

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: MSD Area
Start Time: 11:00am	Start Time: 11:00am
End Time: 2:00pm	End Time: 2:00pm
Meeting Date: Tuesday 11/4/14	Meeting Date: Thursday 11/6/14

Old Business Items:

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New Business Items:

- Ask Guide about what is expected for an assembly drawing
- Talk to guide about component housing

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Items Left Outstanding:

- Will need a table of flow down from ER all the way to components (flow chart?)

Action items – Owners / Deadline:

- ❖ Team Tasks - All
 - Keep track of action items from the review
- ❖ Adam Podolec
 - Prepare MSD II plan template for team to populate
 - Add video for dorsiflexion
 - Schedule meeting with Guide
 - Email Geni about solenoid
 - Looking into power options
 - Purchasing Solenoid hardware
 - Long term
 - Bio
- ❖ Megan Ehrhart
 - Finish Layout PCB/SD distance sensing function
 - Test with Adam
 - Talk with Jared
 - Power ratings
 - Budget feasibility
 - MSD II (not sure what this means)
 - Long term
 -
- ❖ Tyler Leichtenberger

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- Design attachment
- Continue Muscle optimization
- Iterate upper attachment
- Help Geni with test
- Increase severity of fishing line risk
- Long term
 - Color code risk table changes
- ❖ Jared Green
 - PCB Sensors / Schematic (almost done)
 - SD card selection (micro SD)
 - Power source (assist Megan)
 - MSD II project plan
 - Update Detailed design project plan on a weekly basis
 - Distance sensing – (Ideal position)
 - Long term
 -
- ❖ Geni Giannotti
 - Update drawings (11/11)
 - Complete lower attachment test
 - Write test report
 - Long term
 - Purchasing
 - BOM
 - Budget
- ❖ Noah Schadt
 - Test plan for strain test / add details to prioritized tasks
 - Continue Muscle optimization
 - Consider Permanent Elastic in front
 - Long term
 - Refine foot-lift model / report
 - Read Adam's email and discuss
 - Type questions for Dr.D
 - Notes
 - Type report about # of steps based on research

Meeting Notes:

- Held a brief meeting with guide
 - Suggested Megan send Dr.D a note concerning the scheduling of our next review
 - The goal of MSD I is that we should have everything done and be able to leave the galaxy and it would be clear for someone else to pick up where we left off

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- The difference between and “A” or “B” in this phase is if we showed significant prototype progress
- Guide really encouraged us to get a move on system integration so we can learn from it now
- *Then we talked about how before 1972 you could be drafted and die in combat but you couldn't vote*
- Assembly drawings can be essentially annotated photos
 - They should identify everything
- Geni and Tyler as engineers need to create metrics for their soft sciences of comfort and such
- Level of comfort
- **Component housing**
 - Guide mentioned the broom theory
 - If you are sweeping and you miss something then you need to bring the broom back and bring that up to the pile
 - We need to bring the component housing issue to a higher priority since it is something we previously overlooked
 - We need to “put a stake in the ground”
 - Start with something and improve from there
 - What we have now rolling around in the backpack “that is not good enough”
 - Put effort into the design – show engineering thinking
- BOM
 - We need to spec out everything
 - Some items such as electrical tape and wire ties can be “A/R” as required

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Action Items					
Item #	Description	Responsible	Due Date	Close Date	Comments
A001	Consider Permanent Elastic in front	Noah & Tyler	11/11		By DDR
A002	Refine foot-lift model with angles	Noah	11/11		By DDR
A003	Consider not using a quick connect	Noah & Tyler	-		Gate Review
A004	BOM: add columns (vendor/shipping)	Geni	11/11		By DDR (long term)
A005	Look into downsizing electrical side	Megan	11/11		By DDR (long term)
A006	Add music to videos	Noah	-		(optional :)
A007	Color correlation on the M-opt plot	Noah	11/11		Make EGDE clearer
A008	Engineering metric for foot attachment	Geni	11/11		Need to quantify things
A009	Ask Dr. C about compression sleeves	Geni & Jared	11/11		Nazareth clinic
A010	Tweak/update sketched	Geni	11/11		GAD models
A011	Color code the risk table with changes	Tyler	11/11		Expect likelihood changes
A012	Test strain of fishing line	Noah	11/11		Hang weights on the line
A013	Increase severity of fishing line risk	Tyler	11/11		See other strain risk
A014	Move pressure alert priority down	Megan	11/11		On prioritized task list

Issues					
Item #	Description	Responsible	Open Date	Close Date	Comments
I001	The AFO could be slippery with socks	Geni	10/23		Relates to A009

Decisions				
Item #	Description	Contributing Individuals	Decision Date	Comments
D001	Testing comfort with different users	Geni - Tyler	10/23	This is an ongoing resolution
D002	Bring Upper-Lower attachment prototype	Geni - Tyler	10/23	Decided as goal for DDR

Week 9: Rubric

Deliverables (quantity & quality)

Phase-specific deliverables:

- Design output (see examples)
- Risk assessment, mitigation plans & triggers
- Test plan (updated)
- Preliminary Detailed Design Review (80%)

Example design output:

- ME: Drawing package (incl. part and assembly drawings, fasteners, and manufacturing processes identified), mechanical simulations, LabView algorithms
- EE / CE: final schematics and parts list, detailed SPICE, Matlab simulations, development tools. For software: UML/use cases, algorithms, state diagrams, AD/DA mapping for controllers, etc.
- ISE: factory layout, process flow diagrams, workflow maps, supply chain maps, ergonomic drawings, lean implementation plan, inventory management plan.
- BOM complete: vendor identified for long lead-time parts, make-buy (or design-buy) decisions clarified, review against budget
- Simulation models

Process

- "- Use of phase-specific tools => outcomes: breadth of tools used, execution, analysis, iteration
- Customer is appropriately engaged
- Requirements flow-down: customer => system => subsystems => components => tests
- Requirements traceability: tests => components => subsystems => system => customer
- Revisit analyses
- Problem solving & risk assessment
- Project planning and tracking
- Use of feedback
- Team functioning
- Documentation
- Execution of review"

Contribution to Team

Quantity & quality of results, adherence to team norms and values, peer reviews, professional behavior, effective communication, use of feedback, project planning and tracking, logbook and other documentation