

## Meeting Notes

September 14, 2017

### What was discussed:

- Signed Team Contract
- Jacob reserved Room A in Think Tank from 2:00 – 4:00 every Thursday
- Dr. Perry will be coming to future meetings at 2:00 pm on Thursdays, for 30 min.
- Client Interview with Dr. Perry along with brainstorming for project design and application
- Specs of current model:
  - 3 Chips
    - Adafruit feather 32U4
    - Adafruit I2C Expander (multiplexer)
    - Adafruit absolute orientation sensor (BNO055)
  - Adafruit battery (2000mA)

### Client Interview with Dr. Perry

- Casing
  - Unobtrusive, close to body, slim and reasonably unnoticeable
  - Discussed a sleeve option (conductive thread?)
    - Potential for misalignment and shifting – fix with elbow hole or rigid structures to hold in place
      - Maybe buy one and test → our own design
  - Trunk Options
    - Elastic band in center of torso
    - More liked option – 3 or 4 point harness
      - Wiring can go through the straps to prevent complication of wires
      - Must be easy to put on and take off with one arm
- Application
  - Keep it simple for now
    - Include a couple important factors like smoothness and range of motion.
      - Create numeric values for each that can be translated by therapist
  - Factors to consider = elevation from trunk and angle about that horizontal axis
    - Use quaternion?
  - Might be useful to reach out to a therapist for input on important movements to consider
  - FUTURE HOPES
    - Therapist prescribes movements and patient can track progress
      - Green when good, red when bad, or some sort of bar graph with goal set within the app, then tracking to show how close to goal
      - Weekly graphs to show progress
- Advice from Dr. Perry
  - Brainstorm, but start SIMPLE

- Make many iterations early in the game – learning comes from trial and error
- Prioritization for Dr. Perry
  - Characteristics
    1. Stable and Low Profile
    2. Functionality – measure and convert to useful metrics (how well and # of times performed)
  - Steps to focus on
    1. Define reference point and how to make that more easily understood
    2. Design and build first prototype

**TO DO before next meeting: (Tried to Color-Code but this will be easier with new Excel Sheet 😊 )**

- **Colton** to print copies of contract for everyone and edit first page
- **Jacob, Quin, and Alex** to look at and think about designs for casing – come to next meeting with these ideas – plan to pick one to focus on first?
- **Jacob** to reach out to Dr. Perry with Agenda for next meeting (2:00) and Prioritization/Tasks we obtained from the meeting with him. We need him to approve this.
  - a. **DUE 9/28:** Transcript of client interview and target specs sent to client.
- **Ruth, Colton, and Matthew** to review code and begin thinking about potential bottlenecks
- **Alex and anyone else** to look at potentially using Asana for team communication – come to meeting with update
- **Alex** to begin Excel Sheet for action item list
- **Alex** to talk with Textiles and Design friend for sewing input

**Agenda for Next Meeting:**

Date: September 21, 2017

Time: 2:00 pm

Place: Think Tank Room A

1. Review Agenda
2. Discuss design ideas of casing – work to decide which to focus on first
3. Discuss how to fix the code – at a high level
4. Hook up device to cell phone and watch it run – determine where we see room for improvement
5. Determine specific action items and add to excel sheet
6. Review Action items and team minutes