

Logbook

This is your logbook. Insert here all relevant information regarding the evolution of your project

Weekly Report

1st Week Report

Choosing the project theme. Doing some background research about the themes.

2nd Week Report

We chose our project topic. Starter research about the materials and parts we could use. Prepared questions for the first meeting.

3rd Week Report

Started thinking about the objects design. Started with our marketing plan.

4rd Week Report

Hannes and Toomas researched the materials needed. Anna worked on our marketing plan. Due to the intensity of our timetable we don't have much time to work on our project.

5th Week Report

Clarification of our idea. Got our acrylic glass. Made updates and presented our material list.

6th Week Report

Continued our work on the marketing and developing our project. Started the Interim Report. Made some changes in our material list.

7th Week Report

Preparing the interim report presentation. Presenting our interim report. Visited shops for small parts (nuts, screws etc.)

8th Week Report

Waiting for the parts.

9th Week Report

We started to connect the parts (soldering and connecting wires). Hannes started testing the program on the parts.

10th Week Report

Tested the program (some problems with it). Toomas and Hannes made some angle brackets. Jana finished the logo.

11th Week Report

Toomas and Hannes made all the acrylic parts for the shell. Jana corrected the leaflet. Anna worked on the Interim report mistakes.

12th Week Report

Making the report. Jana made the poster.

13th Week Report

Testing the new IMU. Finishing the deliverables.

Meetings

1st Meeting (2012-03-01)

Agenda:

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

Minute:

Introduce here a brief report of the meeting.

2nd Meeting (2012-03-09)**Agenda:**

-Questions:

1. What are the tasks that the object must fill?
2. What sensors should it have, what are the things it should measure?
3. In what environment the object is going to be used?
4. Is there a size limit?
5. What is the budget?
6. Has it to be mobile or stationary?
7. What wireless systems (wi-fi, bluetooth) can we use?
8. What range should it operate in?
9. Do we need to use batteries or can we use the plug-in system? If we use batteries then how long should they last (how many hours)?
10. Who is the final customer/ consumer?
11. What the customer/consumer expect from it?
12. Free questions (questions that have arisen on the meeting)
13. Conclusion

Minute:

Got some information and ideas how and what to research.

3rd Meeting (2012-03-15)**Agenda:**

Questions about materials and laboratory:

1. Shall we add small parts like headers, wires or soldering materials to the material list?
2. Can we use machines for heating and cutting acrylic glass (plexiglass)? Does ISEP have any?
3. Do you know where we can buy acrylic glass in Portugal or Porto (company name would help)?
4. Who can show us the laboratory?
5. Is it possible to make small changes to the material list like a LED or switch after the end of March?
6. Is Bluetooth reflected by acrylic glass? Do we need an external antenna? (We have decided to use Bluetooth, because then the object will also be able to communicate with smartphones etc.)

Questions about marketing:

1. Do we have to do market analysis, if the Smart Object is going to be used only for school?
2. Do we have to do market segmentation?
3. Is the object only for ISEP or for individual client?
4. Can we use ISEP's logo on the Smart Object?

Free questions that have risen during the meeting.

Conclusion

Minute:

Got some answers for the questions we had. Got some good advice what to look in to and so on.

4th Meeting (2012-03-22)

Material list:

<https://docs.google.com/document/d/1uOrNmMXwRpAIS5I9XwNB77idnNh9NM5bNxiXiauNUNs/edit>

Agenda:

1. Introduction of our idea.
2. Present the material list that we have made.
 1. Do you have any suggestions about the things we are planning to use?
3. Questions about the materials
 1. Where can we buy acrylic glass and ABS plastic? Where can we find the company name?
 2. Can you recommend where can we buy the Arduino and other parts?
 3. Do you have any experience with the power consumption of our parts that we have in the list?
 4. It is possible to get a good relative position from the acceleration data or does it only work with a heavy filter?

Minute:

We got some web links where we should find the materials and parts we need (<http://www.dagol.pt/> and www.inmotion.pt). The power consumption becomes obvious when we test the parts. We don't have the general idea what the SO is going to be so we have to think about that. Also we have to think about if we need all the parts that we have listed.

5th Meeting (2012-03-29)

Material list:

<https://docs.google.com/document/d/1uOrNmMXwRpAIS5I9XwNB77idnNh9NM5bNxiXiauNUNs/edit>

Name	Link	Price	Specification	Quantity
Arduino BT	http://www.inmotion.pt/store/arduino-bluetooth	82,00 €		1
IMU Digital Combo Board - 6 Degrees of Freedom ITG3200/ADXL345	http://www.inmotion.pt/store/imu-digital-combo-board-6-degrees-of-freedom-itg3200adx1345	48,95 €	18mm X 16mm (see pictures on the link)	1
Lithium Polymer Battery	http://www.inmotion.pt/store/polymer-lithium-ion-battery-2000mah	13,95 €	Battery: 6mm x 30mm x 48mm	1
LiPoly Charger - Single Cell	http://www.inmotion.pt/store/lipoly-charger-single-cell	12.75 €	maybe 25mm x 25mm	1
Logic Level Converter	http://www.inmotion.pt/store/logic-level-converter	2,65 €	12mm x 15mm	1
Nintendo DS Touch Screen	http://www.inmotion.pt/store/nintendo-ds-touch-screen	7,95 €	55.88 mm x 69.85 mm	1
Breakoutboard for Touchpad Nintendo DS Touch Screen Connector Breakout	http://www.inmotion.pt/store/nintendo-ds-touch-screen-connector-breakout	3,50 €	12 mm x 12 mm	1
Breakout Board for ADMP401 MEMS Microphone	http://www.inmotion.pt/store/breakout-board-for-admp401-mems-microphone	8,50 €	11 mm x 14 mm	1
Standoff - Nylon (3/8", 4-40, 10 packs)	http://www.sparkfun.com/products/10927	2 X 2,23= 4,46	Problelem: Portuguese adress missing	>12
Jumper Wires	http://www.inmotion.pt/store/jumper-wires-premium-6-pack-of-30-mm-20-mf-10-ff	14,3 €		1
Screws with 4-40 thread and a flat head length: ca. 10 mm				> 16
Nuts 4-40	http://www.sparkfun.com/products/10232			>16
Angle Bracket - 4-40	http://www.sparkfun.com/products/10228	0,38 x 10 = 3,8		>8
Targus USB Bluetooth® 2.0 Adapter, 100M	http://www.vobis.pt/ProductDetail.aspx?pid=02967093&oid=&c=	14,99 € + shipping		1

Agenda:

1. Introduction of our idea/marketing idea.
2. Drawings:<http://dl.dropbox.com/u/47213371/Shell.jpg> ,
http://dl.dropbox.com/u/47213371/Componenets_v1.jpg
3. Present the material list that we have made.
4. Questions about the materials
 1. Where to buy screws, nuts, bolts...?
 2. What is the output voltage of the usb charger? Do we need an additional step Up board to get 5V ?(<http://www.sparkfun.com/products/8999>)

3. Who can show us the mechanical laboratory?
5. Time Management Problem:
 1. Is it possible to get the Arduino Board faster then the other parts? (this would be helpful, because otherwise it is hard to make real progress the next month)
6. How to create a new page in the Wiki?

Minute:

We introduced our idea. Presented the material list. Got some feedback where to get some missing parts.

6th Meeting (2012-04-12)**Agenda:**

1. Picture of the electronics

<http://dl.dropbox.com/u/64919990/Scheme2.pdf>

1. Can we connect all ground pins directly with the ground pin of the Arduino?
2. the microphone operates at 3.3 V - is VCC the 3.3 V pin?
3. Can we use the 3.3 V from the Logic Level Converter for VCC from the microphone? (not sure about this, because the product discription says it doesn't work with analog signals)
4. How do we connect the voltage regulator?
5. Picture of the Object
6. http://dl.dropbox.com/u/1073503/Componenets_v2.jpg

Minute:

Got answers to our questions.

7th Meeting (2012-05-03)**Agenda:**

1. Problem: some sensor data from IMU and touchpad is need with a lower data rate(maybe 50 Hz) than the microphone data (maybe 2000 Hz)
2. How to manage a fast data communication, to have a acceptable data rate for the microphone and also a constant period of time between each value?
3. We need to find a solution for the standoffs, which are not available at the stores in Porto.
4. Problem how to fix touchpad and microphone

8th Meeting (2012-05-08)

Agenda:

1. design mistakes in material list
2. z-acceleration problem with IMU
3. Euler angle problem with IMU

Minute:

IMU has to be changed maybe.

9th Meeting (2012-05-17)**Agenda:**

1. bending the plexi glas
2. reselution of the touch pad
3. reselution of the microphone
4. design mistakes in material list

Minute:

We got some ideas how to bend acrylic glass. Supervisors told us how to test the microphone and touch screen if they are working or not.

10th Meeting (2012-05-24)**Agenda:****Minute:**

Introduced current situation.

11th Meeting (2012-05-31)**Agenda:**

1. What should the following things involve, could we get some examples:
paper (how do we write it) poster (examples)
 1. Developement part of the project.

Minute:

We got some answers where we get the templets.

12th Meeting (2012-06-04)**Agenda:****Minute:**

General information what to add to the report, paper and so on.

13th Meeting (2012-06-14)**Agenda:**

All teams present the project results, videos and their prototypes.

Minute:

Team 1, Team 2, Team 3 and Team 4 presented their project results and the supervisors gave some feedback.

Activities

Please register here all project activities

Start	End	Task	Description	Who
01.03.2012	30.03.2012	Research and devolpment	Compose a general idea, choose materials	Hannes, Anna, Janna, Toomas
15.03.2012	14.04.2012	Marketing analysis		Anna
15.03.2012	30.03.2012	Compose material list	Make a list of materials that we need for our project	Hannes, Toomas
15.03.2012	30.05.2012	Drawings	Drawings, sketches etc	Toomas
01.04.2012	14.04.2012	Preparing Interim Report		Hannes, Anna, Janna, Toomas
12.04.2012	17.04.2012	Preparing Interim Report Presentation		Hannes, Anna, Janna, Toomas
07.05.2012	25.05.2012	Connecting parts	Soldering, conecting wires, conecting the parts to the shell	Hannes, Anna, Jana, Toomas

Start	End	Task	Description	Who
14.05.2012	16.05.2012	Making our logo	Makeing the logo for our project	Jana
14.05.2012	24.05.2012	Making the pieces we need	Makeing the angle brackets, shell parts	Hannes, Toomas
15.05.2012	12.06.2012	Making the Final Report		Hannes, Anna, Janna, Toomas
25.05.2012	12.06.2012	Making the Paper		Hannes, Anna, Janna, Toomas
06.06.2012	12.06.2012	Making the Video	Butting together our video	Jana
06.06.2012	10.06.2012	Making the Poster		Jana
10.05.2012	13.06.2012	Making the Final Presentation		Hannes, Anna, Janna, Toomas
25.05.2012	15.06.2012	Making the User Manual		Hannes, Anna, Janna, Toomas

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Last update: **2012/06/14 14:02**

