Project: veyebrations
Date: 9/5/2015
Group Members: Dylan Ayrey, Joshua Pueschel, Raymond Dodge
URL: None yet

Updated Milestone chart

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

Description	Date	Who does it	Modified Date	Comments	Done	Due next week
Purchase components		JRD	9 - 11 - 15	Had to repurchase some parts	✓	
Unit test components to verify functionality	--	--				
Unit test thermistor	9 - 4 - 15	J		Thermistors are 5% inaccurate.	✓	
Unit test proximity sensor	9 - 4 - 15	R		Accurate to 15 feet	✓	
Unit test amplifier	9 - 4 - 15	D	9 - 11 - 15	Delayed due to shipping		✓
Unit test vibrating motor	9 - 4 - 15	J		Pulls .06mA at max voltage	✓	
Unit test atmega328	9 - 4 - 15	R		Functions as intended	✓	
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		Accurate to within 5%	✓	
Unit test power regulator	9 - 4 - 15	D		Correct voltages demonstrated	✓	
Write software for components	--	--				
Write software for temperature control	9 - 11 - 15	J		Complete and tested. Accurate and responsive	✓	✓
Write software for radio communications	9 - 11 - 15	R		Delayed due to shipping		✓
Write software for vibration control	9 - 11 - 15	D		Complete but untested due to shipping		✓

Write software for proximity detection	9 - 11 - 15	D		Complete and tested. Delay is around 50ms for 15 feet.	✓	✓
Write software to integrate components	9 - 18 - 15	JRD		We have integrated the proximity sensor and the thermistor code		
Create mockup on breadboard	9 -22 -15	JRD		Continued work in progress		
Integration test mockup and revise	9 -29 -15	JRD				
Tune vibration control algorithm	9 -29 -15	JRD				
Create PCB board	--	--				
Design PCB Schematic	10 - 15 - 15	JRD				
Design PCB Layout	10 - 18 - 15	JRD				
Order PCB board	10 - 18 - 15	JRD				
Create Enclosure	--	--				
Design Enclosure	11 - 1 - 15	JRD				
Print Enclosure	11 - 1 - 15	J				
Mount components on PCB board	--	--				
Mount the surface mount in reflow oven	11 - 8 - 15	JRD				
Cleanup the reflow results	11 - 10 -15	JRD				
Mount dip components and non-surface mount components	11 - 11 - 15	JRD				
Test PCB board	11 - 18 - 15	JRD				
Integration test for enclosure and PCB board	--	--				
Test board fits in enclosure securely	12 - 9 -15	JRD				
Test system functions in enclosure	12 - 9 -15	JRD				
Acceptance testing	--	--				
Drop test	12 - 9 -15	JRD				
Comfortability Test	12 - 9 -15	JRD				
Polishing	12 - 12 -15	JRD				

Status

Most of the parts have arrived at this point. We are still waiting on a battery, a level shifter for the radio module, and the BJT transistors for amplifying. We started writing code and have made good progress. The source can be found here: https://github.com/dxa4481/Veyebrations/. Most of the code has not been merged into the master branch, and can be viewed by changing the branch. The code is being styled via arduino's style guide for libraries which can be found here: https://www.arduino.cc/en/Reference/APIStyleGuide.

Gantt Chart

Veyebrations		Start Date:	August 24, 2015	
Task	Start Date	End Date	Duration (days)	Percent Complete
1.0 Unit test components to verify functionality	2015-08-24	2015-09-06	14	75.00%
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	0.00%
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/capacit	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	75.00%
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	75.00%
2.4 Write software for proximity detection	2015-09-07	2015-09-13	7	100.00%