Depth2laser 매뉴얼

[파라미터 세팅 매뉴얼]

INDEX

- 깃허브 of `depth2laser`
- Depth2laser의 launch 파라미터 세팅 – 카메라 1대
- Depth2laser의 launch 파라미터 세팅 – 카메라 2대
- Depth2laser값 확인 방법

깃허브 of `depth2laser`

- https://github.com/CogAplex/depth2laser

DEPTH2LASER의 LAUNCH 파라미터 세팅
_ 카메라 1대

```
cona@cona:~/CoNA_Navi_d2l/src/depth2laser/launch$ cat depth2laser.launch
<launch>
    <!-- <param name="robot_description" textfile="$(find depth2laser)/urdf/cona.urdf"/> -->
    <!-- <node pkg="robot_state_publisher" type="robot_state_publisher" name="rob_st_pub" /> -->

    <include file="$(find astra_camera)/launch/stereo_s_u3.launch" />

    <node pkg="depth2laser" type="depth2laser_node" name="depth2laser" output="screen">
        <param name="run_vis" type="bool" value="false" />
        <param name="use_samp_gap" type="bool" value="true" />
        <param name="new_d2l" type="bool" value="true" />

        <param name="cam_name" type="string" value="/camera" />
        <param name="pub_scan_topic" type="string" value="/scan3" />
        <param name="pub_scan_topic_frame" type="string" value="laser3" />

        <param name="sampling_gap" type="int" value="30" />
        <param name="h_sampling_gap" type="int" value="20" />
        <param name="w_sampling_gap" type="int" value="10" />
        <param name="side_gap" value="100" />

        <param name="depth_range_min" type="double" value="-5.0" />
        <param name="depth_range_max" type="double" value="5.0" />

        <param name="vis_inlier_ref" type="double" value="0.05" />
        <param name="inlier_ref" type="double" value="0.01" />
        <param name="valid_dist" type="double" value="2.0" />
        <param name="ratio_ref" type="double" value="0.1" />
    </node>
</launch>
```

DEPTH2LASER의 Launch 파라미터 세팅 – 카메라 1대

- run_vis : visualize 현재 어떤 바닥에 피팅, 디버깅용 툴 (보통 false, 에러 잡을 때 true)

- new_d2l : 새로 만든 depth2laser를 쓸 건지 여부(보통 true)

- use_samp_gap : true일 경우 x와 y를 샘플링하며, false일 경우 y를 샘플링

- cam_name : 토픽 sub/pub 이름 지정, rosnode list에 ${cam_name}/depth 등으로 표시됨

- side_gap : 끝단에 노이즈가 생긴 경우 잘라냄

- depth_range_min : z 높이를 몇미터까지 볼 것인지 결정

- vis_inlier_ref : 장애물 검출 시 평면으로부터 높이가 얼마를 넘는 것을 장애물로 시각화할지 결정

- inlier_ref : 평면 뽑아내는 기준이 되는 포인트

- valid_dist : 카메라 전방 x 축 최대 거리

DEPTH2LASER의 Launch 파라미터 세팅 - 카메라 2대

- $ vim depth2laser_multi.launch
  - cam_name : camera_01, camera_02
  - scan_topic : scan3, scan4
  - pub_scan_topic_frame : laser3, laser4

DEPTH2LASER의 Launch 파라미터 세팅 - 카메라 2대

```
<param name="cam_name" type="string" value="/camera_01" />
<param name="pub_scan_topic" type="string" value="/scan3" />
<param name="pub_scan_topic_frame" type="string" value="laser3" />

<param name="cam_name" type="string" value="/camera_02" />
<param name="pub_scan_topic" type="string" value="/scan4" />
<param name="pub_scan_topic_frame" type="string" value="/laser4" />
```

DEPTH2LASER의 LAUNCH 파라미터 세팅 _ 카메라 2대

```xml
<launch>
    <param name="robot_description" textfile="$(find depth2laser)/urdf/multi.urdf"/>
    <node pkg="robot_state_publisher" type="robot_state_publisher" name="rob_st_pub" />

    <!-- <include file="$(find astra_camera)/launch/stereo_s_u3.launch" /> -->

    <node pkg="depth2laser" type="depth2laser_node" name="depth2laser_1" output="screen">
        <param name="run_vis" type="bool" value="false" />
        <param name="use_samp_gap" type="bool" value="true" />
        <param name="new_d2l" type="bool" value="true" />

        <param name="cam_name" type="string" value="/camera_01" />
        <param name="pub_scan_topic" type="string" value="/scan3" />
        <param name="pub_scan_topic_frame" type="string" value="laser3" />

        <param name="sampling_gap" type="int" value="30" />
        <param name="h_sampling_gap" type="int" value="20" />
        <param name="w_sampling_gap" type="int" value="10" />
        <param name="side_gap" value="100" />

        <param name="depth_range_min" type="double" value="-5.0" />
        <param name="depth_range_max" type="double" value="5.0" />

        <param name="vis_inlier_ref" type="double" value="0.05" />
        <param name="inlier_ref" type="double" value="0.01" />
        <param name="valid_dist" type="double" value="2.0" />
        <param name="ratio_ref" type="double" value="0.1" />
    </node>

    <node pkg="depth2laser" type="depth2laser_node" name="depth2laser_2" output="screen">
        <param name="run_vis" type="bool" value="false" />
        <param name="use_samp_gap" type="bool" value="true" />
        <param name="new_d2l" type="bool" value="true" />

        <param name="cam_name" type="string" value="/camera_02" />
        <param name="pub_scan_topic" type="string" value="/scan4" />
        <param name="pub_scan_topic_frame" type="string" value="laser4" />

        <param name="sampling_gap" type="int" value="30" />
        <param name="h_sampling_gap" type="int" value="20" />
        <param name="w_sampling_gap" type="int" value="10" />
        <param name="side_gap" value="100" />

        <param name="depth_range_min" type="double" value="-5.0" />
        <param name="depth_range_max" type="double" value="5.0" />

        <param name="vis_inlier_ref" type="double" value="0.05" />
        <param name="inlier_ref" type="double" value="0.01" />
        <param name="valid_dist" type="double" value="2.0" />
        <param name="ratio_ref" type="double" value="0.1" />
    </node>
</launch>
```

Depth2laser를 켜는 방법

- Data/CoNA/config.json 에서 a_number_of_laser 값이 3이 되도록 변경