

| Task Name | Group Member | Finish by Date/Due | Sep-15 | | | | Oct-15 | | | | Nov-15 | | | | Dec-15 | | | | Jan-16 | | | | Feb-16 | | | | Mar-16 | | | | Apr-16 | | | |
|---|--------------------|--------------------|--------|---|----|----|--------|---|----|----|--------|---|----|----|--------|---|---|----|--------|----|---|----|--------|----|---|---|--------|----|---|---|--------|----|----|---|
| | | | 1 | 8 | 15 | 22 | 29 | 6 | 13 | 20 | 27 | 3 | 10 | 17 | 24 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 2 | 9 | 16 | 23 | 1 | 8 | 15 | 22 | 29 | 5 |
| Individual Behavior | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research Kilobot Sensors | Jared | September 28, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research Kilobot Communication Protocol | Jared | October 12, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research Q-bot Image Processing | Ryan/Greg | October 5, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research Q-bot Sensors | Ryan/Greg | September 28, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research Q-bot Communication Protocol | Ryan/Greg | October 19, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research E-puck Sensors | Brittany | October 26, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research E-puck Communication Protocol | Brittany | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Individual Communication | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research/Test Kilobot - Kilobot | Jared | October 19, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research/Test E-puck - E-puck | Brittany | December 14, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Research/Test Qbot - Qbot | Ryan/Greg | November 2, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integrated Communication | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test Kilobot - E-puck | Jared/Brittany | December 14, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test Kilobot - Qbot | Jared/Ryan/Greg | November 16, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Test E-puck - Qbot | Brittany/Ryan/Greg | December 14, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Algorithm Design | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design Linear Based Model | All | December 14, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integrated Behavior | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Formation Control Behavior</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Localization | All | January 25, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Point Convergence | All | January 25, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leader Follower | All | January 25, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <i>Flocking Behavior</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Neighbor Repulsion | All | February 1, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endpoint Attraction | All | February 1, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heading | All | February 1, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Testing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Software Implementation | All | March 7, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hardware Implementation | All | March 7, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliverables | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Proposal - Oral Presentation | All | October 1, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Proposal - Document | All | October 15, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Webpage Release | All | October 28, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fall Progress Presentation | All | November 19, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fall Performance Evaluation | All | November 19, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fall Performance Review | All | December 3, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spring Progress Presentation | All | February 18, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Student Expo Abstract | All | March 18, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Demonstration | All | March 24, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Presentation | All | April 7, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Student Expo Poster Printing Deadline | All | April 11, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Student Expo Poster Setup | All | April 12, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Student Expo | All | April 14, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Report (Draft) | All | April 14, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Report | All | April 28, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Final Web Page | All | April 28, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Advisory Board Poster Printing Deadline | All | April 28, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Advisory Board Poster Presentation | All | April 29, 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Complete In progress

For the last week Jared has been working on implementing a receiver circuit that will enable a replication of how Kilobots receive messages and calculate distances. Unfortunately the IR receiver's leads broke off delaying testing until a replacement is obtained. While waiting for new components Jared has begun developing the attraction and repulsion algorithms for the Kilobots; as well as implementing the localization algorithm onboard. Brittany has continued work on the E-pucks IR proximity sensors, and will attempt to enable the disabled E-pucks next week. Greg and Ryan's goal was to implement a heading consensus algorithm on the Qbots. The equations used are seen below.

$$v = \text{constant}$$

$$w_i = \sum \theta_j - \theta_i$$

After programming, all three Qbots moved in the same direction. All Qbots were initially facing different directions, and eventually all three Qbots converged to the same heading. The group is still behind schedule with the communication between each of the robot platforms, but the goal is to get back on schedule before the end of the Fall semester.