minor concerns would be accountability among subteams, and perhaps making sure that resources and time is allocated reasonably amongst them.

2.2 Decision Making

reviewer

The team is on track and understand what they are going to achieve at the end. They have ideally defined the requirements of the design and have thought of key deliverables which they are going to achieve. Also, the team is splitting into sub-groups and everyone is assigned specific tasks. For the design, the team decided to use raspberry Pi and mentioned that there exists contingency about the bandwidth problem, maybe the team can choose alternate microprocessor or a microcomputer. Also, there is a ReSpeaker 4-Mic Array in the design used for determining the direction of sound, however, is it possible that the web cameras can also be the receivers for the sound so that the budget can be lower. The team performs well and has good project output at this stage.

reviewer

The decision making directory is still empty. But there are a lot of decisions made before. Please upload those.

The actual decisions made are fairly robust that is suitable for uncertainty in the future, including the the way of buying cameras/microphone, scoping the project, and determining the key benefit we are going to deliver.

reviewer

According to the meeting minutes, our teams decision making and implementation have been clearly documented, as can be viewed in the meeting logs in the repository. The meeting minutes have outlined and summarised the key point of discussions made during each meeting, thus allowing the thought processes behind the critical decisions to be traced easily.

Although our team has been outlining the decisions made, a formal decision making log summarising these agreements has not yet been created it is advised that we create one as soon as possible. Additionally, there are

some details/testing processes that have been conducted, such as web camera image stitching which have not been documented in the repository. I would also suggest that we include these changes soon.

In regard to the assessment guide, while our teams process for making and implementing decisions are organised well, the learning and evaluation from these decisions have not been conducted. With Audit 1 having been recently completed, I think it would be a good time for us to record these aspects of decision making, especially with the incoming feedback that is to come from the other team Shadows.

reviewer

So far the team is making good progress and able to enact some critical decision independently from the client.

Critical decisions are carried through after it has been debated and agreed upon by the team, this is good as ideas are checked for faults before progressing.

The team need to obtain more autonomy in decision making from the client, as currently it seems there are misunderstanding about the final deliveries. Once this is sorted out and has the client approval, majority of decisions can be made independently.

The team need to start keeping an active records of all decisions made so far this semester.

reviewer

I love the format of your meeting minutes, it looks excellent with the critical decision made section. I'd like to see you translate that into the decision log section of your repository. If you have the decision log up to date, the client and you will be able to see where you're heading and why. This sort of accountability will be crucial in an ambitious project such as yours. The decision log will be your best in in managing the client's expectations as the technological and coding constraints become clearer. Additionally if you take the project in a slightly different direction, you'll have accountability and retraceable steps.

reviewer

The team seems to have good decision-making mechanisms in regular physical meetings and has developed clear weighted criteria to inform future design decision-making. The formal decision log files located in the repository are currently empty. It is important to populate these files and keep them up to date in order to enable tracing of decisions and maintain clear communication between all group members and the client regarding current decisions and project direction. This is especially important seeing as Incompatible integration has been listed as a possible contingency. Analysis of the clients recommendations in response to the meeting on 18/03 suggests that a crucial decision must soon be made regarding a move towards using either two wide-angle cameras or 4/5 cameras utilising an extra processor. Ensure the client is aware of and agrees with the final decision in this regard.

2.3 Teamwork

reviewer

We divided the whole team into 5 different sub-teams and the role of each team is very clear. Everybody understand their individual role and we came up with contingencies to reduce the uncertainties. Overall, I think we did a good job in teamwork.

To improve, We can probably think about some functional roles for our team. We are a group of seven and function roles will help us to form a clearer teams structure.

Meanwhile, We will have some image processing tasks (e.g. image stitching and face detection) and engagement with experts in the relative field may be a good idea. We don't quite understand the processing power of Rasberry Pi and may be we can seek for some suggestions form electronics student and experts.

reviewer

One good aspect to demonstrate the teamwork is the clear work allocation and we get that covered. Each member has a clear clue of what they are good at and what they are not and the team has a vision of how the project is constructed so that each member can be doing what he is best at. The large seven-people team is divided into multiple subteams that are targeting certain tasks.

One thing to improve is that currently the tasks of each subteam have dependencies on each other's deliverable, and we have not yet figured out the relations in between. Sometimes it can cause idleness as some subteam may spend time waiting for other tasks to be completed so that they can continue on what they are doing. A further look into the internal connections might come in handy. Another thing can be that cooperations between subteams may be tricky as we have to fill each other in before assembly everything together. We shall keep everyone updated along the way to save the work at the end.

reviewer

The group has done some fast progress, a lot of the initial software has already been developed and all the members are really motivated to work.

The subteams seem to be up to date in their activities, in my subteam we have had problems starting some activities due to delays in the delivery of components. However, delays were expected and activities were broken down those considerations and still managed to stay on track.

I think some of the work can be activities could be started earlier allowing some parallel working, this will help to increase the efficiency of the team.

reviewer

While teams have been divided up, and specialist roles have been designated, team position descriptions have not yet been uploaded to the repository. Likewise, it appears that communicaitons between the team members are not made available to the shadow teams for project audits. Making these open and transparent allows the conversations leading up to decisions clearer, so that they can be analysed again later. Minimal evidence of communications with the client exist in the repository outside the Monday meetings.

The meeting minutes themselves do not appear to be accurate and comprehensive, stating the outcomes of the meeting without recording any discussions that happened within. Recording the flow of these discussions would be very beneficial for displaying teamwork in operation within the group, and providing attribution of work to specific people. Let us see how the team dynamic works.

There is no evidence in the repository of team members engaging with mentors, embracing and exploiting their diverse skill sets, or providing opportunities for personal development.

reviewer

Judging from the presentation, the breakdown of teams into roles has been effectively done and should hopefully allow you as a team to progress effectively with a fair distribution of work. I would like to hear more specifically on the breakdown of work and how you have decided what is "fair" vs what might be an equal distribution of work(are

there “experts” in your team/why have certain members been chosen for certain roles). With this in mind, the team roles folder in your repository is empty(20/03) perhaps creating a separate document to outline the roles and work breakdown would be wise and work .

During the presentation, the main “presenter” did the bulk of the work which is understandable and acceptable, but it would have been nice to see some other members stepping up to answer some questions, particularly with your project team broken down into smaller groups surely one mini team would be better suited to answer certain questions.

2.4 Communication

reviewer

In terms of communication with key stakeholders, the team is regularly involved with the client, meeting at least once a week. Important project requirements and constraints have been outlined and documented, and weekly meetings with the client have enabled the team to regularly update our progress and check that we are on the right track. I would suggest our team to make the most of the coming meetings (asking questions, small project requirements/specifications we may have missed), due to the client having noted his absence from 6th of April to 6th of May.

In terms of internal communication, due to the team using messenger as the primary form of communication outside of meetings, there are quite a few points and discussions that we may have failed to include in either our meetings or the (future) decision making log. When creating the decision making log, it is important that we carefully review the meeting logs to check if all thought processes and ideas have been documented in detail.

Additionally, the communication between the team and the tutor aside from tutorials seems to be lacking, and is something that we can improve in order to receive constructive feedback for our project.

reviewer

The team has pretty good communication considering the size of it. We meet twice a week with each usually lasting for two to three hours. The discussions are usually substantial and will push the team’s progress for a big step. The communication with the client is also fine. We ensured that we interpret the requirements from the client correctly and we also made clear to the client about our desitions and progress. We come to the client with proposals and clarify the trade-offs we had to make. Having 7-8 people in a discussion, we also make sure that it does not fall into chaos.

However, we could improve on the meeting efficiency. Currently, our meeting is mainly focusing on the most urgent problems we encountered and sometimes it takes too much attention and we could not cover everything we need to discuss. For the following part of the project, we shall have clearer agenda before the meetings and probably assign a specific amount of time for each topic so that we do not get absorbed by one of the issues.

reviewer

The team is meeting frequently, twice a week. This allows everyone to be up to date with the overall progress.

There is an active communication channel through the use of facebook, where any enquiries or concerns can be raise for discussion. Everyone is communicating often through facebook messenger which is nice to see.

The client is updated every Monday on the progress and critical decisions made during the previous week, this allow the team to receive feedback and improve the project by realigning with client expectation.

The team need to develop a better rapport with the client and enhance the communication, there exist some misunderstanding due to the language barrier.

As the client is going away for an extended period of time, the team need to develop a way to continue keeping in contact with the client whether it be weekly emails or fortnightly video calls.

reviewer

The communication of the team is very good, the team has been able to regularly update all progress to the repository, so it is easy to observe what is everyone up to and how the progress is going. The logs are kept on a clear way te format made them very easy to read and track actions and decisions.

I think they subteams are also working quite good, the progress is also quite fast and the communication through the official group always have fast responses.

Communication with the clients is done on a regular base, so is easy to update all progress and keep track of design choices, the client also has a good idea of what he wants.

Something that can be improved is to have different communication methods for subteams, so the group chat is not saturated for very specific topics, this will also make the decisions easier to track

reviewer

Your meeting minutes are well recorded, and going off your presentation the whole team seems to be on the same page and in consistent communication. However this is not as evident looking through the repository. As of today(20/03) the decision log has not been updated, not only making it harder to find critical decisions, but showing a potential communications failure between the team and the members responsible for updating such logs.

Using Facebook messenger as a primary source of communication is convenient, however it does make the communication category difficult to “grade” as a viewer as I cannot see a lot of what’s going on behind the scenes. With this in mind you could consider some way to show evidence of productive communication in your repository along with the decision log, be this screenshots of important messages in the chat, or some kind of communication summary document.

Another point of contention for communication is the communication of progress within the project. The landing page is really well designed, but it tells me nothing of what you have achieved so far, and while some deliverables can be seen in the repository to me it doesn’t seem reflective of what you described in the presentation.

reviewer

Group communication seems effective at this point and the meeting minutes reflect good communication with the client and actionable documentation of client feedback and requests. Creation of 3D renderings of the current concept designs is a great way to communicate the groups design intentions to the client and there is evidence that this has been effective. Currently, it seems that an important decision needs to be made between either proceeding with 4 or 5 cameras and an extra processor or utilising two 180 degree cameras and a single processor. An important communication consideration in this regard is ensuring that the client knows exactly the financial and functional consequences of each option so that the appropriate decision can be made and all parties involved proceed appropriately.

3 Tutor and Client Feedback

3.1 Aspects Done Well

tutor Excellent team structure and good division of work. The WBS is clear and well thought out. The list of requirements is very clear and the key goals have been clearly identified. Risks and contingencies have been clearly identified and well presented. The overall structure of the project and how it will progress is well thought out. The technical solutions to the project were very well explained and well thought out. The integration of hardware with the interface was well designed and in the design phase, such detail is well thought out. The design also incorporates the scope for stretch goals. Excellent visual design and that reflects in the repository, which is easy to navigate and the ConOps are also well documented with all the baseline requirements.

3.2 Aspects To Improve

tutor The contribution or value contribution to the project from the team is not very clear to me. That can be improved by adding the contribution in terms of milestones achieved. The group in the presentation talked about tech-transfer of some sorts to the client and deloping a low cost solution to an existing product, but it was not clear as to how they will achieve that?Also, the team coordination seems slightly off-balance, with 2-3 memberscontributing majorly to all questions and the presentation. This is a big group, I would like to see an equal contribution from each group member. The group has also not decided any testing matrix or parameter son which their prototype or design will be tested. The group also, doe snot make it clear whether the clinet is happy or has given any feedback on their first design or was the first design given by the client? If yes, then what is their contribution to the design process.

4 File Changelog

2019-03-20:

- Initial commit with 2019_S1 data