Senior Design Weekly Meeting #8

Meeting Minutes

10/26/2020   15:30 - 17:10

CM/TM: Dr. Honggang Zhang
Students: Zhuoming Huang, Lucas Lomba, Yue Sun, Alinson Sanquintin

- **Agenda**

  1. Cage and net

  2. Data collecting

  3. Other updates

- **Notes**

  1. Cage and Net

     a. Lucas shared Aluminum rails from McMaster-Carr
        https://www.mcmaster.com/t-slotted-framing/t-slotted-framing-rails/

     b. Zhuoming shared pop up canopy:
        we decided to purchase two 10x10in canopies as follow:
        https://www.amazon.com/gp/product/B077HH9JY4?pf_rd_r=BZWMY1QT9P1QSCZZJHFQ&pf_rd_p=edaba0ee-c2fe-4124-9f5d-b31d6b1bfbee

  2. Data Collecting

     a. Slider issue:
        Use laser level or tripod with level to make sure the slider is vertical and antennas are horizontal

     b. Intensity images are achieved with raw data and TDM-MIMO
        Next: try performing range-fft on the raw data before performing 2D angle-fft
        (Use the first chirp from each virtual antenna, don't average the chirps)

     c. Try estimating distances between two objects at the same range, and two objects at different range.

     d. Try BPM-MIMO

     e. Slider had arrived, do not need CNC machine or milling machine now.

  3. Others

     a. Lucas needs VPN to access GPU machine at home. (Forward email to Jack)

     b. Yue is still working on the GAN network

- Follow-up

    1. Slider has arrived, will try to drive it with a 12V driver.

    2. Some intensity images have been generated, will try to add range-fft to the first step, will try using the slider to improve elevation resolution.