**WNR (Wireless Neural Recorder)**

Rice University

Weekly Progress Report 2

9/11/2015 - 9/17/2015

**Agenda for meetings**

Mentor Meeting:

1. Confirm architecture of the product (one WCU per electrode or one WCU per cluster of electrodes, etc.)
2. Report on task distribution
3. Report on our analysis of the problem (module breakdown, etc.)
4. Report on progress

Meeting 2:

1. Go through pitch presentation

**Activities this week**

1. Weekly meeting with mentor and graduate student team
2. Weekly meeting within the group to discuss pitch presentation

**Problems encountered**

1. Scheduling is still a major problem

**Time devoted to project this week**

|  |  |  |
| --- | --- | --- |
| **Name** | **Tasks Accomplished** | **Hours Spent** |
| Stephen Xia | * Documentation instructions checkup * Design Specifications research | 5 |
| Tingkai Liu | * Market Analysis Research | 5 |
| Yuan Gao | * Customer Need Research | 5 |
| Xin Huang | * Design context review research | 5 |
|  | **Team Total** | 20 |

**Meetings Minutes**

Mentor Meeting – 9/17/2015 , 10:40 AM - 11:40 AM

Attendees: All except Dr. Nitin Tandon

Completed objectives:

* Update mentors on task distribution
* Clarify design architecture: no. of WCU per electrode is a decision for the design team
* Found four potential Competitions to apply for
  + TI Innovation Challenge
  + Intel Greatest Maker Challenge
  + EMedic Global Registration
  + Lemelson MIT Student Prize
* Still must figure out what the best way to design the transmission scheme: have all electrodes transmit with a chip, or connect them all to one chip and transmit all data through one BLE chip.
* Measuring neural activity introduces the an electric potential difference that arises from the contact between the electrode and brain. We must find a way to reject this offset to obtain accurate readings and avoid injecting excess DC current into the brain by accounting for this in the analog front-end
* Must compare and contrast possible wireless transmission specs.
* Device form factor will probably need to be compromised
* Design may require an external antenna

Meeting 2 – 9/18/2015 , 5:00 PM - 6:00 PM

Attendees: All undergraduate team members

Completed objectives:

* Discussed distribution of work for pitch presentation
* Finalize Pitch presentation content

**Expenditures**

N/A

**Action items list**

|  |  |  |  |
| --- | --- | --- | --- |
| **Action item** | **Owner** | **Due date** | **Status** |
| Compile Pitch Presentation PPT | Thomas | 9/19/2015 | Complete |
| Practice Pitch Presentation | All | 9/20/2015 | Complete |
| Complete Cycle 1 Documentation | All | 9/25/2015 | 50% |
| Consult Dr. Tandon about Product and Market | All | 9//25/2015 | Not Complete |

**Additional Comments/Questions for Mentors**