Logbook

Weekly Report

1st Week Report

The first week was based on different team building activities to meet the team members and also the others EPS's students. Some of these activities consisted on trust games to know each other better and to learn about teamwork, but also we found our team's vision, mission, the values and the team rules. We discussed about the project proposals that the supervisors gave us and we send them our preferences about the subjects.

2nd Week Report

In the second week, we received the confirmation of our project proposal: WATER INTELLI-BUOY. After that, we started doing the research about swimming pools and fish ponds among others, trying to define our market and scope. Additionally we were working on the State of the Art chapter, the Gantt Chart and the Task Allocation.

3nd Week Report

In the third week, we continued making research, finished the State of the Art chapter and start thinking about how to deal with the Black Box Diagram. We also chose the niche of the market where we want our prototype to be: NATURAL SWIMMING POOLS.

4th Week Report

In this week, we did a field trip with the class to the Complexo Mineiro Romano de Tresminas and a city tour of Porto for Portuguese class. We did some corrections on the Wiki Report based on a feedback e-mail that we received from the supervisors. We finish the Black Box Diagram defining the parameters that our prototype will have incorporated, also the product-service system and the opportunities that there are on our niche. We started to work on the sketches and the project management.

5th Week Report

This week we divided the subjects ethics, sustainability and marketing to be able to specify the requirements of our solution and we also have done: the 3D structural model (renders), the structural drawings, the cardboard model, the system schematics (electrical scheme). We start thinking about the possible materials to use in the prototype and define the components to be able to make the budget.

6th Week Report

Coming back of the easter week, this was a very short week for us but we choose the material of the buoy and we defined the components and the location of those. We also have improvements on the marketing, sustainability and ethics chapters.

7th Week Report

In this week we have updated the electrical scheme, 3D model and the subjects. We have to prepare the interim presentation for the next week, make a leaflet, finish every chapter and also advance the part of the project development.

8th Week Report

This week the team finished the interim report and trained for the presentation.

9th Week Report

In the 9th week, the team made the power budget. We also updated the 3D module, because the size was too small and for better sealing the seal corners were made rounder. We made the first buoyancy calculations to make sure that the prototype will swim on the surface. Additionally we updated the report concerning the corrections.

10th Week Report

The list of components needed to be updated and the team began to think about the mobile application. First drafts concerning measurements, assistance and settings were made. Also the team got in contact with Jorge, who is responsible for the 3D printing. The team started with the arduino software and the branding.

11th Week Report

The team made a use case diagram for the application, developed the first graphical interface of the app and made the final logo. We additionally decided to make an aesthetical and a functional app.

12th Week Report

In the 13th week, the team decided to make use of the EasyIOT app. We made the PCB (Printed circuit board) drawing. The 3D module needed to be updated again due to bigger components than expected and the size of the 3D printer gave us limitations in size.

13th Week Report

The team updated the printed circuit board drawing and updated the 3D module.

14th Week Report

The team started with the electrical tests and the user manual. We also created a depression for the cork ring at the 3D module.

15th Week Report

The team continued with the electrical tests and fixed some issues with the code and electronics. Additionally the team worked on the report and the final presentation.

Meetings

1st Meeting (2018-02-22)

Agenda:

1. Presentation
2. Modus operandi
3. Project proposals
4. Electronic Logbook

Minute:

During this meeting, all the project proposals have been introduced to all the members of the EPS's program in a way to understand them and choose the most suitable for our team.

2nd Meeting (2018-03-01)

Agenda:

1. Problem definition
2. Concept of product
3. Activities for this week
4. Research and parameters

Questions:

- What opportunities do we have at ISEP in order to create a prototype?

- Does the buoy have to be drifting or can it be anchored?

- What is the fidelity level of the prototype (high VS Low)?

presentation_01.03.pdf

Minute:

Hervé lead the meeting with presentation. We presented our concept and idea of prototype. Asked clarifying questions. Got some ideas regarding the niche.

3rd Meeting (2018-03-08)

Agenda:

1. The specified concept of our product
2. State of the Art overview
3. Industrial and consumers product
4. Real-time monitors
5. Available sensors
6. Plan

Questions:

- Opinion on the concept.

presentation_08.03.pdf

Minute:

Sten lead the meeting. We presented our specified concept of our product. Reviewd the state of art and research we did. Got more ideas and more points to focus on.

4rd Meeting (2018-03-15)

Agenda:

1. Scope of the product
2. Opportunities in the niche

3. Black Box Diagram
4. Parameters
5. Product-Service System
6. Look & Feel

Questions:

- Opinion on the concept.

- Interim report = print wiki?

- We have to upload the presentations?

- Could we use solar panels instead of batteries?

presentation_15.03.pdf

Minute:

Geert lead the meeting with presentation. We presented our final product concept. The supervisors adviced us to brainstorm about the materials and montly fee of the product. They aslo adviced us to make our design not that difficult.

5th Meeting (2018-03-22)

Agenda:

1. Cardboard Model
2. Renders
3. Structural Drafts
4. Wiki: ethics, Marketing,Sustainability

Questions:

- Sponsors - 3D Printer limitations

presentation_22.03.pdf

Minute:

Mireia lead the meeting with presentation. During this meeting we presented the renders and the structural drafts and the supervisors told us that we should start thinking about the cuttings (horizontal or vertical?), the positions of the components, the sizes of the solarpanel, the sponsors and the possibility of incorporate an inner plastic box to protect the electrical components of the buoy.

6th Meeting (2018-04-05)

Agenda:

1. Final sensors used
2. Components
3. Materials
4. Production
5. Location sensors & components

Questions:

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Minute:

Hervé lead this meeting. We presented the final sensors and the electrical schemetics. The supervisors told us to pay some attention to the power regelation.

7th Meeting (2018-04-12)

Agenda:

1. 3D Model
2. Updated elektrical scheme
3. Flyer
4. Wiki

Questions:

1. 3D Model the support for the components?
2. Deliverables

presentation_11.04.pdf

Minute:

Charlotte lead this meeting. During the meeting we showed the updated electrical schematics and 3D models. The supervisors told us to make a power budget for the components and check the dimensions for the prototype.

8th Meeting (2018-04-19)

Agenda:

1. Interim report

Minute:

The team presented all the work done so far.

9th Meeting (2018-04-26)

Agenda:

1. Power budget
2. Updated 3D model after consulting Mr. C. Almeida (INESCTEC)
3. Total price estimation PSS
4. First buoyancy calculations
5. Updated Wiki after feedback interim report

Questions:

1. Remark concerning electrical schematics
2. Remark concerning objectives (report)

presentation_26.04.pdf

Minute:

Sten lead the meeting. In the meeting we discussed the power budget, updated 3D model, price estimation, and the first buoyancy calculations. The supervisors were wondering what the real consumption in regular mode is and that we have to test the batteries by sending information.

10th Meeting (2018-05-03)

Agenda:

1. Updated List of components
2. First structural draft application
3. Updated wiki

Questions:

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Minute:

Geert lead the meeting. We presented the updated list of materials and the first structural drafts of the application. To develop the application the supervisors adviced us to make a used cases and UML diagram. Furthermore they were wondering where we are going to store our data of the sensors.

11th Meeting (2018-05-17)

Agenda:

1. Application development (use case & prototype 1.0)
2. Logo & brand name
3. Work on conference paper

Questions:

1. Functional & esthetical application?

9._presentation_17.05.pdf

Minute:

Charlotte lead te meeting. We showed the first idea's of the application and the logo & name. The supervisors adviced us to use appinventor.mit.edu to develop our application and search for a provider for data from Wi-Fi module to database.

12th Meeting (2018-05-24)

Agenda:

1. Functional application (+chosen IOT system)
2. PCB
3. 3D Print
4. (Work on conference paper)

Questions:

11._presentation_24.05.pdf

Minute:

Mireia lead the meeting.

13th Meeting (2018-05-30)

Agenda:

1. EasyIoT
2. PCB
3. 3D Print
4. (Work on conference paper)

Questions:

12._presentation_30.05.pdf

Minute:

Sten lead the presentation.

14th Meeting (2018-06-07)

Agenda:

1. 3D model
2. Functional tests
3. Manual contenthttps://docs.google.com/document/d/1321zgpTE8MFFb5CM_wovwNg4CgLv4ClweyJWDYplt-0/edit?usp=sharing

Questions:

1. Final presentation
2. Feedback Manual

13._presentation_07.06.pdf

Minute:

Hervé lead the meeting.

15th Meeting (2018-06-14)

Agenda:

1. 3D model
2. Functional tests
3. Finishing wiki

Questions:

1. Final presentation

14._presentation_14.06.pdf

Minute:

Geert lead the meeting.

Activities

Start	End	Task	Description	Who
22.02.	28.02.	Problem definition	The Objectives of the project; first thoughts about the form and parameters	The team
28.02.	02.03.	Task Identification and Allocation	Team advised and made decisions regarding the roles and responsibilities in project.	The team
28.02.	02.03.	Gantti chart	Screenshotted and uploaded the Microsoft Project file to “Deliverables” section.	Sten
28.02.	30.03.	Research	Made the technical and market research on existing products and updated the “State of Art” chapter accordingly.	The team
22.02.	28.06.	Logbook	keeping the Loobook up to date	Mireia
06.03.	30.03.	Black box	Made neccesary research for components and available technology	The team
09.03.	12.03.	Structural drafts	Draft based on the actual research	The team
08.03.	15.03.	Final scope	Defining the scope based on the state of the art research	The team
15.03.	22.03.	Ethics Research	Doing the neccesary research	Charlotte
15.03.	22.03.	Marketing Research	Doing the neccesary research	Geert,Mireia
15.03.	22.03.	Sustainability Research	Doing the neccesary research.	Sten
15.03.	21.03.	Structural drafts	Designing the form of the buoy	Herve

Start	End	Task	Description	Who
20.03.	21.03.	Cardboard model	The cardboard scale model of the buoy was build.	Mireia, Herve, Charlotte
26.03.	12.04.	Ethics chapter	Writing the chapter in the wiki	Charlotte
26.03.	12.04.	Marketing chapter	Writing the chapter in the wiki	Geert, Mireia
26.03.	12.04.	Sustainability chapter	Writing the chapter in the wiki	Sten
30.03.	03.04.	Materials and Components	Research and Selection.	The team
03.03.	11.04.	Introduction	Finishing the chapter	Charlotte
03.03.	11.04.	Project Management	Finishing the chapter	Geert (The team)
03.03.	11.04.	Project Development	Finishing the chapter	Geert, Charlotte (the team)
03.03.	11.04.	Electrical Scheme, 3D Modul	Update	Sten, Herve
12.04.	13.04.	Interim Presentation	Content and slides	The team
13.04.	20.04.	Components chapter	Editing the wiki and handing in the list of components	Sten (the team)
13.04.	23.04.	Materials chapter	Editing the wiki	Herve (the team)
19.04.	26.04.	Power budget	Calculating the necessary power	Sten
26.04.	18.06.	Arduino software	Write the code	Sten
03.05.	17.05.	Visual application	Design and use case diagram	Charlotte
03.05.	17.05.	Logo	Designing	Herve
13.04.	15.06.	3D Modul	Details and corrections	Herve
17.05.	30.05.	PCB	Printed circuit board drawing	Sten
12.06.	18.06.	Poster	Design and content	Herve, Charlotte
12.06.	18.06.	Manual	Design and content	Charlotte
12.06.	18.06.	Video	Design and content	Geert
10.05.	30.05.	Paper	Writing	The team
16.06.	21.06.	Final Presentation	Content and slides	The team
13.04.	15.06.	Final Report	Writing and upload	The team
21.06.	28.06.	Final Report	Corrections	The team