Autoware Sensing Perception Working Group Meeting 2024-07-24 #5029

drwnz started this conversation in **Working group meetings**

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drwnz on Jul 24   Collaborator   edited ⌄

Administrative

- [Previous meeting](#)
- **Meeting time:** Every second Wednesday, 10am UTC (alternating with Mapping WG)
- [WG Google Drive](#)
- [Wiki page for this Working Group](#)
- [Shared issue list](#)

Attendees

▼ Chaired by David
Ryohsuke
Vivid
Max
Koji
Kenzo
Baris
Fatih
Amadeusz
Kotaro
Shunsuke
Armagan

Agenda

- Introduction of new attendees
- Review of [Issue List](#) and assignment
- Review of [Project Board](#) and assignment
- Pointcloud type change: https://github.com/orgs/autowarefoundation/discussions/3533
- Perception package name prefix autoware_ and namespace fix
- RTMDet in Perception Pipeline: ⊙ [Implement RTMDet to Perception Pipeline](#) autoware.universe#7235
- Deleting Apollo Instance Segmentation TVM: ⑂ [refactor(lidar_apollo_segmentation_tvm): remove `lidar_apollo_segmentation_tvm**` packages](#) autoware.universe#7996
- Radar pipeline update

Category

💼 Working group meetings

Labels

meeting:sensing-p...

4 participants

Discussion topics

- Pointcloud type change: https://github.com/orgs/autowarefoundation/discussions/3533
  - PR: ⑁ **feat: migrating pointcloud types** autoware.universe#6996
  - Related launcher PR: ⑁ **chore: remapped topics for the point type migration** sample_sensor_kit_launch#94
- Perception package name prefix autoware_ and namespace fix
- Issue: ⊙ **Prefix packages with autoware_ prefix and keep code in autoware namespace** #4569
- Progressing smoothly, S/P modules should be complete this week
- RTMDet in Perception Pipeline: ⊙ **Implement RTMDet to Perception Pipeline** autoware.universe#7235
  - Is there a suitable message type in Autoware? Currently added custom message type in `tier4_autoware_msgs` ?
  - Koji: what hardware was used in the measured results?
    - RTX3090 (24GB VRAM)
    - Comparison with YoloX is on AGX, so testing on the same hardware for comparison would be good
  - Is there any test data to evaluate this PR?
    - Needs anonymization and conversion back to rosbag.
    - Fatih: how about using NUScenes since we have permission?
      - Armagan: is there a document to prove? -> need to check with Samet
- Deleting Apollo Instance Segmentation TVM: ⑁ **refactor(lidar_apollo_segmentation_tvm): remove `lidar_apollo_segmentation_tvm**` packages** autoware.universe#7996
  - Gained approval from maintainers, went ahead and deleted!
- Radar pipeline update
  - Currently making universal message type for radar: currently we only use Continental at TIER IV
  - Armagan: working on just sensing or perception?
    - We are defining the interface, and then we will have to look at how to integrate into perception pipeline to improve performance
    - Working with radars that have both tracks (object list) and also pointcloud, but not planning to use pointcloud at this stage
  - Armagan: more interested in current implementation
    - We mostly optimized for ARS408
    - Discussion: https://github.com/orgs/autowarefoundation/discussions/2531
  - Kenzo to share some videos if possible
  - David: how do you find the SmartMirco?
    - To test the 171, lower resolution ones do not have object output
    - Hopefully we can share some collected data between Continental and Smartmicro
- Autoware issues/PRs
  - Armagan: can someone check this on other data?

- **feat(autoware_scene_to_image_projector): init package** autoware.universe#7951
  - ⊙ **Visualize 3D objects and useful informations onto the 2D image** autoware.universe#2867
- Want to see if detection issues are present on another vehicle/setup
- Koji: is this perhaps better in Autoware Tools?
  - Either is fine, this is more about evaluating if Autoware perception is working as it should be

Action items

- [ ]

↑ 1

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3 comments · 1 reply

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armaganarsln on Jul 24 `Collaborator`

Could you please give an update on the radar perception pipeline current status, hardware compatibility & roadmap

↑ 1   1 reply

> **drwnz** on Jul 24 `Collaborator` `Author`
>
> **@armaganarsln** sure, **@knzo25** can give a brief summary on the 4D radar status at TIER IV.

StepTurtle on Jul 24 `Collaborator`

Hi **@drwnz**

Can you add this issue to agenda, I have some points to discuss.

- ⊙ **Implement RTMDet to Perception Pipeline** autoware.universe#7235

↑ 1   0 replies

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kminoda on Jul 24 `Collaborator`

Hi **@drwnz**
I wanted to briefly discuss about whether we can delete the apollo instance segentation TVM
autowarefoundation/autoware.universe#7996

But now that we got the approval from all the maintainers and already merged, I think now we don't need to discuss in this WG. Just putting this here as a memo

↑ 1

0 replies