Updated Gantt Chart of Project Schedule (3/9/16)

ID	Activity	Start	Finish	Hours	Completion Percentage
1	Read Manual for Interpretation of data packet from scanner	9/15/2015	9/17/2015	3.33	100%
2	Research Image Registration Algorithms	9/22/2015	9/24/2015	4.33	100%
3	Purchase Camera	9/22/2015	10/1/2015	N/A	100%
4	Purchase Embedded Device	9/22/2015	10/8/2015	N/A	100%
5	Receive VLP-16	9/22/2015	10/15/2015	N/A	100%
6	Test Embedded Device	10/20/2015	10/20/2015	2.17	100%
7	Test Power supply to camera	10/22/2015	10/27/2015	5.83	100%
8	Implement Image Registration in MATLAB	10/22/2015	10/29/2015	7.17	100%
9	Implement Data Packet Read Function on Embedded Device	10/22/2015	11/10/2015	16	100%
10	Test image Capture Capability of Camera	10/29/2015	11/5/2015	7.17	100%
11	Implement Image Registration on Embedded Device	11/3/2015	11/23/2015	20.83	85%
12	Camera Installation	11/10/2015	11/17/2015	7.67	100%
13	Test Data Packet Read Function on Embedded Device	11/12/2015	11/19/2015	6.33	100%
14	Interface via operating system	11/19/2015	12/1/2015	8	75%
15	Test power supply to scanner	11/23/2015	12/1/2015	3.17	0%
16	Implement Image Registration for Single Frame Input	12/1/2015	1/21/2016	11	70%
17	Test Timing And Transmission of Data	12/3/2015	1/21/2016	6.17	25%
18	Test VLP-16 Scanner	12/3/2015	12/8/2015	3.17	100%
19	Process Data Packet From Scanner	1/21/2016	2/2/2016	11.33	100%
20	Image Registration For Live Video	1/26/2016	2/4/2016	11	70%
21	Camera Data Packet Transmission	2/4/2016	2/16/2016	11.5	100%
22	Orient/Install Scanner with appropriate scan angle (15 degrees)	2/9/2016	2/16/2016	6.17	0%
23	Progress Presentation	2/18/2016	2/18/2016	Deliverable	N/A
24	Student Expo Abstract	3/10/2016	3/10/2016	Deliverable	N/A
25	Test System Stability	3/22/2016	3/29/2016	Deliverable	N/A
26	Project Demonstration	3/24/2016	3/24/2016	Deliverable	N/A
27	Final Presentation (Last Lab Day)	4/7/2016	4/7/2016	Deliverable	N/A
28	Student Expo Poster Printing Deadline	4/7/2016	4/7/2016	Deliverable	N/A
29	Student Expo Poster Setup	4/12/2016	4/12/2016	Deliverable	N/A
30	Student Expo	4/14/2016	4/14/2016	Deliverable	N/A
31	Final Report (Draft)	4/14/2016	4/14/2016	Deliverable	N/A
32	Final Report	4/28/2016	4/28/2016	Deliverable	N/A
33	Final Web Page	4/28/2016	4/28/2016	Deliverable	N/A
34	Advisory Board Poster Printing Deadline	4/28/2016	4/28/2016	Deliverable	N/A
35	Advisory Board Poster Presentation	4/28/2016	4/28/2016	Deliverable	N/A

Progress Update (3/9/16)

Juan Vazquez

Array implementation is was successful and is now functional on the Odroid, however currently the program is encountering a segmentation fault. I have now begun working with timers to speed up the data capturing process and am currently debugging the code to eliminate the segmentation fault.

David Bumpus

I have explored methods for registration of the range image and webcam image. Blob detection seems to be the best method for meaningful keypoint detection in the range image. Additionally, I am exploring using surface normal approximation to extract keypoints from the 3D data and 2D image. I will continue to work at the same pace.

Daniel Kubik

This week I have further explored Barnes' Interpolation method and have been able to create a color range image representative of distances from our lidar data. The next steps will be to register this range image with a camera image using either Harris Corner detection, or blob detection. I will continue working at the same pace.