Technical Report

Team 3 December 11, 2018

The transceivers were easy to work with. This project would have been easier if not for the WIN32 COM port I/O. Initial protocol timeout settings were too low. Significant parts of the initial design were reworked to include additional custom data structures for easier data access and to have all COM port readings to happen in a single, dedicated thread.

Padding of a data frame after it has reached EOF is to use DC4 instead of NUL. NUL causes unexpected behavior when validating with the CRC when a frame was received.

constexpr masks were created to control the frames that we expect to return from read frame; allowing the readFrame function to ignore all other frame that are not one of the expected.

Program takes a while to upload relatively small files.

The protocol works, but it takes a while to recover from failure – however, it is reliable, no dead ends found so far.

Conclusion: Works, but at slow transfer rates.