

ENGN4221 WebCam Project: week2 logs

Mon. 04/03/2019: introductory workshop

- the requirements could be changed later in the project, so keep updated
- we need to make the repository open to course convenor regarding decision making

insurance

- no problem at anu or insurance covered by clients.
- need to sign up an insurance form from anu if working regularly off-campus(form available at CECS building reception)

IP and NDA

- the client may require the IP from the project, (make it clear at the beginning)
- if applied, check the IP form carefully about the legal part of the form
- it takes 1 or 2 weeks for anu to process the IP form
- make sure everyone can see others' work for purpose of NDA and any disclosure agreement

expenses

- apply for funds referring to the application document (micro-grant)
- normally for product that client is able to check
- talk to course convenor before spending money (keep the receipts, and finish the form)

Tues. 05/03/2019: group discussion in the first tutorial

we are trying to figure out the meeting that is available for everyone. We come up with the meeting times:

potential meeting times

- Mon. 12-2 pm.

- Thurs. after 6 pm
- Fri. after 3 pm

client meeting

Hengjia pointed out that we only needed to meet the client with the team rep.

shadow groups

we need to split into 2 groups to shadow for Floating buoy chassis design and VR-GMT.

Team members	Uni number	shadown group (Floatingbuoy/VR)
Hongjian He	u5670512	VR
Jireh	u6051142	Floating buoy
Jiawei	u5922620	Floating buoy
Jose Quiroga	u5604968	Floating Bouy
Hengjia Li	u5629478	VR
Yilin Geng	u5613613	VR
Minh Doan	u5586843	VR

Mode of communication

For communication, Facebook messenger was chosen or email to tutor.

The tutorial time

No tutorial next week. The tutorial time changes to 8:00-9:30.

meet with clients

we sent an email to client about meeting with him. Link said that we should prepare a list of questions for ask clients before meeting.

technical discussions

Cameras: 2 USB cameras from Yilin and Hongjian. Probably we could work on integrated chips with camera Processor: rasp pi 3B+ from Hongjian, could change to cheaper processor in the later stage of the project. Programming Language: Python/C++/Julia

We set up 2 repositories (360WebCamProgram for coding and 360WebCamDocumentation for progress). There are
lecture notes in tutorial week 1: ## workshop times in week4,5,6,8 for topics of technical leadership

notices on audit 1

- overall project vision, goal, objective, or purpose
- what will the project achieve
- the key stakeholders, identify them and their interactions
- identification of resources, risks, potential costs and who will bear them (indicative budget)
- technical and other constraints
- Non-Disclosure Agreement and IP forms if applicable
- set-up development method, task management, and project repository
- set milestones for each project audit:
 - goals and deliverables
 - contingencies: such as stretch or crash goals for the milestones
 - timeline of milestones
 - a work breakdown structure
- it is highly recommended that we sign-off for the ConOps (the project plan) from our client, tutor and all team members.
- week 4,6,10
- we could get feedback from the whole class during the tutorial session, so we could try to think about what we could get from the rest of class for potential ideas and solutions during the session.

self-evaluation

Do evaluation for both shadow team and your own (self-evaluation). It is a verbal assessment rather than numerical. It is not graded but required to be well-written (250 word limit).

The final mark may be modified by the team reflection factor during each audit session.

It is natural that the self-evaluation is better than others'. Focus on decision making, communication and project quality at the end.

The assessment guide has a good description of the course requirements and expectations.

feedback

Use many-eye decision making based on all the feedbacks from clients, tutors, and shadows.

repository

We may need multiple repositories for the project (GoogleDrive, Github, slach, etc.).

Use the repository to fully document the progress in such a way that other people can get trace of it.

Meeting no. 2 8/3/19

selecting components of prototype device

Camera (Imaging): - team decided to choose USB based cameras due to their cheap price, making it an optimal choice for the prototyping stage (4-5 cameras, approx. \$7-60ea, preferably ~\$40)

Audio input potential options: - multichannel input audio interface (pros: possesses existing algorithm, cons: expensive) - rotating microphone - multiple microphones (pros: cheap, cons: requires supporting algorithm/code) - Respeaker 4-Mic Array for Raspberry Pi (\$24.90)

Microprocessor: - Raspberry Pi 3 was selected because a member has one. Benefits of this microprocessor include being inexpensive (~\$50) and scalable - therefore we can move to Raspberry Pi 0

Other components: - USB Hub (to divide USB ports ~\$10) - 3D printing access

Calculated estimated budget: Min: \$112.9 (sum of cheapest components) Max: \$500 (sum of expensive components)

prepared questions for client meeting

- point out our understanding of the scope, then ask client about their expectations for the scope of the project
- do you expect a prototype or a complete product?
- do we need external microphones to collect high quality audio - or are they provided in the conference room?
- budget?
- device lifecycle considerations?

- project constraints: size, portability, power supply (external or internal?), operating system
- expected client deadlines
- IP license?

temporary group role/task delegating

The following group roles and tasks for the project were delegated based on each student's engineering major. Direction of Arrival (Electronics aspect) - John, Jose I/O standards - Image processing - Hongjian Modelling/manufacturing - Jireh Documentation - whole team

planning template for next meeting

- attendance
- current agenda

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