Wireless Networks for Multi-Robot Communications Team

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Biweekly Report 3

Current Progress

We have built three robots so far. All of these robots have the antennas mounted on the side and can communicate with each other. We have placed foam over the transmitter and receiver chips and they can now communicate when very close together. Most of the code for communication is written and working. Dynamic addition and removal of nodes is still not working. Crc and send acknowledgement is now working. We have been able to test three way robot communications and it is now functional.

Initial dead reckoning is working on somewhat large distances and angles.

Current Objectives

We are trying to achieve dynamic node addition and removal with the networking code. Also we need to try different rc values for the light searching algorithm. We also need to refine the dead reckoning algorithm to use shorter distances and smaller angles.

Finally we will need to integrate the separate algorithms into a single program. The light searching algorithm will need to use functions provided by the dead reckoning code. The dead reckoning code will need to call functions from the networking code to determine where all the bots are once the light is found.