

A vehicle protocol "hub" for Autoware #2697

Unanswered Sharrrrk asked this question in Ideas



Sharrrrk on Jun 29, 2022 Maintainer

Background:

Inspired by the recent discussion of bus odd vehicle driver-by-wire protocol open source, it came into mind to have a vehicle protocol "hub" which is an open place for all Autoware users to upload and share their specific vehicle DBW protocol to all other Autoware users.

Currently, we do not have any vehicle DBW driver integrated in Autoware compared with other open source AD/ADAS project, which means users who wants to integrate Autoware into real vehicle will have to develop their own driver or seek for third party providers. And this may bring repeated effort.

However, it is also difficult for Autoware to maintain a vehicle DBW driver in the main stream, based on the fact that the vehicle models used by Autoware developer varies among each other , also I don't think we have resource for the adaptation, verification for lots of vehicle models.

So If we could have some kind of vehicle protocol "hub" -- the idea comes from docker hub, where the docker images are maintained by all developers around the world. In this way, All Autoware users, like the universities, or companies, could share their own vehicle DBW driver freely, and others could benifit from the "hub", to easily integrate Autoware into the available vehicle models.

Some concept of vehicle protocol "hub":

- Provide an open space for users to share their own vehicle dbw drivers
- Support standard CAN drivers, maybe using socket CAN
- The driver contains a unified protocol definition layer, e.g. through reading yaml file, this layer will transfer the defined CAN signal to data
- Consistent with current Autoware vehicle interface

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Category



Ideas

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None yet

2 participants



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kenji-miyake on Jun 29, 2022

@Sharrrrk Great idea, it's exactly the concept of Autoware Universe. I feel it's not only for vehicle drivers but also for other Autoware components (Perception/Planning/etc.).

Provide an open space for users to share their own vehicle dbw drivers

I think it's good to simply start with the `Show and tell` category of GitHub Discussions.

It's already possible to share vehicle drivers by sharing the Git repository there.

If a developer publishes a vehicle driver in any repository, other developers can refer to the repository and integrate it into Autoware like this.

[autoware/autoware.repos](https://github.com/autoware/autoware.repos)

Line 78 in [cc441e7](#)

```
78 url: https://github.com/tier4/pacmod_interface.git
```

Later, we can consider more efficient ways to share Autoware components.



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0 replies



kenji-miyake on Jun 29, 2022

The driver contains a unified protocol definition layer, e.g. through reading yaml file, this layer will transfer the defined CAN signal to data

@Sharrrrk Would it be possible for you to tell me a bit more details about this layer?



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0 replies