# **Updated Gantt Chart of Project Schedule (2/24/16)**

					Sep-15	Oct-15	Nov-15	Dec-15 Jan-16	Feb-16	Mar-16	Apr-16
ID Activity	Start	Finish	Hours	Completion Percentage	15 17 22 24 29	1 6 8 15 20 22 27 2	9 3 5 10 12 17 19 2	24 1 3 8 21 26 28 2	4 9 11 16 18 23 25	5 1 3 8 10 22 24 29 31	5 7 12 14 19 21 26 2
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	80%							
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	73%							
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	40%							
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	0%							
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 (2/24/16)

## Juan Vazquez

The combined Ethernet detection and classification program is now able to run continuously while capturing and storing data packets from the VLP-16. However, the program execution is slower than desired and currently only captures six packets for each full 360 degree rotation. Data is currently saved and red from text files and I've begun to replace this technique by implementing the use of arrays.

#### **David Bumpus**

After extracting keypoints from the 3D point cloud and 2D image, I began researching a method for compressing the 3D point cloud into 2D for feature detection. I have explored the use of a range image. I am currently using range images to register the point cloud and image. I will continue to work at the same pace.

#### Daniel Kubik

This week I have successfully converted a .ppm image to a two-dimensional PCL point cloud. Keypoint detection did not return useful results on this point cloud, so I will continue looking into ways to represent 3D data in a 2D image. I will continue working at the same pace.