

Meeting Activity Agenda

15001

Attendees:

- Adam Podolec: Electrical Engineer / Project Lead
- Megan Ehrhart: Senior Electrical Engineer
- Tyler Leichtenberger: Mechanical Engineer
- Noah Schadt: Mechanical Engineer / Team Facilitator
- Jared Green: Senior Mechanical Engineer
- Geni Giannotti: Biomedical Engineer / Treasurer

Current Meeting	Next Meeting
Location: MSD Area	Location: BAD Lab
Start Time: 11:00am	Start Time: 12:30pm
End Time: 2:00pm	End Time: 2:00pm
Meeting Date: Thursday 10/16/14	Meeting Date: Monday 10/20/14

Old Business Items:

- Risk Updates
- Strain problem
- Numbers in the document footers

New Business Items:

- ASME contest
- Muscle optimization phase 1

Items Left Outstanding:

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Action items – Owners / Deadline:

- ❖ Team Tasks - All
 - Prepare a list of individual tasks per Megan's template in Subsystems/Electrical
- ❖ Adam Podolec
 - Solenoid
Long term (10/21)
 - Bio
 - In Air flow test look at flow of air muscle
- ❖ Megan Ehrhart
 - Follow up with Email to our Guide
 - Order parts
 - Filtering test
 - Advance Pseudocode
 - Advance Arduino Schematics
 - Ongoing
 - Make EDGE magnificent
- ❖ Tyler Leichtenberger
 - Upload report and FBDs
 - Work on deflection problem
 - Update risk table

Meeting Activity Agenda

15001

- Work on CAD to achieve 10%
Long term
- In Air flow test look at flow of air muscle
- ❖ Jared Green
 - Filtering test
 - Basic timing diagram
 - Long term
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- ❖ Geni Giannotti
 - Write test report from lower foot attachment
 - Include FBD
 - Draft the BOM
 - Work on the budget
 - Long term
 - Email Nazareth contact with question
- ❖ Noah Schadt
 - Visit Performance paintball and test paintball tank
 - Add notes / email
 - Work on getting LabVIEW test rig to work
 - Draft report from the muscle optimization stage I
 - Long term (10/21)
 - Refine foot-lift model with angles
 - Complete report from foot-lift feasibility test
 - Add corrosion test to long term plan
 - Consider Permanent Elastic in front

Meeting Notes:

- Announcements:
 - Patent attorney is coming to speak this Friday 10/17 from 12:00-1:00pm in GLE-4425
 - Lunch is provided but they needed to know how many people to plan for
 - Noah is planning on attending
 - Start looking for contests
 - Some past teams have been given travel grants to go to Oregon, Boston...
 - One listed was a past AFO team
- LabVIEW consulting was pretty informal, got enough information to get us going
- Brinkman Lab
 - John Bonzo is the contact, he's often busy
 - 2 CNC mills – they are pretty quick
 - 2 3D printers one is like a maker-bot: ABS plastic \$5/ci other is \$15/ci
 - 3D printing is porous and not ideal for waterproof parts

Meeting Activity Agenda

15001

- Water jet is CNC, quick and accurate for 2D profiles
- Fused deposition is also available – not great in tension
- Cost can be flexible depending on budget, it should really be \$95/hr
- We asked where is the best place for fabric and sewing equipment at RIT
 - John recommended checking out the Industrial Design department on the 4th floor of Building 7
 - Potential contact: Rick
- Geni looked up the ASME contest
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Notes from meeting with Dr.D:

- Q: Where can we get a power supply next to compressed air so that we can test the solenoid?
 - A: There may be stuff in the design center
 - A: Check with Dr.KLK since this problem has probably come up before
- Q: Would it be alright to make 3 different size AFO's?
 - A: Yes, that makes sense; you may need to build a bigger and smaller one. The weight of the foot and things like that may be a factor. Also, how easily it can be obtained.
- Q: Monitoring air pressure; do we have sensors already? Do we want to move forward with the \$20 purchase?
 - A: \$20 is not too bad; we probably won't go over budget. Time is the real concern; this is a lower priority and it's not very critical compared to other functions.
- Q: How would you suggest we obtain a more accurate number for the number of steps/day?
 - A: Check the CDC website since it has lots of useful medical data; it may be disorganized. One of the P1300_ projects found a source that actually studied the number of steps of AFO users.
- Q: Could you review our prioritized task list and see if we seem to be missing anything critical?
 - A: Routing between the upper and lower foot attachment (week 12?) lower priority
 - A: Untethering it and incorporating the terrain sensing system are really what differentiates this apart from the past projects
 - A: Curb sensing. Would like the step detection to be used in other circumstances where there is an elevation change, if possible.
- Adam's friend with an AFO shared that his new AFO was rigid and it interfered with another insert he had. He was excited to hear we were working on a soft orthotic.
- Our subsystems design review is scheduled for Thursday Oct. 23, 2014
- Later Dr.D mentioned more about the contests; the two most likely are:
 - RESNA: Rehabilitation Engineering and Assistive Technology Society of North America

Meeting Activity Agenda

15001

- Location Denver, CO
- Key dates:
 - **December 2, 2014** - Registration opens
 - **April 3, 2015** - Registration closes
 - **April 17, 2015** - Submission deadline
 - **June 10-14, 2015** – RESNA 2015
- <http://www.resna.org/news-events/annual-meeting/annual-meeting-archives/program/student-design-competition>
- <http://aac-lerc.psu.edu/wordpressmu/RESNA-SDC/>
- SB³C, formerly ASME summer BioEngineering undergrad
 - New: <http://sb3c2015.com/>
 - Location: Utah
 - Key dates:
 - January 16, 2015: abstract submission
 - April 1, 2015: acceptance notification
 - April 24, 2015: early bird registration
 - **June 17-20, 2015: SB3C Meeting**
 - Old: <http://www.asmeconferences.org/sbc2013/>
- IEEE competition is another possibility at RIT