

Technical Steering Committee (TSC) Meeting #46 (2022/09/14) Minutes #2887

mitsudome-r started this conversation in TSC meetings



mitsudome-r on Sep 22, 2022

Maintainer

2022/09/14 22:00 UTC

Attendees

- Ryohsuke Mitsudome (TSC Chair)
- Shinpei Kato (AWF)
- Daisuke Tanaka (AWF)
- Christian John (SPC)
- M. Fatih Cirit (AWF)
- Bonolo Mathibela (AWF)
- Zhijie Qiao (AWF)
- Xinyu Wang (AWF)
- Hiroshi Igata (ODD WG)
- David Walmroth (OAD WG)
- Armağan Arslan (OAD WG)
- Wojciech Jaworski (Simulation WG)
- Kerem Par (Adastec)
- Kasper Mecklengburg (Arm)
- Stephen Li Autocore
- David Cole (Danlaw)DanlawDanlaw
- Akihiko Tsukuda (eSOL)
- Michael Li (ITRI)
- Mert Colak (Leodrive)
- Rahul Mangharam (F1 Tenth Foundation)
- Yuki Kitsukawa (MAP IV)
- Adam Dabrowski (Robotec.ai)
- Naoyori TANZAWA (Tier IV)

Board Passdowns (5min)

- https://docs.google.com/presentation/d/1GD5WPLGKgbyY0xjIMFH-tgzCx87JYCZBLt9d0nYqNsk/edit#slide=id.gd0eeda4473_0_0

Discussion:

Category



TSC meetings

Labels

meeting:tsc

1 participant



- CJ: We are planning to initiate two work groups, Safety WG and Passenger vehicle WG, but maybe we can combine the two
 - Shinpei: we should also work with MIH and SOAFEE
 - CJ: MIH has AD WG and Cockpit WG, which focuses on defining the interface of AD stack and how they interact with the cockpit of the vehicle. They only focus on the interface design and not necessarily the implementation
- Armagan:
 - <https://inf.news/en/auto/59d8843632aefae669b922fc50b9feba.html>
 - Huawei applied for AUTOWARE trademark
 - OC will take care of it.

New member:

- Map IV joined as a new premium member

Working group report: Autonomy Software (10 min)

- Bus Integration:
 - July-August Milestone Closed:
 - <https://github.com/autowarefoundation/autoware.universe/milestone/7>
 - Adding steering limits
 - Control evaluation module added
 - Safety slow down feature for crosswalks
 - Sensor calibration Tools added
 - Adding UTM support for GNSS modules
 - Other bug fixes
- ITRI Bus project update
 - https://www.dropbox.com/s/bvr2sr1yfxhes6p/ITRI%20ADV%20upgrade%20schedule_status%20update_20220913_v2.pdf?dl=0
 - Remaining issues needed to be resolved before moving on to on-vehicle testing at ITRI campus:
 - LiDAR perception:
 - msg converter | Estimated Completion Date: 9/23
 - TF converter | Estimated Completion Date: 9/23
 - Localization Module
 - TF converter | Estimated Completion Date: 9/23
- LeoDRIVE:
 - [report](#)
 - LeoDrive will be running initial test with ISUZU this week
 - Localization module: Experiencing delay when using camera pipeline. Applanix driver twist message get shifted under high message load.
 - Perception: Because of the delay in the system, we are working on creating camera containers. (👍 [Image messages have latency or dropped](#) autoware#1228)
 - Rosbag: Having performance issues with rosbridge server. Trading messages happens with intolerable delays. For example, calling emergency service may take upto 30 seconds.

- Adding CODEOWNER file to track maintainers for each package
 - Now we require an approval by the code owner before making changes

Discussion:

- Armagan:
 - LeoDrive was able to drive 4km path with Autoware

Working group report: Operational Design Domain (10 min)

- As of September 14, 2022, [127 out of 137 public road bus scenarios are successful](#). (It was 119/143 at last month's TSC.)
- Following six scenarios (or maps) were modified and tested this week.
 - UC-LD-001-0010-2-Gebze (Vel=8.4, 5.58, 2.76)
 - Misc0 was replaced by stationary NPC1->Failed: Need additional parameter tuning
 - UC-PB-001-0009-4-Hsinchu (Ve=30)
 - The point where signal is changed from green to yellow was moved toward the intersection->Succeeded
 - UC-PB-001-0009-5-Hsinchu
 - The point where signal is changed from red to green was moved toward the intersection->Succeeded
 - UC-PB-008-0001_40_20-Shalun (VL=14.0, VM=8.4)
 - Modified by using the custom command "WalkStraightAction" for Ped0->Succeeded
 - UC-PB-009-0001-Db20/40-Hsinchu (Vb=4.2, 2.8, 1.4)
 - Mitsudome-san kindly updated the LL2 map data->Failed: Need to fix scenario bug
- The following scenarios succeed in the past, but sometimes fail though the scenario and the map data are not modified. We may be able to ignore failure cases after observing the trend for a while.
 - UC-LD-001-0005-Gebze (Vel=8.4)
 - UC-PB-001-0010-11_D40-Shalun (Ve=14)
 - UC-PB-005-0001-3-Hsinchu
 - UC-PB-001-0009-3-Ve50-Hsinchu
- Some of the successful scenarios need additional analysis as the results do not completely match the scenario intentions.
- The public road bus use case definition is [here](#).
- In the context of the "Autoware Roadmap Planning", ODD working group [populated and brushed up the use cases](#) in the four categories below for further discussion for the roadmap.
 - Improved object detection
 - Improved detection of traffic lights and emergency vehicles
 - High speed driving on freeways in low traffic density
 - Urban and freeway driving in high traffic density

Discussion:

- David W.: Does Danlaw interested in amber alert to be covered in V2X?

- David Cole: we can find V2X specialist to get back to you
- Armagan: What's the Amber Alert?
 - It's the SMS alert to notify possible children abduction
 - Armagan: How does this relate to AD usecases?
 - David W: Amber alert is just an example
 - CJ: We might want to abstract it and think about how infotainment, traffic information should interact with other V2X network
- Shinpei: Safety WG could also include V2X as well as IVI/Cockpit in their scope?
 - David Cole: We have technical experts in infotainment and V2X

Working group report: Simulation (10 min)

- Co-chair replacement : Sugwan Lee left MORAI, will be replaced by HyeongSeok Jeon.
- TierIV decided to restrict access to the sample binary only to AWF developers, until the project is open sourced. Please contact Wojciech on discord to get access.
- Compatibility tests
 - new PR with sensor data publication tests created : [🔗 feat\(simulator_compatibility_test\): test codes for sensors data publishers autoware.universe#1804](#)
 - MORAI to add configuration files for sensors details (number of sensors, topics, etc.)
- ITRI Bus:
 - We are still waiting for vehicle_launch and sensor_kit_launch, should be provided soon
- Isuzu Bus
 - We have received all required files and packages from LeoDrive
 - First decision was to wait until the ITRI Bus simulation is ready, but we can try to make it in parallel : Isuzu Bus in an ITRI environment that is ready.

Discussion:

- Armagan: For ISUZU bus simulation, we should check with Mert if they already have their own simulation environment
 - LeoDrive also has a simulation team which might be able to provide the test course environment.
 - Wojciech to take care offline in Discord

Working group report: Racing (10 min)

- Racing WG leadership in transition from Johannes/CJ to George
- Current focus is to realign on the areas of focus for the Racing WG going forward
 - Continued enhancement of the Autoware on F1TENTH software
 - New functionality/algorithms for racing (e.g. path planning)
 - Performance optimization for lower compute platforms

- Scaling of Autoware in small scale racing
 - F1TENTH hardware options and availability
 - Engagement with other ecosystems (e.g. Amazon DeepRacer)
 - Participation/Promotion of Sim/Real racing events
- EVGrandPrix platform development for advanced Autoware R&D
 - Enable vision based imitation learning as first major project
- Autoware education program on F1TENTH for university AD programs
 - Build on work done by Poznan Univ which conducted first Autoware + F1TENTH grad level AD course

Discussion:

- Transition to George should finish by the next call

Working group report: Open AD Kit (10 min)

- Administrative. OADKit WG Co-chair Lalith will be moving on. Tremendous thank you and appreciation for his effort and support! Announcement was made in today's meeting for new volunteers and nominations.
- Finalize OADKit 2.0 scope - goal is to finalize in next meeting. [Final draft](#) from Hashimoto-san
- Testing of OADKit with Autoware Universe complete on:
 - ADLink AVA Kit, AutoCore PCU, NVIDIA AGX Orin and AGX Xavier.
 - Testing by TierIV, AutoCore, LeoDrive.
 - Next steps are to complete documentation.
- Upcoming presentations:
 - Autocore
 - ADLink will discuss AVA AP1 updates, presentation on current product line, and informal discussion on features that would be desired for an entry level Autoware dev board. Daniel and CY (ADLink) to follow up regarding content and logistics.
- Arm DevSummit Workshop and MIH demo preparations are proceeding, no known red flags.
 - Tanzawa-san working on shrinking container for OTA transfer
 - Daniel implementing before/after centerpoint algorithm for perception demo
 - Kasper, AWS, Excelfore and others are enabling infrastructure.

Discussion:

- Kasper: We won't be able to provide GPU environment for the workshop. We will be using c7g instance: <https://aws.amazon.com/ec2/instance-types/c7g/>
- Tanzawa: TIER IV is aware of the issue and plan to have internal discussion to come up with alternate proposal
- Armagan: Three co-chairs of the WG had different strengths. Should we consider assigning a new WG lead?
 - Tanzawa: At the moment, we don't have any candidates.

- Mitsudome: We can ask for volunteer to become a co-chair of Open AD Kit.

Launch of Mapping WG (LeoDrive)

- [Mapping WG.pdf](#)

Discussion:

- Armagan: Is creating a colorized pointcloud from a real world environment something useful for creating simulation environment?
 - Wojciech: It surely helps to generate an environment
- Decision made: Map WG will officially start as AWF WG from next week
 - Armagan will make a post on Github and Discord to announce in public

Progress and Plan for Design Docs (TIER IV)

[Planning of Design Docs.pdf](#)

↑ 1

0 comments