Senior Design Weekly Meeting #6

Meeting Minutes

Meeting 1: 10/12/2020   15:30 - 16:45
Meeting 2: 10/14/2020   12:50 - 14:00
Meeting 3: 10/15/2020   21:00 - 23:00
Meeting 4: 10/16/2020   14:00 – 14:30

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

- **Agenda**

    1. Updates from Zhuoming

        a. Formal design (meetings 1, 2)

        b. Raw data collecting tests (meeting 1)

        c. MATLAB code (meeting 4)

    2. Updates from Lucas (meeting 1)

    3. Updates from Yue

        a. SAR process (meeting 3)

- **Notes**

    1. Updates from Zhuoming:

        a. Finalizing the formal design and optimize the presentation

            i. motivations: exploring, rescues, covid19 monitoring (non-intrusive)

            ii. system architecture: camera data for AI model training

        b. Report results of raw data collecting from last week

            i. Cannot detect objects properly: some signals may travel through the paper boxes while the other are getting reflected; replaced with metal boxes (tower computer cases), worked much better (accurately estimated distance)

        c. MATLAB code from TI's documentation for reading captured raw data.

            i. Try the MIMO configuration to obtain the range-angle plot, and the el-az-range plot from SuperRF paper

            ii. SuperRF dataset

    2. Updates from Lucas

        a. Still learning milliMap

      b. need VPN access

3. Updates from Yue

      a. Introduced basic concepts on SAR technologies

      b. Discussed methods shown in book 'Spotlight-Mode Synthetic Aperture Radar', especially the PGA method.

- **Follow-ups**

1. Three data collecting tests in last week didn't show proper results, will use the new MATLAB for viewing the raw data this week.