Senior Design 491 Weekly Report 9

Date : 11/15/2017

sdmay18-10: Patch-clamp microchip testing circuit interface

Client & advisor : Que Long

Team member & Roles :

---- Chenhang Xu - team communication leader

---- Daiyuan Ding - team webmaster

---- Li Qian - team leader & time keeper

---- Junhua Hu - Team designer

---- Ningyuan Zhang - team programmer

---- Yigao Li - team test leader

Weekly summary :

Regularly met with advisor and continued testing the PC-ONE patch-clamp with different settings to collect silicon DMEM data. Started to try put neurons to get some data.

Past Week Accomplishments

Member name	Accomplishments
Chenhang Xu	Collect the testing data and try to reduce the noise.
Daiyuan Ding	Keep working on the speed-test module. Adjust the settings to get more accurate measurement data.
Li Qian	Still working on the testing of the PC-ONE and collect testing data. Meeting with advisor.
Junhua Hu	First time on PC-ONE.
Ningyuan Zhang	Continuing testing the interface prototype and collecting data. Meeting with advisor. Trying to get the best settings.
Yigao Li	keep doing the test of interface prototype and record data. Regular meeting.

Pending issues

Member name	Accomplishments
Chenhang Xu	Use oscilloscope to find out which equipments create the noise and find the way to reduce it.
Daiyuan Ding	The oscilloscope outputs seems good, but

	something is different from the manual's expectations, need more test.
Li Qian	Try to find out the setting that fit the test.
Junhua Hu	Try to filter the noise by using PC-ONE to collect data.
Ningyuan Zhang	Still trying to find the most stable setting to start the test on neurons.
Yigao Li	figure out the smooth setting to use in the test in order to make the data as accurate as possible.

Individual contribute

Name	Individual Contributions	Hours this week	Hours Cumulative
Chenhang Xu	Order the shield to reduce the room noise and find the way to reduce the electrical noise, which is create by our device and the computer.	6	29
Daiyuan Ding	Keep working on the speed-test module. Regular website update. The outputs seems good. Need more test.	5	31
Li Qian	Testing the PC-ONE and get testing data, and find the most suitable setting by comparing the data. Regular meeting. Draft weekly report	5	33
Junhua Hu	Running speed-test. and trying to filter the noise by the enviroment.	3	35
Ningyuan Zhang	Drafted the weekly report, kept testing the interface, met with advisor. Just same as last week.	5	5
Yigao Li	Do some parts of the test and record the data. Meanwhile, meeting with professor to report our data.	5	15

Comments and Extended Discussion

We were continuing testing the interface without any other step forward. This would be a long and relatively bored procedure but we have to collect enough data to find the most suitable and stable setting to get the neurons tested.

Plan for Coming Week

We are planning to continue test the interface and until we find the best setting to test neurons.

Summary of Weekly Advisor Meeting

In this meeting, we told advisor where were we and how far we have done. Advisor gave some good advices towards the setting and the method of test with neurons.