

Technical Steering Committee (TSC) Meeting #45 (2022/08/17) Minutes #2886

mitsudome-r started this conversation in TSC meetings



mitsudome-r on Sep 22, 2022

Maintainer

2022/08/17 15:00 UTC

Attendees

- Ryohsuke Mitsudome (TSC Chair)
- Shinpei Kato (AWF)
- Yang Zhang (AWF)
- Daisuke Tanaka (AWF)
- Christian John (SPC)
- M. Fatih Cirit (AWF)
- Bonolo Mathibela (AWF)
- Xinyu Wang (AWF)
- Haoru Xue (AWF)
- Hiroshi Igata (ODD WG)
- David Walmroth (OAD WG)
- Armağan Arslan (OAD WG)
- Wojciech Jaworski (Simulation WG)
- Kasper (Arm)
- Stephen Li Autocore
- Leon Sun (Danlaw)
- Mert Colak (Leodrive)
- Rahul Mangharam (F1 Tenth Foundation)
- Adam Dabrowski (Robotec.ai)
- Naoyori TANZAWA (Tier IV)

Working group report: Autonomy Software (10 min)

- We have organized Bus ODD Project board and track Bus ODD related tasks better
 - <https://github.com/orgs/autowarefoundation/projects/17>
 - We have reviewed timeline and required features that we still have to implement:
 - [Bus ODD specific features](#) [autoware.universe#1468](#)
 - We will be aiming for doing the demo in December for ITRI and LeoDrive

Category



TSC meetings

Labels

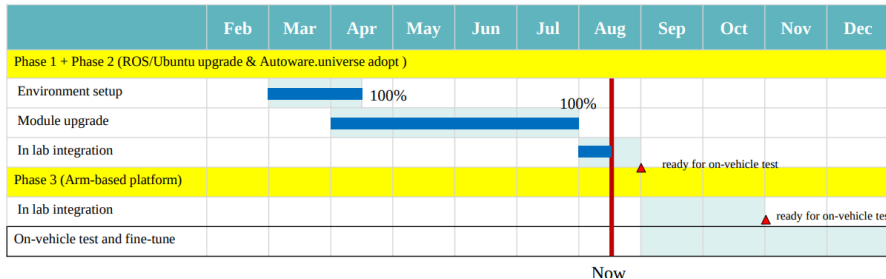
meeting:tsc

1 participant



- ITRI bus integration reports
 - Bi-weekly reports: [08/02](#), [08/16](#)

Updated Schedule (Merging Phase 1 and Phase 2)



- Vehicle integration starts next month
- They have started to investigate the performance of perception and planning modules on rosbags
- They are currently trying to fix timestamp issues in pointcloud and a crash in [behavior planner](#)
- LeoDrive bus integration reports
 - [Weekly reports](#)
 - Their vehicle specification and maps are now [publicly available](#)
 - They had a localization error last month, but it is now fixed with better calibration of lidars.

Discussion:

- Armagan: Is there going to be a stable release for testing?
 - Mitsudome will confirm that the current tutorial works with the newest version and do a beta-release as a tentative stable branch until official release
- David: Is the planned demo about the campus demo?
 - Yes
- Bonolo: We have hired a new software developer, George who will be working on the CoE projects

Working group report: Operational Design Domain (10 min)

- As of August 17, 2022, 119 out of 143 bus scenarios are successful. (It was 99/107 at last month's TSC.)
- We have discussed the additional use cases from the Isuzu-LeoDrive bus project including "slowing down before crosswalks or speed bumps". LeoDrive members created 36 scenarios (with parameter variation) from the use cases and provided the map data of their test site.
- Regarding the original 107 scenarios, most of the semantic errors have been ironed out. The residual issues include the following.
 - The EGO vehicle does not start.
 - The left turning EGO vehicle does not stop when detecting oncoming traffic
- Regarding the newly added 36 scenarios, the failure cases are being analyzed. Some of the 36 scenarios turned out to be not based on the use cases which we discussed in the ODD WG meeting, but I plan to brush them up if necessary and include them in the scenario set.

- Some of the new scenarios seem to take too much time and reach the simulation time limit of the CI/CD pipeline.
- Unsuccessful cases include "avoid the obstacle within the lane" scenarios.

Discussion:

- Armagan: Are these scenarios going to be tested in simulation or real world?
 - We are planning to pass all the scenarios in simulation. We would have to choose representative scenarios out of 143 scenarios for the real world testing.
 - Armagan: we should have a list of passed scenarios documented in the documentation site.

Working group report: Simulation (10 min)

- AWSIM:
 - Binary working with main branch of Autoware.universe prepared, shared and tested (Lexus + Kashiwanoha)
 - First instruction added to the Autoware documentation : [link](#)
 - Successfully matched PCD with LL2 maps of ITRI campus - tested with Lexus
 - First test with ITRI Bus/ITRI campus performed using Lexus sensor configuration (at the moment the sensor placement was not provided by ITRI) : [link](#)
- Metric calculation nodes:
 - Added draft PR with segmentation metric
 - Issue reported on the Autoware task (false detection of ground as valid objects) doesn't occur on the simulated data. We will manually solve the problem and make sure that regression doesn't happen on the synthetic dataset provided by MORAI
- Simulation compatibility tests
 - Minor fixes applied to Control related tests. Merged
 - Tests related to sensor data publication created by MORAI, now in process of testing and code review
- Experiments design for high fidelity simulators : [link](#)
 - Tested components defined (Localization, Perception, E2E)
 - Template of experiment definition defined
 - Ego movement defined based on scenario provided by ITRI

Discussion:

- Mert: any work done to integrate Isuzu bus model to AWSIM?
 - Wojciech: Not yet. I don't know if we should prioritize integration of ITRI bus or Isuzu bus.

- Mitsudome: I think we should finish ITRI bus first, then we can work on Isuzu bus.
- Wojciech: We should have the 3D model already.
- Mert: LeoDrive can provide any missing information
- Is the simulator activity going to be announced somewhere?
 - Tanzawa-san will involve Tsutake-san to plan the announcement of the simulator release.

Working group report: Racing (10 min)

- Working thru transition of leadership and future direction of Racing related developments
 - George, AWF developer located at Pennovation CoE, will take over as chair of Racing WG from CJ/Johannes
 - Knowledge transfer from Haoru (leaving AWF in Sept) to George
- Focus areas going forward:
 - Configuring go-kart to enable imitation learning using Lidar and Camera
 - Continued enhancements to F1TENTH to enable competitive racing (focus on planning/control for higher speed, passing, etc.)
 - Enabling vision based imitation learning on F1TENTH (longer term)

Discussion:

- David: Any activities on-going with IAC?
 - CJ: No follow-ups. Stefano said he will be connecting AWF and IAC again, but no discussion is happening yet. CJ will meet Stefano this Friday so we can follow-up there.

Working group report: Open AD Kit (10 min)

- Documentation review
 - Currently reviewing documentation status and maintenance procedures, various link corrections and updates in progress.
 - Need to have a clean, functional documentation path for cloud-sim-edge activities.
- Arm DevSummit and MIH demo progressing well
 - Daniel outlined approach based on cloud development with sim and OTA push to edge
 - Use of on Autoware and Perception containers are envisioned
 - Ito-san has had several advances including porting the eSync layer to AVA Kit.
- OpsCon and OAD Kit 2.0 Use Cases
 - Discussion had been somewhat stalled by lack of community input beyond primary authors, but now moving forward thanks to posts by Hashimoto-san and Kasper.
 - Topic will be discussed and concluded in next 1-2 WG meetings
- Alignment between technical infrastructure goals and OpsCon Use Cases is proceeding, Use Case example by Hashimoto-san reflects core of Arm DevSummit and MIH demo goals.

- <https://github.com/autowarefoundation/autoware/files/9155812/CR-FY2022-089.Use.cases.with.OpsCons.xlsx>
- General documentation overview, need to coordinate with Mitsudome-san regarding alignment with overall Autoware documentation and repository standards.
https://github.com/autowarefoundation/autoware_core_universe_prototype/files/8964849/Proposal.of.the.configuration.of.the.document.repo.for.Open.AD.Kit.pdf
- Foxglove relationship
 - Investigating a relationship with Foxglove for enhanced GUI and rviz capabilities. Contact has been initiated by CJ and Armagan.
- Releasing of ROS nodes suggestion and Autoware deployment slides (Kasper/5 mins(?))
 - [Open AD Kit Autoware Release and Deployment \(2022-08-17\).pdf](#)

Discussion:

- Armagan: Are there similar package in ROS buildfarm (package size, application, etc)
 - Fatih: We will not going to put into ROS buildfarm since we have to update more frequently
 - Mitsudome: what would be the granularity of released binaries?
 - Fatih: probably package by package
 - Kasper: We have already started testing
- Do we already have anyone working on the release task?
 - Kasper: Not yet
 - David: we can make resourcing as a next step
 - Mitsudome: Esteve might be able to help with the work. I can also ask Geoff if he can help us to plan out the tasks

Autoware ODD / Use Case Planning after Bus ODD (SPC + TSC chair)

- [Autoware Roadmap Update 20220817.pdf](#)

Discussion:

- Samet: In the previous meeting, we were discussing the timeframe of the feature development. Was that finalized?
 - CJ: No. We have to map the feature with expected events and schedule the timeline
- Shinpei: Looks go to me
- Mitsudome: If you have any other use cases that you would like us to consider, please contact Mitsudome or CJ

Updates from CoE (Rahul/CJ)

- Autoware CoE - EV+AV Gokart development [[Slides](#)]; [Rahul Mangharam](#)

Discussions:

- CJ: Are we getting support from Vecow to fix the issues?
 - Rahul: We can talk offline, but it's ongoing

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0 comments