EE 491 WEEKLY REPORT 1

Date: 24/01/2015

Group number: DEC1616
Project title: Surveillance of dairy animals using a smartphone-based system
Advisor: Meng Lu

Team Members/Role:
Xin Tong: App development (Skill: X-code)
Di Zhao: Mount design and 3D printing (Skill: Solidworks)
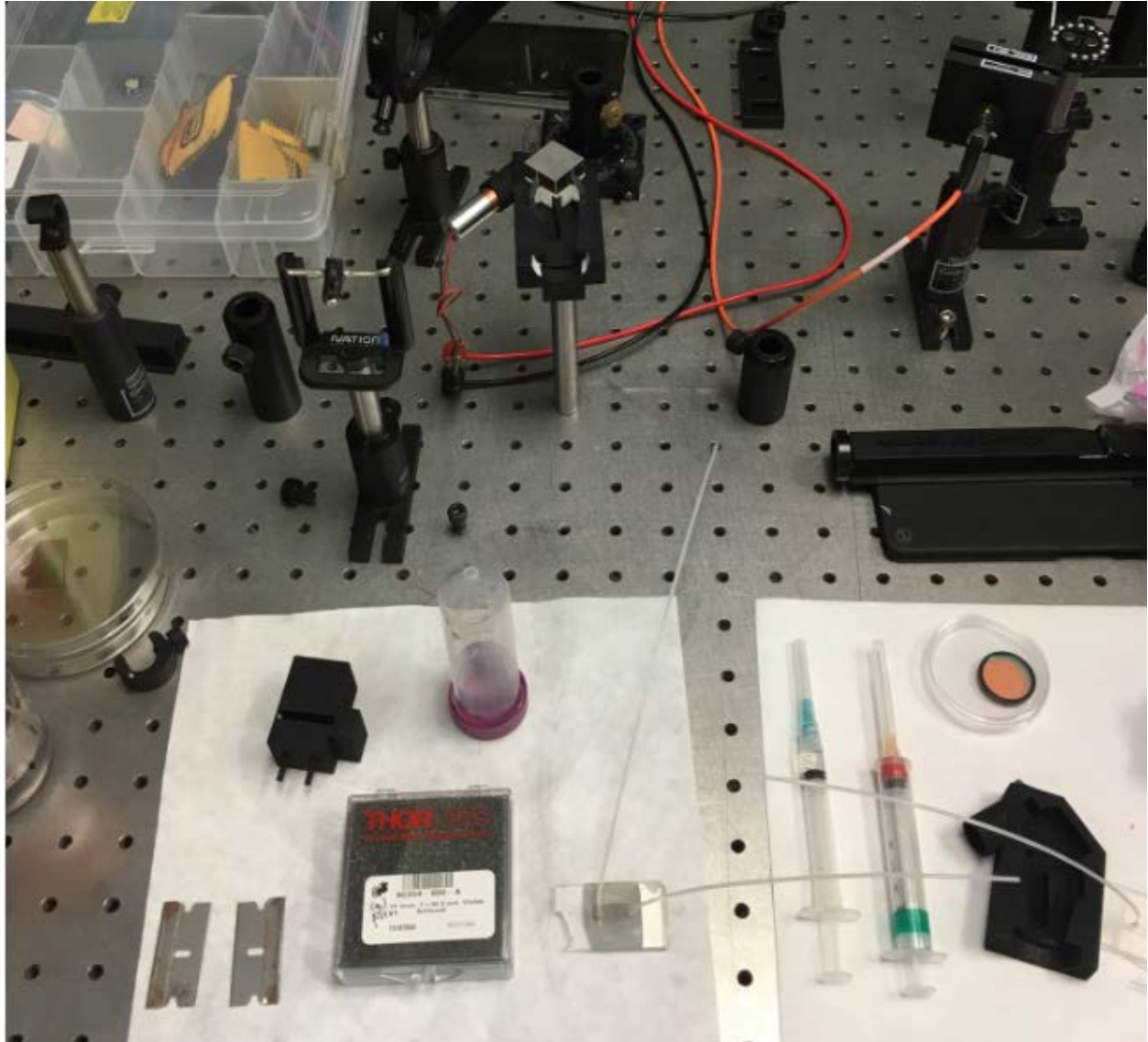Le Wei: Optical design (Skill: Code V)
Tianqi Luo: Assay development (fluorescence polarization assay kit)

Weekly Summary about the first week

We built the group in the first week, we meet each other in the second week 491 class, there are

four member in our team: Xin Tong(CPRE major),the rest of the students are: Tianqi Luo, Di

Zhao, Le Wei(we all in Electrical Engineering). At the second class, we know each other and

vote the group leader that is Xin Tong. After class we all went to the Coover Hall 2042 to make

the plan of the future steps.

Then we sent the email want to make an appointment with the Advisor (Meng Lu) that talk about

our project. After that, we successfully make the appointment at Thursday 11:00 am with our

advisor Dr. Meng Lu. During the meeting time the advisor talked about more about our project,

he introduce some devices we should to use in our project. we have one mentor in our group who

is a master students named Zijian Zhao, he will give us some suggestion and help when we have

some questions during the project. The advisor give us three papers that related project, they are:

Two SPIE papers about smartphone-based fluorescence spectroscopy, the Semrock document

about fluorescence polarization assay, Themo-fisher manua. When we finished the reading we should have the answers for this question. After the meeting our mentor Zijian Zhao showed our lab place in Coover Hall Second floor 2105.

This picture shows from our labs.
We should to use this to operating floor to do the lab section.

Here is our task last week:
To-do list:
1. Assign tasks:

☐ App development (Skill: X-code)

☐ Mount design and 3D printing (Skill: Solidworks)

☐ Optical design (Skill: Code V)

☐ Assay development (fluorescence polarization assay kit)

2. Review four articles

a. Two SPIE papers about smartphone-based fluorescence spectroscopy

b. The Semrock document about fluorescence polarization assay

c. Themo-fisher manual

3. Fundamental principles to understand this week

a. Fluorescence

b. Polarization (optics)

c. Optical setup: camera, mirror, lens, CCD

d. Mobile operation system

4. Setup a weekly meeting time:
  Every Wednesday 10:00 AM

Past week accomplishments (please describe as what was done, by whom, when)
A.We decided our group meeting time

   Every Friday afternoon 2pm

Every Monday 10am

B. We set up the meeting time with our advisor:

Every Wednesday 10 am

C. We submit our own tasks in the project:

Xin Tong: App development (Skill: X-code)

Di Zhao: Mount design and 3D printing (Skill: Solidworks)

Le Wei: Optical design (Skill: Code V)

Tianqi Luo: Assay development (fluorescence polarization assay kit)

Individual contributions

NAME	Individual Contributions	Hours this week	HOURS cumulative
A	Tianqi Luo	8	8
B	Di Zhao	8	8
C	Le Wei	8	8
D	Xin Tong	7	7

Comments and extended discussion

We are very happy to have four members in our group. We all have passion, responsibility to do the best of this senior design. We have specific details that which part we should to do together and which part the individual should do. And when we done for the paper work we all excited to do the important that is: lab section.

Plan for coming week (please describe as what, who, when)

A. Answer the questions about these paper during the second meeting with advisor and do few of power point slides to show our efforts last week.

B. To do some part of the project.

C. Get the admission key of the lab.

Summary of weekly advisor meeting (if applicable/optional)

The advisor gave us some tasks and we should complete these papers before next week meeting.

Our group have own meet three times a week, two within week, another one that is on weekends.

Group member is pretty good, we all do well last week. Hope we can do better in the future.