Logbook

Weekly Report

1st Week Report

The first week was a presentation week. Teachers and students introduced themsleves. Teams were made. We also had the opportunity the strenghten the links between each members thanks to the “Team Building Activities”. We had a small meeting to choose which were our three favorite options. This was our list: 1) Disaster shelter 2) Bicycle Probe 3) Crosswalk Safety.

We finally get our second option which is Bicycle Probe.

2nd Week Report

We started our research about the possibility to integrate different sensors in the bike, to increase the quantity of data available for the bike user and the community. After the first meeting with the professors, we had a new point of view which is way less ambitious : our two main missions for the bicycle probe is to integrate an air quality sensor and to ensure the safety of the rider. We then looked for bike sensors which already exist in the market.

3rd Week Report

We made our Gantt Chart and tried to think of all the possible processes we need to do, so have a complete product at the end of the semester. We discussed about the different ways to power our product. Should we produce our own energy, using generators or solar panels? Or should we just use batteries? Discussed about what kinda sensors and parts we need and how expensive they are.

We started to think how complete product should look like and started to make sketches of complete product. We also made cardboard-model and small video from our product.

Started to make black box diagram.

Meetings

1st Meeting (2020-02-20)

Agenda:

1. Presentation
2. Modus operandi
3. Project proposals

4. Electronic logbook (Wiki)

Minute:

A general meeting to get to know the 16 subjects we can choose.

2nd Meeting (2020-02-27)

Agenda:

1. Get new ideas
2. Ask about wind propeller

Minute:

We have to put the focus on air quality sensors and on the safety of the cyclist. Light indicators should be a good solution to give information to road users. Air quality information will be updated to a cloud so that the community could be aware about the most polluted places.

3nd Meeting (2020-03-05)

Agenda:

1. Discuss about Gantt Chart
2. Present our research about State of Art
3. Present the big idea about the whole system, thanks to our work on design thinking
4. Have information about how to link our sources

Minute:

During the meeting with the teachers, we clarified which conditions are gonna be assessed by the bike : safety indicator lights which can react with acceleration and air quality sensors.

4nd Meeting (2020-03-12)

Agenda:

1. Is it worth it putting a (bluetooth?) back light connected to the bike ?
2. How to link the 2 side lights?
3. Another option would be to add laser lights instead of side lights
4. Will the dynamo be powerful enough in powering the battery?
5. Waterproof air pollution sensors doesn't exist : need to find a solution

Minute:

We reconsidered the solution of the wireless backlight or a plug/unplug cable. We need to be careful with the calibration of the sensors. A comparison table is needed to assess the better solutions for the sensors and the dynamo.

5th Meeting (2020-03-19)

Agenda:

1. Creation of an application on Android to show the user the air quality and temperature
2. Lights turn on automatically with the environment light intensity

Minute:

6th Meeting (2020-03-26)

Agenda:

1. Enquire about lead acid battery use
2. Enquire about connection of dynamo to battery

Minute:

7th Meeting (2020-04-02)

Agenda:

1. Is sensor CCS811 good?
3. 3D Model
4. Connection between dynamo and device

Minute:

8th Meeting (2020-04-23)

Agenda:

1. 3D model video
2. Backlight
3. Materials list - sourcing

Minute:

We must create a video of the bicycle probe for the first approach, only a visual presentation of it, and then with some explanations in the background. We should revise having a bak light or no. If no, we must change the advertisement f the probe because then, the prob doesn't secure enough the cyclist with the only front light.

9th Meeting (2020-04-30)

Agenda:

1. Functionnalities and testing?
2. Discussion?
3. Where to look up for the price of raw materials?
4. Reasons we are not including the back light

Minute

We must include a voice and a bicycle frame into the video of the 3D model; the final video must look like the history behind GOairLight; it could be interesting to make the user choose the color of the probe (only in some parts of the probe); we must select the parts we are going to produce to have a clear idea of the price; we must select an IoT platform: define the data to be stored; simulate in Kicad the parts of the control system (there is Bluetooth simulation); define the user cases of the app; do the mock of the app and its development; prepare the packaging solution; prepare the paper.

10th Meeting (2020-05-07)

Agenda

1. Price of the raw product (without margins): approx. 92 €
2. Packaging solution proposal
3. 3D video proposal
4. What about discussion?

Minute

We must include the taxes for the prices of the components and the transportation costs as well. The discussion is an interpretation of the results. It shows limitations and recommendations for a new version. Doing a flyer can be a good idea to improve our communication with our product. We must calculate the power budget. The 3D model video is perfectly realized, even though there is a spelling mistake in it.

11th Meeting (2020-05-14)

Agenda

1. Product packaging solution
2. Use case diagram
3. Electrical simulation

Minute

For ASAP, we must include and upload the code on deliverables and add the must relevant parts as a figure on the report. The 3D model video must include the packaging solution. The poster must as well include the packaging solution and maybe some text in the middle strip should be shorten. We can use the word “sustainable” in it.

12th Meeting (2020-05-21)

Agenda

1. Database sychronisation
2. Map
3. Packaging solution video

Minute

The app development should be done in 2 weeks. The paper should be finalised really soon.

13th Meeting (2020-05-28)

Agenda

1. Manual
2. App progress
3. Routing

Minute

13th Meeting (2020-06-04)

Agenda

1. Manual

Minute

Activities

Please register here all accomplished project activities

Start	End	Task	Description	Who
03-20-2020	03-20-2020	Choose a subject	Make a choice between a list of 16 subjects	The whole team

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