



## Alternatives for Optimizing Battery Life

Cybercom has developed a number of prototypes to be used as multipurpose Internet of Things modules. One of the main aspects to consider before you plant hundreds of such modules around in the city is how much their batteries will last, going around replacing hundreds on batteries on regular basis seems like nothing fun to do.

The purpose of this thesis will be to investigate and implement battery saving techniques for an Arduino board transmitting over LoRa protocol for one of our internal projects called *Stairs*.

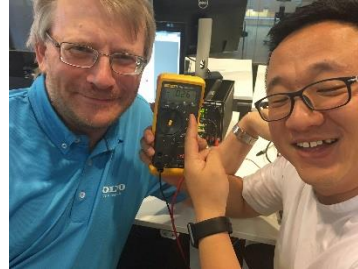
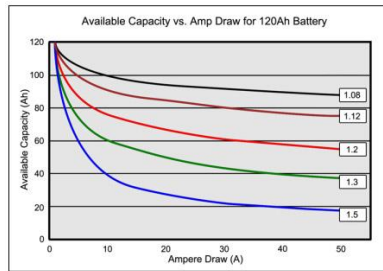
**The final result should contain a demo and an analysis of how battery consumption was improved.**

Comparing performance of different microcontroller kits such as Intel Edison or Raspberry Pi, is also an option. It will all depend on how ambitious you would like the scope of your thesis to be.



With Arduino, we face consumptions of around 25mA on running mode. The battery on the picture below has a capacity of 6600 mAh, which means over 260 hours of battery life. A reduction to 0,5 mA

would extend our autonomy to 13200 hours, quite a big difference!



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At the keyboard:



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