openPASS AC – 10.02.2022

Donnerstag, 10. Februar 2022   14:00

Date: 10.02.2022 14:00
Location: Microsoft Teams-Besprechung
Participants

- ☑ [Das Arun, FG-461](#) (BMW Group)
- ☑ [Hammouda Manel, EG-342](#) (BMW Group)
- ☑ [jan.dobberstein@daimler.com](#) (Mercedes Benz AG on behalf of Daimler TSS)
- ☑ [Per.Lewerenz@daimler.com](#) (Mercedes Benz AG on behalf of Daimler TSS)
- ☑ [Platzer Thomas, EG-342](#) (BMW Group)
- ☑ [Duong Quang, Tuan](#) (TÜV SÜD Auto Service GmbH)
- ☑ [Daniel.Schmidt6@de.bosch.com](#) (Robert Bosch GmbH)
- ☑ [Lucas, Gwendal, Dr. (K-AERT/A)](#) (VW on behalf of VW GoA)
- ☑ [Schoenawa, Stefan, Dr. (K-AERM/A)](#) (VW on behalf of VW GoA)

Notes

Support for Linux OS (i.e. Loading of PCM files)
Most parts of GUI and simulation core are already working under Linux and Windows. Also, the CI is set up for both platforms.
The main concern remaining is the "Microsoft Access Database Engine 2016 Redistributable" which is used for loading PCM cases. It is currently unknown, if a suitable component is also available for Linux. Potential next steps are:

1. Investigate if there is an efficient solution to enable reading PCM cases under Linux
2. Disable PCM under Linux and show a message to users for information purposes (including also adaptions in the documentation)
3. Provide PCM cases in a readable format for openPASS (this is planed long term but requires involvement of external partners)

Currently no partner is available to perform an evaluation according to option 1, therefore solution 2 has been chosen in the short run.
According progress will be tracked in an issue on GitLab:
https://gitlab.eclipse.org/eclipse/simopenpass/simopenpass/-/issues/117

Timeline for renaming of branches
According issue on GitLab: https://gitlab.eclipse.org/eclipse/simopenpass/simopenpass/-/issues/94
Possibly affected elements: documentation, Jenkins CI, Merge Requests
Tuan and Arun will do the renaming on Monday.

Presentation of openPASS at Safety Week (May in Würzburg)
The SafetyWeek will take place on 17.-19. Mai 2022 in Würzburg
(https://www.carhs.de/de/safetyweek.html).
Jan was asked to present openPASS at the Safety Week. Key message could be: Fields of application, current developments towards modularity and platform idea of openPASS. Further, the transformation of openPASS from a simulator to a larger ecosystem (e.g. flexible combination of scenario engines with environment simulator) can be described. Potentially this will be underlined with an overview of research projects where openPASS is applied.

Next steps: Jan will come up with an outline for the presentation and a first draft. A separate meeting will be set up by Jan to discuss the presentation in more detail.

Compatibility of GUI and core
Some plugins of the GUI have already been disabled in Release v0.8 as they were not compatible anymore. Most likely, this will be very similar in v0.9 as developments in the GUI will probably

continue later this year.

Short overview of plugins and their current state:
- Project: plugin is independent of content of config files as only a config directory is referenced
- System Editor: still compatible as no changes to the format of the systemConfig have been made. Yet, it is unclear if the probabilistic approach for the configuration is working. Investigation will happen in issue
https://gitlab.eclipse.org/eclipse/simopenpass/simopenpass/-/issues/118
- PCM Simulation: This plugin creates config files, thus changes to the configs are relevant for the plugin. Due to latest and upcoming changes, the plugin needs to be updated continuously
- PCM Evaluation: Only runs based on the simulation outputs, therefore changes to the input configs do not cause compatibility issues
- Result Visualization: Only runs based on the outputs (similar to PCM Evaluation)
- AgentConfiguration and TrafficSimulation: Both are not compatible as of Release v0.8 and are thus deactivated. Probably the CMake buildsystem is not even set up properly yet.

Documentation of Requirement Refinement Meetings
List of requirement refinement meetings since last AC meeting:
- 03.02.2022 Synchro meeting on current developments of OpenSCENARIO Engine / API

  As there have been a lot of discussions concerning scenario interpretation and usage aside from the regular organizational topics, some additional notes have been collected during the refinement meeting:

  - Teleport Action: coordinates can be given in various coordinate frames. Currently any given position is converted to world coordinates prior to executing the action through the MantleAPI. The environment simulator and thus also the MantleAPI are used during conversion.
  - SpeedAction now considers also the orientation of an entity when determining the velocity vector
  - Teleport Action now considers orientation (type "absolute" refers to orientation in world coordinates, type "relative" refers to orientation in the according position type)
  - TrafficSignalStateAction:
    OpenSCENARIO 1.1 is still quite unclear in how to control traffic lights. The action can be used on different levels (e.g. for a single bulb or for a whole traffic light). Further, the state is an arbitrary string. As the state is not defined by OpenSCENARIO, each environment simulator can have own definitions. Therefore, the current implementation in the scenario engine just forwards the state string to the environment simulator.
    A TrafficSignalController is intended to control a group of traffic lights, while a group contains traffic lights controlled in the exact same way (e.g. all traffic light in the same entering direction into a crossing). A crossing will then consist of several traffic light groups and controllers.
    It is still unclear how dynamic speed limits and overtaking restrictions are handled through OpenSCENARIO.
    Regarding the definition of enums for the MantleAPI it seems beneficial to reuse the same definitions as already given in the OSI standard.
  - VisibilityAction is currently not evaluated in the scenario engine but just forwarded to the environment simulator.

If you plan to attend one of the following meetings, contact one of the attendees to forward you the meeting or approach Arun Das.