Meeting Minutes

12/07/2020   15:30 -

CM/TM: Dr. Honggang Zhang
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- **Agenda**

    1. SAR Experiments Related

    2. Deep Learning Related

- **Notes**

    1. SAR Experiment related

        a. Alinson help researching on tools for creating CAD models

        b. To generate depth image from CAD model point clouds

            i. find the point cloud in front-view projection

            ii. feed the points into pointcloud2image function in MATLAB

            iii. match the zed mini resolution

    2. Deep Learning Related

        a. Use similar resolution in zed mini for 2d depth image output (not 64x64)

- Follow-up

    1. **On Ubuntu PC**, synthesizing 38 models * 30 placements = 1140 data samples

      a. 2020/12/06   00:18 – 01:53

        i. Generates .mat files including (1) CADptCloud.mat (>100MB), (2) depth.mat (3) reflector.mat, (4) radarheatmap.mat; and .png files (5) CADptCloud.png, (6) depthMap.png, (7) reflector.png, (8) heatmap_top.png, (9) heatmap_front.png

        ii. MATLAB crashed at 01:53, by model#4 placement#19

        iii. Duration: 1hrs35min = 95min
             #Data sample = 109
             ~= 0.87 min/sample,   ~=1.15 sample/min

      b. 2020/12/07   00:29 – 09:04

        i. Finished generating only (1) depth.mat (2) radarheatmap.mat; and (3) depthMap.png

  ii.   Duration: 8hrs35min = 515min

   #Data sample = 1140

   ~= 0.45 min/sample,   ~= 2.21 sample/min