

Product design team 8

Minutes meeting 5, 21.10.2016

Present: Cyril, Loic, Micha, Tamara, Louai, Dominic
Excused: -

Communication channels used for this project:

Trello : <https://trello.com/b/pVXtibGt/magnetic-inductive-headlight>

Drive : <https://drive.google.com/drive/u/0/folders/0B7IF6TarFXPeZUJkdIZTMDMwQjA>

Blog : <http://blogs.epfl.ch/productdesignteam8>

Points to discuss:

1. Gantt chart / time planning : Are we in the time?
2. Administrative:
 - a. Component shopping list: put your components here
https://docs.google.com/spreadsheets/d/1BTRhUZ2idXD4Jx0o6bYSDy_6IClOLwxZlaAE9ag9fMw/edit#gid=0
 - b. OpenSource PCB design software : KiCad / Altium EPFL licenses
3. Updates about the separate divisions
 - a. **LED part (Head : Loic)**

Circuit with timer 555 finished, see trello. The light output circuit consumes 150 mA @ 5,3 V and 100 mA @ 5V
Power = 800 mW - 500 mW
 - b. **Harvesting part (Cyril, Dominic)**

Decision: maximum size for the magnet: 30mm diameter
→ **magnets have to arrive before next week!**
800 windings, coil length 75 m, coil resistance : 18ohms
height of the shaker: 4cm (coil windings on a total length of 3cm)
possibility to put 2-3 modules if the power is not sufficient
Testing next thursday morning
 - c. **Harvesting PCB and storage (Micha)**

The circuit is designed for 3V but the LED needs now 5V
→ change it for an output of 5 - 5.3V
→ place the supercapacitors before the output regulator
→ order components and test
→ look for the connector
 - d. **Mechanical and structure (Tamara, Louai)**

Basic design made
Changes : The PCB size has to be defined!
Make a housing around the reflector
Inform yourselves about the production (3D printing)

4. Tasks for next week

- a. Loic: Work on PCB design for timer555 (LED electronics)
- b. Cyril: Test magnet + coil, define sizes, tubes, ...
- c. Dominic: Test magnet + coil, define sizes, tubes, ...
- d. Louai: 2nd part of housing, inform about production
- e. Tamara: 2nd part of housing, inform about production
- f. Micha: Adapt the harvesting circuit design, start working on PCB, ordering and testing components