Title: Creation of an international sensor network - An IoT solution for the measurement of indoor light-spectrum

Introduction
EXEGER was founded in 2009 in Stockholm with the vision to become the world’s next industrial giant. We have developed the world’s best indoor solar cell and are building the world’s largest screen printing facility for solar cell production. We have our manufacturing facility in the city center of Stockholm, 3000 sqm on the KTH-campus.

At EXEGER, we understand the value of your master thesis work and view it as a stepping stone in your future career. That is why we want you to have the best experience possible. You will have access to the whole Exeger’s facility and will have the possibility to cooperate with all the engineers and researcher working on the same topic.

Background:
The products that will be powered by EXEGER are devices you see in your everyday life, like tablets, e-readers, headphones. Our vision is to accelerate the transition to sustainable electricity, join us on our journey.

As expert in indoor solar cell, Exeger is aiming to increase its expertise in domestic indoor light. Many factors are affecting the amount of light indoor. One of the obvious factor is the weather outside but is far from being the only important one. Work environment, life habits, lighting technology and other societal aspect are affecting a lot the amount of light indoor available for Exeger’s cells.

Assignment:
The purpose of this master thesis is to develop a sensor network analyzing the amount of light and the light spectrum in different indoor environment in the world.

An electronics sensor node composed of a Light sensor and an internet connection (WIFI and/or 3G) will be designed. Component costs, light sensor performance, mechanical integration and SW compatibility will be factors to consider.
The data collected will be send an IBM Cloud solution to be collected and analyzed.
A Graphical User interface will be created using IBM Cloud environment to display the data and the analysis results.

This project is large and can be suitable for two students. Students can apply alone or with a partner.

Deliverables
Deliverables expected at the end of the thesis project include clearly documented HW design, a final thesis report, and a live demonstration to an Exeger audience. Note that these are in addition to your university thesis requirements.
Qualifications
We are looking for a self-motivated and creative student with the following qualifications:
- Master student in the area of Engineering Physics, Electrical Engineering, IT, Computer Science, or similar.
- Strong communication skills in written and spoken English and good presentation skills

Bonus
- Experience in designing a PCB, Altium is a plus
- Hands-on programming experience in C
- Experience in programing microcontrollers
- IBM Cloud solution
- Experience in data processing

Please address your questions to Gael.Chosson@exeger.com and submit your resume to recruitment@exeger.com