

**Meeting Purpose:**

To review the progress of P15001 and to determine areas for improvement

**Materials Reviewed:**

Project 15001 System Level Design Review Presentation

**Attendees:**

Adam Podolec:	Electrical Engineer / Project Lead
Megan Ehrhart:	Senior Electrical Engineer
Jared Green:	Senior Mechanical Engineer
Tyler Leichtenberger:	Mechanical Engineer
Noah Schadt:	Mechanical Engineer / Team Facilitator
Geni Giannotti:	Biomedical Engineer / Treasurer
Ed Hanzlik:	MSD Guide
Dr. Beth DeBartolo:	Customer
Dr. Kathleen Lamkin-Kennard:	Customer / Technical Expert

**Recorded by:** Noah Schadt: Mechanical Engineer / Team Facilitator

Noah Schadt                      (*signature*)

**Meeting Date:** 10/2/2014

**Previous Open Action Items Reviewed:**

Increase font size for next review's Powerpoint  
Increase benchmarking research  
Remember clients are not patients  
More specific definition of problem (clients with spasticity)  
Refined Engineering requirements  
Use Scenario

**Discussion** (*describe any relevant discussions not captured in actions / issues / decisions tables*):

Ankle brace is that going to restrict the foot? – Noah discussed that it would not and showed the morph chart  
Sensor question from our guide – to be addressed later

Passive vs active support – passive might be able to hold residual air and keep the foot rigid

Secure foot – how did you come to that Dr.KLK – addressed; morph chart shown in backup slides

How could you conserve excess air and integrate sensors? Dr.D – Noah and Megan shared brainstorming ideas they had discussed

Remember that air leaks are a real possibility especially with quick connects Dr.D

Terrain sensing, something interesting – risk ant: mitigation (*I'm not sure what this was about, but we do need to add more technical mitigation plans and we could use the ROBO Ant's info to help us with this*)

<b>Action Items</b>					
<b>Item #</b>	<b>Description</b>	<b>Responsible</b>	<b>Due Date</b>	<b>Close Date</b>	<b>Comments</b>
A001	Adjust Use Scenario	Geni	10/9		Switch before sitting
A002	Change "FOS" instead of multiplier	Noah	10/9	10/5	ER units column
A003	Use a constant system of units	Noah	10/9	10/5	ER units column
A004	ER temperature is not heat	Noah	10/9	10/5	ER units column
A005	Consider not using a quick connect	Tyler	10/21	10/15	To be included in DDR
A006	Look at weight per hour	Jared	10/9	10/9	In the batteries EA
A007	In Air flow look at flow of air muscle	Tyler & Adam	10/21	10/20	Consideration for test
A008	Unplanned use scenario	Geni	10/21	10/9	Inflate for misuse
A009	Research low air alert	Megan	10/21	10/16	Discussed with customer
A010	Consider Permanent Elastic in front	Noah & Tyler	10/21		By DDR
A011	Weight budget	Tyler	10/9	10/9	
A012	Refine foot-lift model with angles	Noah	10/21		
A013	Consider more technical risks	Tyler	10/21		Ongoing
A014	Add corrosion test to long term plan	Noah	10/9		Need long term test plan

<b>Issues</b>					
<b>Item #</b>	<b>Description</b>	<b>Responsible</b>	<b>Open Date</b>	<b>Close Date</b>	<b>Comments</b>
I001					
I002					
I003					

<b>Decisions</b>				
<b>Item #</b>	<b>Description</b>	<b>Contributing Individuals</b>	<b>Decision Date</b>	<b>Comments</b>
D001				
D002				
D003				

Notes from Megan Ehrhart: Senior Electrical Engineer

Presenters: Team 15001

- Adam Podolec
- Megan Ehrhart
- Tyler Leichtenberger
- Jared Green
- Geni Giannotti
- Noah Schadt

Action Items

- ❖ Use Scenario: Switch sit down and turn off
- ❖ Engineering Requirements: stick to one system of units
- ❖ Concept: look more into rigid brace or soft brace, could use for passive support to balance the foot
- ❖ Concept: quick connects for design process, not in final design (could be difficult for clients to use. Investigate other solutions
- ❖ Concept: Venting air options. Look into uses
- ❖ Feasibility Testing: weight/mWh for batteries
- ❖ Risk Table: Think of more causes for the technical risks in risk table. Add more technical Risks as we go along
- ❖ Feasibility Testing: look into inflating muscle and capping it off when air is low. This would mean that we need to come up with a way to tell if the air is low.
- ❖ Feasibility Testing: weight allocation chart, similar to budget
- ❖ Feasibility Testing: more complex simulation of forces, specifically forces at an angle.