Project: veyebrations Date: 9/12/2015

Group Members: Dylan Ayrey, Joshua Pueschel, Raymond Dodge

URL: None yet

Updated Milestone chart

J - Joshua Pueschel, R - Raymond Dodge, D - Dylan Ayrey

		Jones, IX - I		odge, D - Dylan A	yicy	
	<u>Original</u>		<u>Modified</u>			<u>Due</u>
	<u>Completion</u>	Who does	<u>Completion</u>			<u>next</u>
<u>Description</u>	<u>Date</u>	<u>it</u>	<u>Date</u>	<u>Comments</u>	<u>Done</u>	<u>week</u>
				Had to repurchase		
Purchase components		JRD	9 - 11 - 15	some parts	1	
Unit test components to verify functionality				·		
				Thermistors are		
Unit test thermistor	9 - 4 - 15	J	9 - 2 - 15	5% inaccurate.	1	
Unit test proximity sensor	9 - 4 - 15	R	9 - 2 - 15	Accurate to 15 feet	1	
Unit test amplifier	9 - 4 - 15	D	9 - 11 - 15	Delayed due to shipping	1	
Unit test vibrating motor	9 - 4 - 15	J	9 - 2 - 15	Pulls .06mA at max voltage	/	
Unit test atmega328	9 - 4 - 15	R	9 - 2 - 15	Functions as intended	1	
Unit test radio module	9 - 4 - 15	D	9 - 11 - 15	Need to order level shifter. Testing is delayed		✓
Unit test resistors/switches/buttons/capacitors	9 - 4 - 15	J	9 - 2 - 15	Accurate to within 5%	/	
Unit test power regulator	9 - 4 - 15	D	9 - 2 - 15	Correct voltages demonstrated	1	
Write software for components						
Write software for temperature control	9 - 11 - 15	J	9 - 2 - 15	Complete and tested. Accurate and responsive	1	
Write software for radio communications	9 - 11 - 15	R		Delayed due to shipping		✓
Write software for vibration control	9 - 11 - 15	D		Completed	1	
Write software for proximity detection	9 - 11 - 15	D	9 - 2 - 15	Complete and tested. Delay is	√	

				around 50ms for 15 feet.	
Write software to integrate components	9 - 18 - 15	JRD	09-19-2015	We have integrated the proximity sensor and the thermistor code	✓
Create mockup on breadboard	9 -22 -15	JRD	09-20-2015	Continued work in progress	
Integration test mockup and revise	9 -29 -15	JRD	09-27-2015		
Tune vibration control algorithm	9 -29 -15	JRD	09-27-2015	We are going to need to implement a running average to avoid small blips	
Create PCB board					
Design PCB Schematic	10 - 15 - 15	JRD	10-11-2015		
Design PCB Layout	10 - 18 - 15	JRD	10-17-2015		
Order PCB board	10 - 18 - 15	JRD	10-17-2015		
Create Enclosure					
Design Enclosure	11 - 1 - 15	JRD	11-07-2015		
Print Enclosure	11 - 1 - 15	J	11-07-2015		
Mount components on PCB board					
Mount the surface mount in reflow oven	11 - 8 - 15	JRD	10 - 24 - 2015		
Cleanup the reflow results	11 - 10 -15	JRD	11 - 11 - 2015		
Mount dip components and non-surface mount components	11 - 11 - 15	JRD	11 - 13 - 2015		
Test PCB board	11 - 18 - 15	JRD	11 - 25 - 2015		
Integration test for enclosure and PCB board					
Test board fits in enclosure securely	12 - 9 -15	JRD	11 - 25 - 2015		
Test system functions in enclosure	12 - 9 -15	JRD	11 - 25 - 2015		
Acceptance testing					
Drop test	12 - 9 -15	JRD	11 - 25 - 2015		

Comfortability Test	12 - 9 -15	JRD	11 - 25 - 2015		
Polishing	12 - 12 -15	JRD	11 - 25 - 2015		

Status

This week we were able to able to finish writing code for the proximity sensor, the temperature controller, the amplifier and the vibrating motor. We wrote tests, and integrated those components. The mockup on the breadboard is now capable of vibrating at different strengths based on how far away objects are.

Gantt Chart

				Date:
1.0 Unit test components to verify functionality	2015-08-24	2015-09-06	14	87.50%
1.1 Unit test thermistor	2015-08-24	2015-09-06	14	100.00%
1.2 Unit test proximity sensor	2015-08-24	2015-09-06	14	100.00%
1.3 Unit test amplifier	2015-08-24	2015-09-06	14	100.00%
1.4 Unit test vibrating motor	2015-08-24	2015-09-06	14	100.00%
1.5 Unit test atmega328	2015-08-24	2015-09-06	14	100.00%
1.6 Unit test radio module	2015-08-24	2015-09-06	14	0.00%
1.7 Unit test resistors/switches/buttons/capacitors	2015-08-24	2015-09-06	14	100.00%
1.8 Unit test power regulator	2015-08-24	2015-09-06	14	100.00%
2.0 Write software for components	2015-09-07	2015-09-13	7	81.25%
2.1 Write software for temperature control	2015-09-07	2015-09-13	7	100.00%
2.2 Write software for radio communications	2015-09-07	2015-09-13	7	25.00%
2.3 Write software for vibration control	2015-09-07	2015-09-13	7	100.00%
2.4 Write software for proximity detection	2015-09-07	2015-09-13	7	100.00%
3.0 Write software to integrate components	2015-09-13	2015-09-19	7	75.00%
3.1 Integrate Components	2015-09-13	2015-09-19	7	75.00%
4.0 Create mockup on breadboard	2015-09-07	2015-09-20	14	60.00%
4.1 Create Mockup	2015-09-07	2015-09-20	14	60.00%
5.0 Integration test mockup and revise	2015-09-21	2015-09-27	7	65.00%
5.1 Integrate software and breadboard and tune vi	2015-09-21	2015-09-27	7	65.00%