

# Autonomy Software WG Meeting 2022/12/20 #3135

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



BonoloAWF on Dec 13, 2022

edited ▾

## Administrative

- [Previous Meeting Minutes](#)

## Common Resources

- Bus ODD [software architecture proposal](#)
- Bus ODD [architecture design discussions](#)
- Bus ODD [candidate simulator comparisons](#)
- Bus ODD [milestone development plan](#)
- Bus ODD [Project Board](#)
- Autoware [contributors list](#)

## Attendees

► Chaired by Ryohsuke

## Announcements

- Part I of the [Autoware.Universe Training Series](#) is complete.
- The next two ASWG meetings are cancelled due to Christmas holidays. Regular meetings will resume on 10 January 2023.

## Autoware.Universe

- ☐ Bus ODD [Nov-Dec Milestone](#)
- ☐ Bus ODD [high priority issues/PRs](#) not in the current milestone
- ☐ PRs [waiting for review](#) not in the current milestone/high priority.
- ☐ Autoware.Universe reported [bugs](#) not in the current milestone/high priority.
- ☐ Autoware [design discussions](#) and [demos](#)

## Bus ODD progress updates

ITRI bus integration update (In meetings with 7am UTC time slot)

### Category



Working group meetings

### Labels

meeting:software-wg

### 4 participants



- See comments for slides
- Mike to create discussion under Q&A with rosbags with current issue with Localization
  - ekf\_localizer taking up to 70-80% cpu
  - unstable when turning corner
  - Only 6 Hz coming from LiDAR
- On-vehicle dynamic testing is ongoing - bus can drive straight and turn left

Ryohsuke - do you include odometry information? Brian - yes, but localisation is still shaking. Fatih - could you record and share a rosbag? Brian - yes.

## LeoDrive bus integration update

- Transitioning to Humble
- Working on created issues/PR
- Web.Auto integration will be done after Humble transition

## Discussions

---

### Discussion 1

- AD API updates moved to next call

### Collision checking (Berkay)

- Updates on predicted path
- <https://github.com/orgs/autowarefoundation/discussions/2859>
- 🐛 [feat\(predicted\\_path\\_checker\): check predicted trajectory to avoid collisions planning can not handle](https://github.com/orgs/autowarefoundation/discussions/2859#discussioncomment-4452777) [autoware.universe#2528](https://github.com/orgs/autowarefoundation/discussions/2859#discussioncomment-4452777)
- Mehmet & Berkay would like to have reply on this thread: <https://github.com/orgs/autowarefoundation/discussions/2859#discussioncomment-4452777>
- Goal is to slow down with a proper acceleration profile (not emergency)

## Demos

---

### Autocore Updates (Lucas)

- See slides in comments
- Open source lidar-camera calibration tool is available
- Running Open AD Kit podman instead of k3s reduces the overall running time for Autoware
- Localization tests on higher speed 60km/h - data collection complete

Lucas - which algorithms should we use? Fatih - I don't mean localisation algorithms, I mean using generalised ICP to match the pointclouds. We can skip testing different algorithms and play bagfiles slowly to check matching performance.

Ryohsuke - please post Discussion Show & Tell for the calibration tool, with a link to the docs.

## Action Items

- None

## Review of Issues and Discussions

The following Discussions and Issues were highlighted:

- See comments below

↑ 1

3 comments

Oldest

Newest

Top



mitsudome-r on Dec 20, 2022

Maintainer

edited ▾

## Nov-Dec Milestones:

- [👍 behavior\\_path\\_planner generating invalid path orientation](#) autoware.universe#2125
  - no updates (cc. [@beyzanurkaya](#) [@mehmetdogru](#) )
  - started on creating PR
- [👍 Trajectory planning for long vehicles not working properly](#) autoware.universe#2182
  - [@maxime-clem](#) working on updating PR [👍 Trajectory planning for long vehicles not working properly](#) autoware.universe#2182
  - [🔗 feat\(behavior\\_path\\_planner\): param to skip some linestring types when expanding the drivable area](#) autoware.universe#2288  
This needs to be updated by this week as well [@maxime-clem](#)
  - plan to finish this week
- [👍 The detection\\_area module does not visualize debug markers when some obstacles are not detected by it](#) autoware.universe#1121
  - PR: [🔗 fix\(detection\\_area\): add color debug markers](#) autoware.universe#2401
  - resolved issue with rebase
- [👍 Vehicle starts move before the steering angle converged](#) autoware.universe#1543
  - [🔗 fix\(trjectory\\_follower\\_nodes\): mpc\\_follower does not send proper converged data under low steering rate limit](#) autoware.universe#2454
  - PR being reviewed. We might want some explanation regarding "structural change" from [@brkay54](#)

- waiting for [🔗 refactor\(trjectory\\_follower\\_nodes\): refactor the controller framework](#) [autoware.universe#2432](#) to be merged
- [👍 add configurable lateral\\_distance for different target objects](#) [autoware.universe#2222](#)
  - PR ongoing
- [👍 Checking only 4 corners in the drivable area](#) [autoware.universe#1716](#)
  - PR: [🔗 feat\(obstacle\\_avoidance\\_planner\): check footprint with boost::geometry::intersection](#) [autoware.universe#1999](#)
  - Any updates from [@beyzanurkaya](#)?
  - [@mehmetdogru](#) to review
- [👍 Create speed\\_bump behavior module](#) [autoware.universe#611](#)
  - PR: [🔗 feat\(behavior\\_velocity\\_planner\): add speed bump module](#) [autoware.universe#647](#)
  - Had discussion last week.
  - Waiting for this comment to be resolved: [🔗 feat\(behavior\\_velocity\\_planner\): add speed bump module](#) [autoware.universe#647](#) (comment)
- [👍 Using a de-grounded point cloud for NDT matching gives a more reasonable match score](#) [autoware.universe#2044](#)
  - [🔗 fix\(ndt\\_scan\\_matcher\): using de-ground points calculate ndt match score](#) [autoware.universe#2312](#)
  - If no concern with merging, we can merge this.
- [👍 Vehicle stops in front of non-existing obstacle on the path](#) [autoware.universe#2213](#)
  - [🔗 fix\(obstacle\\_stop\\_planner\): add checking of point height](#) [autoware.universe#2296](#)
  - Any remaining issues before merging?
  - [🔗 fix\(obstacle\\_stop\\_planner\): add checking of point height](#) [autoware.universe#2296](#) (comment) needs to be resolved.
- [👍 Can not give a new goal behind in the same lane](#) [autoware.universe#1715](#)
  - [@mitsudome-r](#) would like to take different approach (maybe modify mission\_planner to break route into different parts and send sequentially).

↑ 1

0 replies



**hueirutseng** on Dec 20, 2022

Collaborator

ITRI Autonomous Bus Update [Slides](#)

↑ 1

0 replies



**liuXinGangChina** on Dec 20, 2022

Collaborator

edited ▼

[AWF w52 ASWG.pdf](#)

hi, everyone. Above is the slide for today's sync from autocore L4 AD team. I want to highlight our recently open sourced lidar-camera extrinsic params calibration tool.[https://github.com/autocore-ai/calibration\\_tools/tree/main/lidar-cam-calib-related#4-calculate-rotation-and-translation](https://github.com/autocore-ai/calibration_tools/tree/main/lidar-cam-calib-related#4-calculate-rotation-and-translation) please feel free to test and create issues and prs. thanks, wish everyone a happy healthy day.

↑ 1

0 replies