

Group number: 22

Project title: Smartphone based nano-device for human breath sensing

Client &/Advisor: Prof. Long Que

Team Members/Role: Jared Smiley-Team Leader, Zhaobo Huang-Webmaster, Mengzhou Sha-Communication Leader, Concept Holder-Xin Chen

o **Weekly Summary**

This week we continued working on the matlab code for creating a frequency spectra from a spectrum image. We were able to graph the intensity of the spectrum image as a function of position on the image but now need to determine what frequency of light corresponds to that area of the image so we can plot intensity vs frequency. We also met with the professor and discussed our findings. We had a meeting to discuss what we thought should be included in each section of the project plan and took notes. We then split up to turn these notes into paragraph form.

Past week accomplishments

- Xin: Debugged and found fixes to matlab code at meeting, gave suggestions for each section of the project plan at meeting, wrote design section of project plan
- Mengzhou: Researched matlab code solutions, gave suggestions for each section of the project plan at meeting, wrote challenges section of project plan
- Zhaobo: Found intensity formula in matlab, gave suggestions for each section of the project plan at meeting, wrote timeline section of project plan
- Jared: Wrote code to iterate through image, find intensity and plot on graph, researched how commercial spectrometers find frequencies, wrote project requirements/specifications on project plan

o **Pending issues**

o **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Xin	Attended project work meeting, project plan meeting, worked on Matlab code, wrote part of project plan	4	11
Mengzhou	Ditto	4	11
Zhaobo	Ditto	4	11
Jared	Ditto	4	11.5

o **Plan for coming week**

- Team Member 1: Reconsider our matlab code to make it works better, discuss website plan, consider starting the android app, test code.
- Team Member 2: Reconsider our matlab code to make it works better, discuss website plan, consider starting the android app, test code.
- Team Member 3: Reconsider our matlab code to make it works better, discuss website plan, consider starting the android app, test code.
- Team member 4: Reconsider our matlab code to make it works better, discuss website plan, consider starting the android app, test code.

- **summary of meeting with our professor**

In this meeting, we showed our matlab work with Professor ue. Professor Que explained how to find frequency from spectrum image. After that he talked with us about the timeline of his project and told us what we should do in the next two weeks including finding frequencies. In the last few minutes, he told us to find out how to purchase stuff so that we can start to build the spectrometer.