

[Feature] costmap generator #1774

New issue

Merged

sgermanserrano merged 149 commits into `develop` from `feature/costmap_generator` on Mar 11, 2019

Conversation 11

Commits 149

Checks 0

Files changed



k0suke-murakami commented on Dec 13, 2018 • edited

Status

DEVELOPMENT

Description

Generate useful costmap for planning module.  
This node is different from other costmap nodes.

- 1, Efficient computation.
- 2, Using the result of Perception module for the first time.

**subscribe:**  
/points\_no\_ground (sensor\_msgs::PointCloud2)  
/prediction/moving\_predictor/objects  
(autoware\_msgs::DetectedObjectArray)  
/tf  
vector\_map

**publish:**  
/semantics/costmap (grid\_map::GridMap)  
/semantics/costmap\_generator/occupancy\_grid(nav\_msgs::OccupancyGrid)

Reviewers

sgermanserrano ✓

aohsato ●

Assignees

No one assigned

Labels

version:autoware-ai

Projects

None yet

Milestone

No milestone

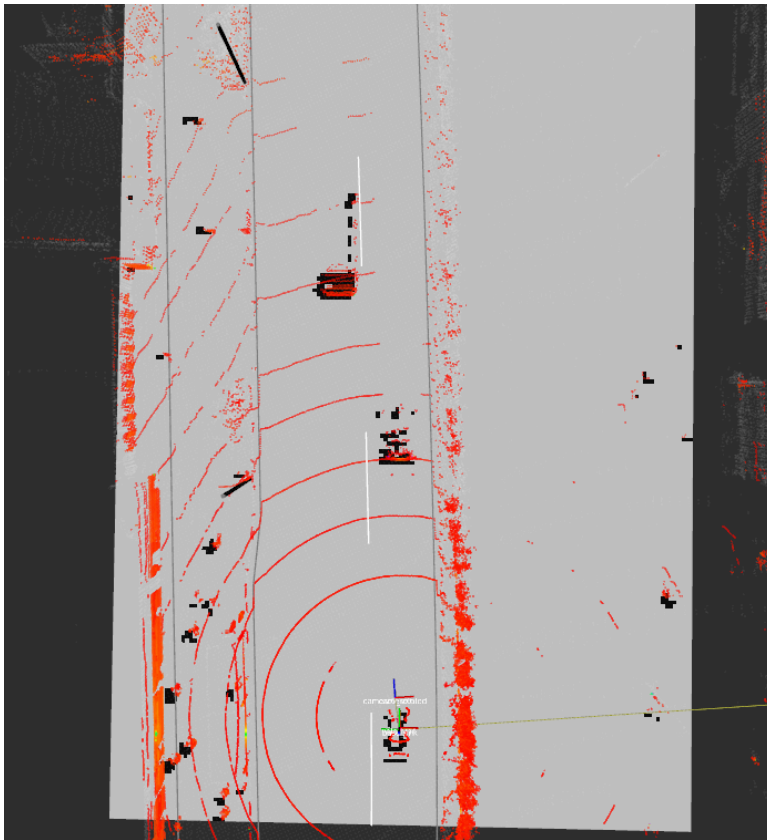
Development

Successfully merging this pull request may close these issues.

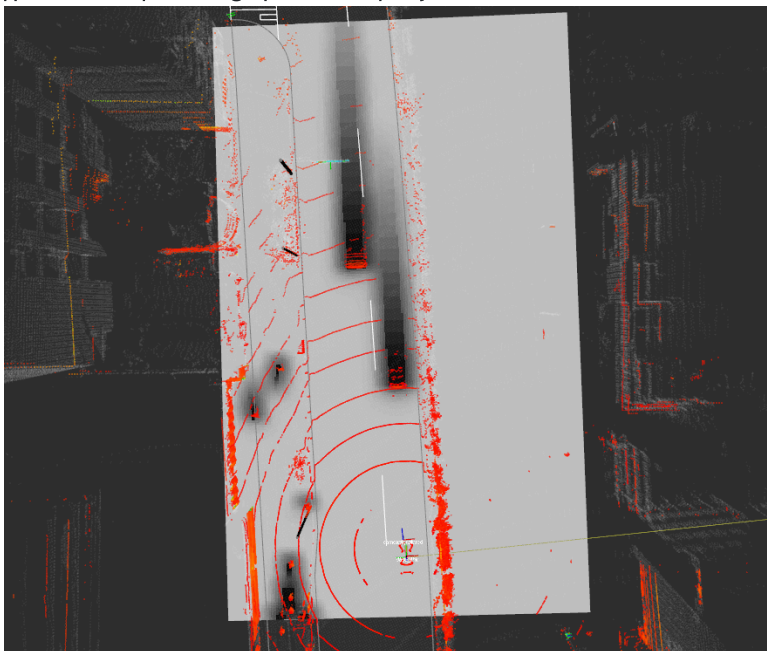
7 participants

# Result

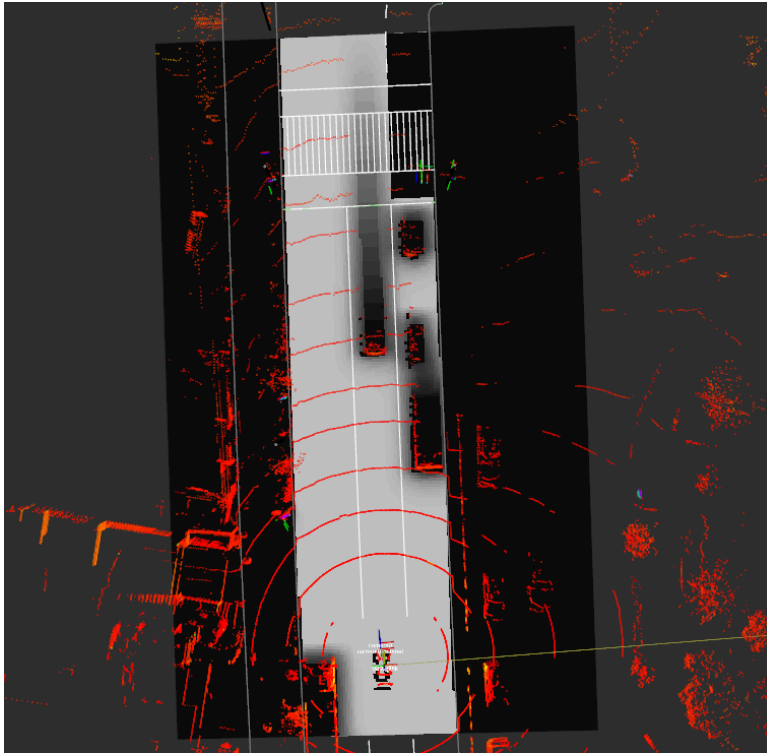
Only using /points\_no\_ground



Using /points\_no\_ground and  
/prediction/moving\_predictor/objects



Using /points\_no\_ground,  
/prediction/moving\_predictor/objects and /vectormap



## Related issue

<https://github.com/CPFL/Autoware/issues/1772>

## Todos

☐ Tests

```
catkin_make run_tests_costmap_generator_gtest
```



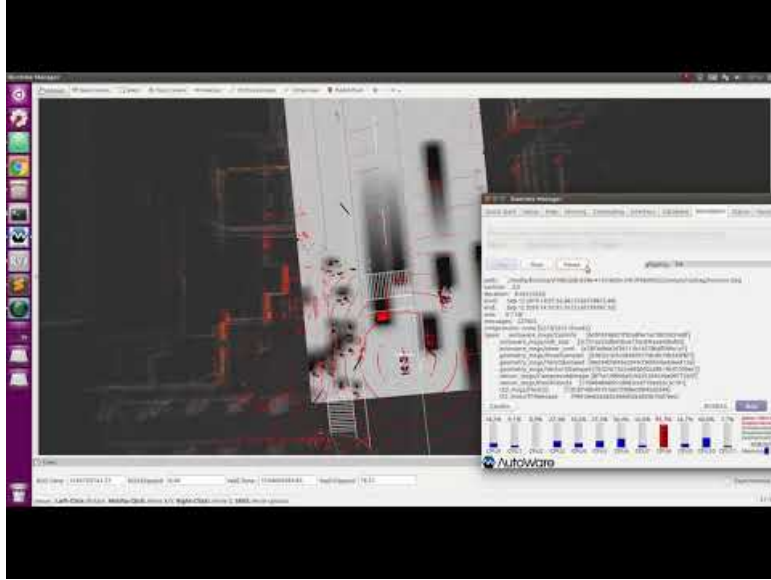
☐ Documentation

## Steps to Test or Reproduce



















```
roslaunch costmap_generator  
costmap_generator.launch
```















This video will show how to launch costmap\_generator.  
(Assuming we already know tf information between /map  
and /base\_link)




**amc-nu** and others added 30 commits 6 years ago





-  \* Initial commit for visualization package ... 180900c
-  Merge branch 'develop' into feature/perception\_visualization\_cleanup 0c2df3e
-  \* Fixes to visualization ... 7a59696
-  Reduce verbosity on markers 6a05d7e
-  intial commit 923e468
-  \* Changed to 2 spaces indentation ... a92460c
-  Fixed README messages type d807166
-  2 space indenting 6040437
-  ros clang format 752161e
-  Publish acceleration and velocity from ukf tracker 161cbff
-  Merge branch 'develop' into feature/perception\_visualization\_cleanup c861aa8
-  Remove hardcoded path 900bcf7
-  Updated README 15d5286
-  updated prototype 56fdc09
-  Prototype update for header and usage ea4886d
-  Removed unknown label from being reported 887d45a
-  Updated publishing orientation to match develop 83e1b54
-  \* Published all the trackers ... 1bfbfe6

-  merge develop 15c7663
-  Add simple functions 855ba4a
-  Refacor code 4654d87
-  \* Reversed back UKF node to develop 11ee790
- ...
-  Refactor codes 5a9c60d
-  Refactor codes f02b2db
-  Refactor codes 709f171
-  Refacor codes 58a17a0
-  Make tracking visualization work 41c13cc
-  Relay class info in tracker node 1637baa
-  Remove dependency to jskbbox and rosmarker in ukf tracker 4fa1dd4
-  apply rosclang to ukf tracker 4f8d1cb

108 hidden items

[Load more...](#)

 **sgermanserrano** and others added 4 commits  
[5 years ago](#)

-  Space cdc44ef
-  Generic folder name 56a7e4d
-  Merge branch 'fix/costmap\_generator' into feature/costmap\_generator 556af29
-  Fix/costmap generator ([#2077](#)) cda2014








 **sgermanserrano** suggested changes on Mar 6, 2019 [View reviewed changes](#)

**sgermanserrano** left a comment

@cirpue49 there are a number of duplicated variables that are used across most tests. Can you add them to the TestSuite and the initial values to the `SetUp` method?

 **koh-murakami-ai** added 5 commits [5 years ago](#)

-  segmentation fault in `CheckAssignPoints2GridCell` 577f883
-  resolve conflict 0cd0d8e
-  Remove redundant codes in test b789746
-  Merge develop into costmap\_generator 3260fb7
-  Add some variables in SetUp 9d885f8



**sgermanserrano** commented on Mar 8, 2019

**@amc-nu** **@cirpue49** I have just realised there is another `points2costmap.cpp` inside the `object_map` package, can either one be named differently?



**sgermanserrano** reviewed on Mar 8, 2019

[View reviewed changes](#)

```
...omputing/perception/semantics/packages/costmap_generator/test/src/test_costmap_generator.cpp
```

Outdated

```
209 + TEST_F(TestSuite, ChecMakePolygonFr
210 + {
211 +     double expand_polygon_size = 0;
212 +     autoware_msgs::DetectedObject in_c
```



**sgermanserrano** on Mar 8, 2019 • edited

**@cirpue49** `autoware_msgs::DetectedObject in_object;` is used in multiple tests, although its `convex_hull` member varies you can declare it `in_object` as part of the `TestSuite` and initialise `header.frame_id`, `pose`, `score`, `orientation` and `dimensions` in the `SetUp` since they seem to be the same and clear the `convex_hull` contents in `TearDown` so that it is fresh for each test.  
The `pose` can be overwritten in the last test where it is different.



**k0suke-murakami** on Mar 11, 2019

Author

Could you check the latest commit?  
Added some scripts in `SetUp` function.






**koh-murakami-ai** added 4 commits [5 years ago](#)



 rename class

ecf5f32

-  rename files ff22ff9
-  modify tests dac3b63
-  Add scription in SetUp a9accab



**k0suke-murakami** commented on Mar 11, 2019 •

edited ▾

Author

@amc-nu @cirpue49 I have just realised there is another `points2costmap.cpp` inside the `object_map` package, can either one be named differently?

Yes, so I renamed `points2costmap` to `points_to_costmap` in this PR's files.

However, it is still confusing to have a similar name on both packages.

Basically, both 2 files do the same thing except that old `points2costmap` is computationally expensive.

So, will propose to make old `points2costmap` obsolete in next release(1.12).

What do you(@sgermanserrano) think?



**sgermanserrano** approved

[View reviewed changes](#)

these changes on Mar 11, 2019

**sgermanserrano** left a comment • edited ▾

@k0suke-murakami thanks for adding the tests, please remove unused `in_object` from tests before the branch is merged

```
...omputing/perception/semantics/p
ackages/costmap_generator/test/sr
c/test_costmap_generator.cpp
```

Outdated

```
285 +
286 + TEST_F(TestSuite, CheckMakeCostmapF
287 + {
288 +   autoware_msgs::DetectedObject in_c
```



**sgermanserrano** on Mar 11, 2019 • edited ▾

@k0suke-murakami

`autoware_msgs::DetectedObject in_object;`

are not used any more, can you remove them?  
I'll approve so it can be merged when they are removed



**k0suke-murakami** on Mar 11, 2019

Author

Thank you for checking!  
I deleted unnecessary `in_object` .

 **koh-murakami-ai** added 2 commits 5 years ago

  Remove unnecessary `in_object` 67735bd



  Refactor test codes 6af3155

  **sgermanserrano** merged commit **d37ec2e** into `develop` on Mar 11, 2019

  **sgermanserrano** mentioned this pull request on Mar 14, 2023

**Make points2costmap obsolete**  
autowarefoundation/autoware\_ai#612

 Closed

  **k0suke-murakami** deleted the `feature/costmap_generator` branch 5 years ago


 **hamkuchan** commented on Jun 18, 2019

@sgermanserrano Hi, I'm wondering why after I ran the node: `ray_ground_filter`, `compare_map_filter`, `costmap_generator` but didn't get the costmap on rviz?

 **gbiggs** commented on Jun 18, 2019

Thanks for using Autoware and for your question. However the issue tracker is for posting confirmed bugs and feature requests.

We ask that you please ask questions at the [ROS Answers website](https://answers.ros.org/) following our support guidelines: <https://github.com/autowarefoundation/autoware/wiki/Support-guidelines#ros-answers>. Please pay particular attention to the information we ask you to provide.

 **anubhavashok** pushed a commit to NuronLabs/autoware.ai that referenced this pull request on Sep 7, 2021

  [Feature] costmap generator (autowarefoundation#1774) 69e3dc2





**mitsudome-r** added the **version:autoware-ai** label  
on Jun 14, 2022