

Team Leader: **Michael Sizemore**

Secretary: **Sara Taylor**

Team members in attendance:

Michael Sizemore, Mark Wurzelbacher, Sara Taylor, Eric Nolan, Tom Blanford

Meeting Summary

- Did Tom find capacitors that Dr. Schafer put into the box?
 - Mark found in box
 - Needed for DC blocking
- Clock:
 - DSP has oscillating circuitry inside, but unsure how to clock external AD; found out that we can use a multipurpose pin and set it as a clock, so should be able to share the DSP's clock
 - Schafer questions whether we can do that; typically need to run in same clock cycle; Michael responds that you can set the multi-purpose pin as a clock, resolving the issue
 - Schafer: have we verified that this can be done yet? No - need to verify that we can get clock out
 - Clint also has a lot of extra signal generators if our current one has a problem
- Battery:
 - Has wrong connector to charging circuit; "The two don't mate" - Dr. Schafer
 - Header pin could charge it if done correctly; could measure voltage and see if identical
 - XH for charge plug (3 pin); red discharge plug
 - Provides up to 7.4v; regulator can only take 5v
 - Problem of documentation on website
 - Need to determine if charging circuit can work with battery
- Microphones:
 - MEMS were able to be soldered onto board; seem to be workable!
 - Tom "soldered the layout of the board, plopped the microphones on, and heated it some more;" surface tension lined/locked up
 - For eventual product. want to rearrange signals (ground to middle) and cut down size of board
 - Considerations: soldering process and heating 4x4; want to size holes to meet gain of wires
- Layout of board
 - Digital/Analog half
 - Isolate pulse signal
- Microphones:
 - We aren't rewiring the headphones
 - Size of earbud to be considered when more is known about the microphone and how small of a space will be needed

- *Impedance Matching - 16-24 ohm loads to match DSP*
 - *Schafer: Are we worried about power transfer? Match impedance*

Unresolved Issues

- Clock: Need to verify that we can get clock out
- Battery: Need to determine if charging circuit can work with battery - NO
 - Find alternative - Mark
- Microphones: For eventual product, want to rearrange signals (ground to middle) and cut down size of board
 - Considerations: soldering process and heating 4x4; want to size holes to meet gain of wires
- Headphones: Impedance matching
- Continue with AD
- Caps on microphone board; redesign microphone board
- Microphone board - Michael