2024-08-05 ODD working group weekly meeting (200) #5063

Igata-ctrl started this conversation in **Working group meetings**

Igata-ctrl on Aug 5 Collaborator edited

Attendee

- Daniel Shi (National Taiwan University/TIER IV)
- David Walmroth (PIX Moving)
- @mitsudome-r Ryohsuke MITSUDOME (AWF TSC/TIER IV)
- @Igata-ctrl Hiroshi IGATA (TIER IV)

Agenda/Minutes

- On July 21, 2024, 346/424 regular and prototype scenarios succeeded. One scenario (2 parameter cases) has been added in public road bus suite.
  - 127/141 **public road bus** scenarios were successful. 100% identical to July 7 and June 23 result.
    - UC-23-004-0001-With2Obstacles-ShalunRS : EGO doesn't stop against the detected NPC from the left. -> The issue persists after EGO size was made smaller nor LOS disturbing object (building) was deleted. -> EGO initial position was adjusted and it succeeded.
    - UC-LD-001-0004-1-Gebze : NPC crashes with EGO. -> NPC initial position further corrected and this one succeeds now.
    - UC-PB-005-0001-(1|2|3)-Hsinchu : EGO doesn't start after the cross traffic passed. -> NPC initial position further corrected and these scenarios succeed now.
    - UC-PB-009-0001-Db00-Hsinchu : System error. Simulation not executed.
      - UC-PB-009-0001-Db00-3-Hsinchu has been created from scratch, replaced above scenario and succeeded.
    - **UC-PB-009-0001-Db20-Hsinchu was corrected in regard to pedestrian behavior, etc. 1/2 parameter case failed as Ego seemed to ignore the bicycle.**
  - 187/198 **pull out** scenarios were successful.
    - **UC-v2-F-15-00006_001_case(01|02|03)_cmn_general : Failed -> StoryboardElementStateCondition has been modified but the "act_ego_speed_check" was not met as EGO accelerates only up to 15kph though the target speed is higher and the lane speed limit is 60kph (9 parameter cases).**

Category
Working group meetings

Labels
meeting:odd-wg

1 participant

- UC-v2-F-15-00101_001_case01_cmn_general : Start planner (red wall) is preventing EGO from going into the main lane. -> EGO start position parameter has been adjusted and this one succeeds now.
- **UC-v2-F-15-00103_001_case01_cmn_general : Obstacle stop prevents EGO from proceeding. -> The scenario intention is to use the space outside of the lane, but current Autoware.universe is not capable of it.**

- 27/83 **Low Speed Vehicles (Dense Urban) were successful.**
  - **Test-dense-urban_ITRI(2|3|4) : EGO cannot use the space in the opposite lane when it passes/overtakes NPC/Pedestrians.**
  - **Test-roundabout1_Shalun : Ego cannot avoid collision with the NPC in the round about. -> It looks like NPC is not detected (as the red bounding box does not appear in Rviz screen).**
  - **Test_MRM_Fault_Injection1 : MRM not conducted upon the fault injection.**
  - UC-NTR-001-0001_case(1|2), UC-NTR-001-0003_case1, UC-NTR-001-0005 : NPC's "take over finished" condition was not met though the rude NPS behaves as intended. -> Succeeded after Point0 position and the distance-to-Npc threshold were adjusted.
  - UC-NTR-001-0003_case(1|2) : Initial positions seems to be messed up. -> Succeeded after correcting the initial position by not using parameters.
  - **UC-NTR-001-0004_case2 : EGO and NPC1 spawn at different positions than in the scenario (a system error).**
    - **UC-NTR-001-0004_case2-Hsinchu was created with the same use case on Hsinchu map and it succeeded.**
  - **UC-NTR-001-0007 : NPC1 spawns at a different position than in the scenario (a system error).**
    - **UC-NTR-001-0007-Hsinchu was created with the same use case on Hsinchu map and it succeeded.**
  - **UC-NTR-002-0001_case(1|2), UC-NTR-002-0002_case(1|2), UC-NTR-002-0003_case(1|2) : EGO cannot overtake NPC using the space outside of its lane.**
  - UC-NTR-002-0004 : Fails with the excess deceleration. -> Succeeded after "min_acc" threshold was changed from -1.5(-0.15G) to -3.92(0.4G). (Where did -0.15G come from?)
  - UC-NTR-003-0001 : Fails with crash. -> Succeeded after "min_acc" was changed from -1.5 to -7.84(0.8G) and "D" from 5 to 3.
  - UC-NTR-003-0002 : Fails with excess deceleration condition when EGO detects the oncoming NPC. -> Succeeded after "min_acc" was changed from -1.5 to -7.84(0.8G).
  - UC-NTR-003-0003 : Fails with crash. -> Succeeded after changing "D" from 30 to 50.
  - **UC-NTR-004-0001 : EGO does not avoid the NPCs in the wrong direction.**
  - UC-NTR-005-0001 : Failed as "act_slow_down_npc" was not met. -> Succeeded after "follow_dist" was changed from

8.5m(2.2sec) to 19.2m(5 sec).
    - UC-VRU-001-0001_case1 : Was failing for Vp2=0 case -> Succeeded after Ped2 start condition and distance (D) were adjusted.
    - UC-VRU-001-0002 : Was failing with excess deceleration condition when EGO detects the pedestrian (jay walker). -> Succeeded after "min_acc" was changed from -1.5(-0.15G) to -7.88(0.8G). (Higher deceleration should be allowed to void collision.)
    - UC-VRU-002-0001_case(1|2) : Was failing with obstacle stop/timeout. -> Succeeded after "park_offset" was changed from2 to 2.5 and "min_acc" changed from -1.5(-0.15G) to -3.92(0.4G), Bicycle start condition corrected and one point added to FollowTrajectoryAction. As for case2, D was changed to (15, 17, 19).
    - UC-VRU-002-0002_case(1|2) : Was failing with excess deceleration condition when EGO tries to pass the bicycle. -> Succeeded after D was changed to 14 or 18 and min_acc changed from -1.5(-0.15G) to -3.92(0.4G).
    - UC-VRU-002-0003_case(1|2) : Was failing with obstacle stop/timeout. -> Succeeded after "park_offset" was changed from2 to 2.5 and "min_acc" changed from -1.5(-0.15G) to -3.92(0.4G), Bicycle start condition corrected and one point added to FollowTrajectoryAction.
    - UC-VRU-002-0004_case1 : Was failing with excess deceleration condition. -> Succeeded after D, "min_negative_acc" and bicycle tart condition were modified. (Higher deceleration should be allowed to void collision.)
    - UC-VRU-002-0004_case2 : Was failing with excess deceleration condition. -> Succeeded after "min_negative_acc" and FollowTrajectoryAction points were modified. (Higher deceleration should be allowed to void collision.)
    - UC-VRU-002-0005 : Was failing with excess deceleration condition. -> Succeeded after adding Ve=5.6(20kph) and changing "RelativeDistance Type" from "lateral" to "euclidian" and changing the lateral position of Bicycle0|1. (May need to observe the safety margins when playing back.)

- On July 28, 2024, 369/423 regular and prototype scenarios succeeded.
    - 139/142 **public road bus** scenarios were successful.
        - **UC-23-004-0001-With2Obstacles-ShalunRS : Ego is ignoring the traffic from its left.**
        - **UC-23-test-bikeway1 : Drivable area looks appropriately enhanced, but EGO stops for "Outside (of) Drivable Area" and Bicycle stops though "isBLIND:true" is set.**
        - UC-PB-009-0001-Db20-Hsinchu was corrected in regard to pedestrian behavior, etc. 1/2 parameter case failed as Ego seemed to ignore the bicycle. -> It succeeded after modifying the size of EGO vehicle (to allow more space for Bicycle0 on its right).
    - 185/198 **pull out** scenarios were successful.

- **UC-v2-F-15-00003_001_case01 : Failed for D1=8 and D2=4 (insufficient space).**
- **UC-v2-F-15-00006_001_case(01|02|03)_cmn_general : Failed -> StoryboardElementStateCondition has been modified but the "act_ego_speed_check" was not met as EGO accelerates only up to 15kph though the target speed is higher and the lane speed limit is 60kph (9 parameter cases).**
- UC-v2-F-15-00007_001_case01_cmn_general : Failed but became successful after explicitly setting Ve=5.6[m/s].
- UC-v2-F-15-00101_001_case01_cmn_general : Start planner (red wall) is preventing EGO from going into the main lane. -> EGO start position parameter has been adjusted and this one succeeds now.
- **UC-v2-F-15-00103_001_case01_cmn_general : Obstacle stop prevents EGO from proceeding. -> The scenario intention is to use the space outside of the lane, but current Autoware.universe is not capable of it.**

- 27/83 **Dense Urban** scenarios were successful.
  - **Test-dense-urban_ITRI(2|3|4) : EGO cannot use the space in the opposite lane when it passes/overtakes NPC/Pedestrians.**
  - **Test-roundabout1_Shalun : Ego cannot avoid collision with the NPC in the round about. -> It looks like NPC is not detected (as the red bounding box does not appear in Rviz screen).**
  - **Test_MRM_Fault_Injection1 : MRM not conducted upon the fault injection.**
  - UC-NTR-001-0001_case(1|2), UC-NTR-001-0003_case1, UC-NTR-001-0005 : NPC's "take over finished" condition was not met though the rude NPS behaves as intended. -> Succeeded after Point0 position and the proximity threshold were corrected.
  - **UC-NTR-001-0003_case1 : Succeeded for Vn=11.11 case. Ego starts before NPC finishes the takeover as opposed to the scenario intention. Is this potentially dependent on LHT/RHT?**
  - UC-NTR-001-0003_case2 : Succeeded after loading the latest version map ("fix local diff problem" map).
  - **UC-NTR-001-0004_case2 : EGO and NPC1 spawn at different positions than in the scenario (a system error).**
    - **UC-NTR-001-0004_case2-Hsinchu was created with the same use case on Hsinchu map and it succeeded.**
  - **UC-NTR-001-0007 : NPC1 spawns at a different position than in the scenario (a system error).**
    - **UC-NTR-001-0007-Hsinchu was created with the same use case on Hsinchu map and it succeeded.**
  - **UC-NTR-002-0001_case(1|2), UC-NTR-002-0002_case(1|2), UC-NTR-002-0003_case(1|2) : EGO cannot overtake NPC using the space outside of its lane.**
  - UC-NTR-002-0004 : Fails with the excess deceleration. -> Succeeded after "min_acc" threshold was changed from -1.5(-0.15G) to -3.92(0.4G). (Where did -0.15G come from?)

- UC-NTR-003-0001 : Fails with crash. -> Succeeded after "min_acc" was changed from -1.5 to -7.84(0.8G) and "D" from 5 to 3.
- UC-NTR-003-0002 : Fails with excess deceleration condition when EGO detects the oncoming NPC. -> Succeeded after "min_acc" was changed from -1.5 to -7.84(0.8G).
- UC-NTR-003-0003 : Fails with crash. -> Succeeded after changing "D" from 30 to 50.
- **UC-NTR-004-0001 : EGO does not avoid the NPCs in the wrong direction.**
- UC-NTR-005-0001 : Failed as "act_slow_down_npc" was not met. -> Succeeded after "follow_dist" was changed from 8.5m(2.2sec) to 19.2m(5 sec).
- UC-VRU-001-0001_case1 : Was failing for Vp2=0 case -> Succeeded after Ped2 start condition and distance (D) were adjusted.
- UC-VRU-001-0002 : Was failing with excess deceleration condition when EGO detects the pedestrian (jay walker). -> Succeeded after "min_acc" was changed from -1.5(-0.15G) to -7.88(0.8G). (Higher deceleration should be allowed to void collision.)
- UC-VRU-002-0001_case(1|2) : Was failing with obstacle stop/timeout. -> Succeeded after "park_offset" was changed from2 to 2.5 and "min_acc" changed from -1.5(-0.15G) to -3.92(0.4G), Bicycle start condition corrected and one point added to FollowTrajectoryAction. As for case2, D was changed to (15, 17, 19).
- UC-VRU-002-0002_case(1|2) : Was failing with excess deceleration condition when EGO tries to pass the bicycle. -> Succeeded after D was changed to 14 or 18 and min_acc changed from -1.5(-0.15G) to -3.92(0.4G).
- UC-VRU-002-0003_case(1|2) : Was failing with obstacle stop/timeout. -> Succeeded after "park_offset" was changed from2 to 2.5 and "min_acc" changed from -1.5(-0.15G) to -3.92(0.4G), Bicycle start condition corrected and one point added to FollowTrajectoryAction. -> Failed again but succeeded after "bicycle_side_offset" is changed from 1.5 to 2m and "keep:true" is set for RelativeDistance (longitudinal) condition.
- UC-VRU-002-0004_case1 : Was failing with excess deceleration condition. -> Succeeded after D, "min_negative_acc" and bicycle tart condition were modified. (Higher deceleration should be allowed to void collision.) -> Failed again but succeeded after the final FollowTrajectroyAction point was set at s=140.
- UC-VRU-002-0004_case2 : Was failing with excess deceleration condition. -> Succeeded after "min_negative_acc" and FollowTrajectoryAction points were modified. (Higher deceleration should be allowed to void collision.)
- UC-VRU-002-0005 : Was failing with excess deceleration condition. -> Succeeded after adding Ve=5.6(20kph) and changing "RelativeDistance Type" from "lateral" to "euclidian"

and changing the lateral position of Bicycle0|1. (May need to observe the safety margins when playing back.)

- On August 5, 2024, 365/423 regular and prototype scenarios succeeded.
  - 139/142 **public road bus** scenarios were successful.
    - **UC-23-004-0001-With2Obstacles-ShalunRS : Ego is ignoring the traffic from its left.**
    - **UC-23-test-bikeway1 : Drivable area looks appropriately enhanced, but EGO stops for "Outside (of) Drivable Area" and Bicycle stops though "isBLIND:true" is set.**
    - UC-PB-009-0001-Db20-Hsinchu was corrected in regard to pedestrian behavior, etc. 1/2 parameter case failed as Ego seemed to ignore the bicycle. -> It succeeded after modifying the size of EGO vehicle (to allow more space for Bicycle0 on its right).
    - UC-LD-001-0010-1-Gebze : Ve=2.7 case was failing. Ego size modified to allow more lateral space within the lane. -> Succeeded.
  - 181/198 **pull out** scenarios were successful.
    - **UC-v2-F-15-00003_001_case01 : Failed for (D1=8, D2=4) case and (D1=10, D2=4) case. Unnecessary Ego stop was observed.**
    - **UC-v2-F-15-00006_001_case(01|02|03)_cmn_general : Failed -> StoryboardElementStateCondition has been modified but the "act_ego_speed_check" was not met as EGO accelerates only up to 15kph though the max speed is set higher and the lane speed limit is 60kph (10 parameter cases).**
    - UC-v2-F-15-00007_001_case04_cmn_general : 2/36 cases failed due to unnecessary stop. After explicitly assigning Ve=4.2 to ego max speed, they succeeded.
    - **UC-v2-F-15-00103_001_case(01|02)_cmn_general : Obstacle stop prevents EGO from proceeding. -> The scenario intention is to use the space outside of the lane, but current Autoware.universe is not capable of it.**
    - UC-v2-F-15-01001_001_case01_cmn_general : This scenario has been succeeding for recent two months, but it failed this week by the PR merged last week. -> **@lgata-ctrl** is asking TIER IV CI/CD team for a batch conversion.
  - 45/83 **Dense Urban** scenarios were successful.
    - **Test-SafetyPool-map1 : Has been successful for a month, but failed this time. (A simple lane change did not happen.)**
    - **Test-dense-urban_ITRI(2|3|4) : EGO cannot use the space in the opposite lane when it passes/overtakes NPC/Pedestrians.**
    - **Test-roundabout1_Shalun : Ego cannot avoid collision with the NPC in the round about. -> It looks like NPC is not detected (as the red bounding box does not appear in Rviz screen).**
    - **Test_MRM_Fault_Injection1 : MRM not conducted upon the fault injection.**

- UC-NTR-001-0001_case(1|2), UC-NTR-001-0003_case1, UC-NTR-001-0005 : NPC's "take over finished" condition was not met though the rude NPS behaves as intended. -> Succeeded after Point0 position and the proximity threshold were corrected.
  - One case of UC-NTR-001-0001_case1 failed this week. If you change the "min_acc" parameter, it will succeed, but it should better be reverted to -1.5. Please see the discussion material.
- **UC-NTR-001-0003_case1 : Succeeded for Vn=11.11 case. Ego starts before NPC finishes the takeover as opposed to the scenario intention. Is this dependent on LHT/RHT?**
- **UC-NTR-001-0003_case2 : Succeeded after loading the latest version map (fix local diff problem). -> 1/3 failed this week as Ego started before Npc takeover was finished.**
- UC-NTR-001-0004_case2 : EGO and NPC1 spawn at different positions than in the scenario (a system error).
  - UC-NTR-001-0004_case2-Hsinchu was created with the same use case on Hsinchu map and it succeeded.
- UC-NTR-001-0007 : NPC1 spawns at a different position than in the scenario (a system error).
  - UC-NTR-001-0007-Hsinchu was created with the same use case on Hsinchu map and it succeeded.
- **UC-NTR-002-0001_case(1|2), UC-NTR-002-0002_case(1|2), UC-NTR-002-0003_case(1|2) : EGO cannot overtake NPC using the space outside of its lane.**
- **UC-NTR-002-0004 : Fails with the excess deceleration. -> Succeeded after "min_acc" threshold was changed from -1.5(-0.15G) to -3.92(0.4G).-> Revert to -1.5 before next week and expect future success after planning improvement.**
- **UC-NTR-003-0001 : Fails with crash. -> Succeeded after "min_acc" was changed from -1.5 to -7.84(0.8G) and "D" from 5 to 3. -> Revert to -1.5 before next week and expect future success after planning improvement.**
- **UC-NTR-003-0002 : Fails with excess deceleration condition when EGO detects the oncoming NPC. -> Succeeded after "min_acc" was changed from -1.5 to -7.84(0.8G).-> Revert to -1.5 before next week and expect future success after planning improvement.**
- **UC-NTR-003-0003 : Fails with crash. -> Succeeded after changing "D" from 30 to 50.-> Reverted to 30 and the crash to be avoided by future planning improvement.**
- **UC-NTR-004-0001 : EGO does not avoid the NPCs in the wrong direction. "max_negative_acc" was not modified,**
- **UC-NTR-005-0001 : Failed as "act_slow_down_npc" was not met. -> Succeeded after "follow_dist" was changed from 8.5m(2.2sec) to 19.2m(5 sec). -> May need modification of action1 trigger condition.**
- **UC-VRU-001-0001_case1 : Was failing for Vp2=0 case -> Succeeded after Ped2 start condition and distance (D) were**

adjusted. -> Reverted D to 15 and the crash or hard braking to be avoided by future planning improvement.

- UC-VRU-001-0002 : Was failing with excess deceleration condition when EGO detects the pedestrian (jay walker). -> Succeeded after "min_acc" was changed from -1.5(-0.15G) to -7.88(0.8G). Revert to -1.5 before next week and expect future success after planning improvement.
- UC-VRU-002-0001_case(1|2) : Was failing with obstacle stop/timeout. -> Succeeded after "park_offset" was changed from2 to 2.5 and "min_acc" changed from -1.5(-0.15G) to -3.92(0.4G), Bicycle start condition corrected and one point added to FollowTrajectoryAction. As for case2, D was changed to (15, 17, 19). -> Revert D (in case2) and "min_acc" to -1.5 before next week and expect future success after planning improvement.
- UC-VRU-002-0002_case(1|2) : Was failing with excess deceleration condition when EGO tries to pass the bicycle. -> Succeeded after D was changed to 14 or 18 and min_acc changed from -1.5(-0.15G) to -3.92(0.4G). -> D and min_acc reverted to original.
- UC-VRU-002-0003_case(1|2) : Was failing with obstacle stop/timeout. -> Succeeded after "park_offset" was changed from2 to 2.5 and "min_acc" changed from -1.5(-0.15G) to -3.92(0.4G), Bicycle start condition corrected and one point added to FollowTrajectoryAction. -> Failed again but succeeded after "bicycle_side_offset" is changed from 1.5 to 2m and "keep:true" is set for RelativeDistance (longitudinal) condition. -> "min_acc" reverted to -1.5.
- UC-VRU-002-0004_case1 : Was failing with excess deceleration condition. -> Succeeded after D, "min_negative_acc" and bicycle start condition were modified. (Higher deceleration should be allowed to void collision.) -> Failed again but succeeded after the final FollowTrajectroyAction point was set at s=140.-> Revert D and "min_acc" to -1.5 before next week and expect future success after planning improvement.
- UC-VRU-002-0004_case2 : Was failing with excess deceleration condition. -> Succeeded after "min_negative_acc" and FollowTrajectoryAction points were modified. (Higher deceleration should be allowed to void collision.)-> Revert D and "min_acc" to -1.5 before next week and expect future success after planning improvement.
- UC-VRU-002-0005 : Was failing with excess deceleration condition. -> Succeeded after adding Ve=5.6(20kph) and changing "RelativeDistance Type" from "lateral" to "euclidian" and changing the lateral position of Bicycle0|1. (May need to observe the safety margins when playing back.) -> Revert "min_acc" to -1.5 before next week and expect future success after planning improvement.

- Discussion of the condition/threshold setting so that we can better track the Autoware maturity through scenario simulation.

- After the discussion, it turned out "min_acc" parameter should better be reverted to original value of -1.5 (this week).

[recap of the discussions until last week]

- Current discussion with Safety Pool
    - [Map] Successfully converted a sample OpenDRIVE map from Safety Pool database to Lanelet2, but we have following issues. Though Mohammad (Deepen.ai/AWF Safety Assurance WG lead) proposed in May TSC that Autoware should consider accepting OpenDRIVE maps in a direct fashion as it solves all these issues, given that we may need to map-less autonomy, it may not worth switching map format from now.
        - Speed limit, lane change flag and LHT/RHT are lost through the conversion.
        - The converted Lanelet2 map contains a lot of unnecessary points on line strings. (e.g. 16,000points on 1 km one way straight road)
    - [Scenario] Autoware requires EGO's destination in each scenario, while all of the Safety Pool scenarios do not have the destination. Though Safety Pool once suggested to run Autoware in the “roaming” mode which does not require the destination in the scenario, it sounds unrealistic for Autoware to operate without destination as the destination is almost always an important part of the use case/scenario intention. (e.g. turning left/right).
        - In the Safety Pool Webinar, they demonstrated Autoware running with Safety Pool scenario, but they say that it requires some special settings for it and it is not scalable.
    - [Scenario file format] Though both Safety Pool and Autoware (Scenario Simulator v2) use OpenSCENARIO v1.x (a.k.a. OpenSCENARIO XML) standard, Autoware (Scenario Simulator v2) uses ”.yaml” file to better handle the parameters, while Safety Pool uses “.xosc” file, which is the default of the OpenSCENRIO standard. If the number of scenarios is not too big, we might be able to convert them from .xosc to .yaml format manually. (Currently, no automated converter is available.) If the scenario simulator v2 is installed on-premise, it will accept the .xosc file in a direct fashion.
    - [Scenario availability] After signing up for the Safety Pool database, the number of the accessible/visible scenarios are limited. 32,588 scenarios are visible but most of the scenarios are marked with "access restricted" and only 1957 scenarios are accessible. The total number of the scenario which Safety Pool claims is one million. Still waiting for an answer from Safety Pool

- After a brief hearing form TIER IV CI/CD team, it seems that the storage is becoming the bottle neck with Autoware Evaluator (for AWF organization use). There are two settings to save the storage space.
    - [Log Expiration] : Currently set to 60 days. We can revise this to 30 days, etc.

    - [Disable Logging on Success] : By disabling this, only the failed logs will be stored.

- In order to change the above settings of weekly simulations, you need to go to [Catalog] -> (ex) public road bus -> INTEGRATION tab -> select catalog -> ACTIONS -> Edit. You need the Github access token of the integrated repository.

- We can also exclude the stably succeeding scenarios from the weekly test list to save the storage space.

- After the discussion today, following settings have been applied.

    - [Log Expiration] : Changed from 60 to 45 days.
    - [Disable Logging on Success] : Not disabled for now. (We may sometimes need to play back the successful cases, too.)

- Following changes will be applied to the Autoware Evaluator settings by next week.

    - "**pull over** scenario suite" ("UC-F-16_ArvDpt_PullOver_zero#2") will be excluded from the weekly list as it may take some time for the speed limit/AEB issue to be addressed.
    - "test scenarios" suite to be renamed to "Low Speed Vehicles" for clarification.

- Did additional Q&A on Salvi's paper/poster "Online Identification of Operational Design Domains of Automated Driving System Features" which was presented in IV24 including the AD safety models defined in IEEE2846. His other papers are available form his personal page at Fraunhofer.

- Comments have been added to Leo Drive Scenario Catalog v0.7 - DRAFT.

    - Discussion topics include:
        - Autoware can detect animals as small as 15cm, but it requires additional learning/tuning.
        - If the detected objects fall in "unknown" category, it may lead to a sudden braking. In low speed ODDs, it may not be a big issue as the maximum speed is low (<20kph).
        - Parking module is included in current Autoware.universe.

- In addition to the discussion last week, **@lgata-ctrl** is investigating the cloud storage quota. It is associated to how long you would like to keep the simulation result in terms of rosbag.

- Answers to some of the questions from the meeting last week.

    - Comfortable braking threshold (deceleration and jerk) -> See the updated vehicle performance page.
    - Cloud quota for the weekly simulation -> The monthly total DURATION should not exceed 50 hours. You can check it in the Evaluator screen. -> **@lgata-ctrl** to double check that it is OK to

simply add up the time in the DURATION column in the Evaluator Reports page.

- A TUM researcher Aniket Salvi, M. Sc. introduced his paper/poster "Online Identification of Operational Design Domains of Automated Driving System Features" which was presented in IV24.

> Aniket Salvi, M. Sc.
> Research Engineer
> Engineering of Software-Defined Mobility
> Fraunhofer-Institut für Kognitive Systeme IKS

- **@Igata-ctrl** joined the Reference Design WG meeting on May 29, 2024 and learned about the low speed ODDs of ROBEFF Technology's cargo vehicle and Kingwaytek's shuttle bus. -> Try to take some time to comment on this use case spreadsheet.

- Also discussed the followings:

  - Comfortable braking threshold (deceleration and jerk)
  - Cloud quota for the weekly simulation (TBC)
  - Expect **@mitsudome-r** to streamline the registration process to the Evaluator
  - Is there an easy way to download multiple scenarios at once? -> Unfortunately, no, as each scenario is associated to certain map and its version.

Action Item

Documents

- The bus ODD use case list which was assigned to the members is here.
- The bus ODD use case list has been also uploaded here to make it visible to anyone on the net.
- The ODD working group shared document folder is here. [Restored!]
- Discussions and Q&As in AWF Discord ODD WG channel are also encouraged.

Tools

- [Autoware Evaluator (CI/CD pipeline)]

  - Cloud based DevOps (integration of the development tools including the scenario editor and the scenario simulator below)
  - A product from TIER IV and offered for the official Autoware Foundation projects like Cargo Delivery and Public Road Bus, etc.
  - The user guide is available TIER IV document site

    - As it consumes AWS resource, the (batch) weekly execution of the scenario simulation is managed by the Software/ODD WG leads

- [Scenario Simulator V2 (Scenario testing framework)]
    - Stand alone scenario simulation tool
    - An OSS from TIER IV freely available for any Autoware developer/researcher
    - The documentation of the Scenario Testing Framework (open sourced from Tier IV) is on GitHub

- The GUI Scenario editor
    - Web based GUI scenario editor freely available from TIER IV
    - You can create and export scenarios with this web interface
    - The user guide is available TIER IV document site

- [TIER IV account]
    - The working group members who are interested in creating and testing scenarios are advised to create a free TIER IV account here.
    - Once you have created your account, please let **@lgata-ctrl** know the (long) User ID which appears on your login page. After **@lgata-ctrl** registered you to the AWF group in the Evaluator (CI/CD pipeline), you can go to AWF Autoware Evaluator page to see the simulation results, create/edit scenarios, etc.
    - If you already have a TIER IV account, your 4-digit User ID continues to work, so you do not need to register to TIER IV account again.

Administrative

- The two meetings on December 25th (Christmas day) and January 1st (New Year day) have been cancelled.

- Please check the ODD WG wiki page.

- Recurring weekly meetings have been scheduled. Please check Autoware Foundation events calendar and add this calendar to your own Google calendar by clicking the right bottom button and/or add your contact to ODD WG invitation group to receive invitations for future meetings.

- ODD WG meetings are held weekly in the following single time slot.
    - 7:00am, Monday (PST) / 6:00am, Monday (PDT) US Pacific Time
    - 10:00am, Monday (EST) / 9:00am, Monday (EDT) US Eastern Time
    - 4:00pm, Monday (CEST) / 3:00pm, Monday (CEDT) Poland time
    - 5:00pm, Monday (TRT) Turkey time
    - 10:00pm, Monday (CST) Taiwan time
    - 11:00pm, Monday (JST) Japan Time

0 comments