Draft report of the 24th Session of the GRSG Informal Working Group on awareness of Vulnerable Road Users proximity in low speed manoeuvres (VRU-Proxi)

Dates: 6th and 7th of July 2022
Venue: Webex meeting
Chair: Mr. Romain Ladret Piciorus (European Commission)
Secretary: Mr. Johan Broeders (OICA)

1. Welcome and introduction

The Chair welcomed the group and explained the objectives of this 24th session of the IWG VRU-Proxi.

2. Adoption of the agenda

Document: VRU-Proxi-24-01 Rev1 (Chair)

The Chair explained the revision to the initial agenda and running order as made by the Secretary due to the availability of some experts. The group adopted the revised agenda.

3. Adoption of the report of the 23rd VRU-Proxi session (online meeting)

Document: VRU-Proxi-23-04 Rev1 (Chair)

The expert from France submitted a comment to section 6.1 of the draft report of the 23rd VRU-Proxi meeting. The Secretary explained the proposed revision of the draft report and the expert from France agreed with the proposed changes. As no further comments were received the revised draft report was adopted by the group.

4. Moving-Off Information System (R159)

Document: GRSG-123-32_0
GRSG-123-11 Rev1

The GRSG adopted both documents GRSG-123-32 and GRSG-123-11 Rev1 in its 123rd session and agreed to submit them to WP.29 and AC.1 for consideration and vote at their November 2022 sessions. The Chair asked the group for any further comments or considerations to these documents. There were no comments and as these documents were already in the WP.29 process no further actions were needed.

5. Reversing Motion (R158)

Document: GRSG-123-31
VRU-Proxi-24-02 (FR-DE)
VRU-Proxi-24-03 (CLEPA)

The group continued the discussion on Paragraph 16.1.3.1 regarding the temporary obstruction of the monitor view. The expert from France presented a proposal from France and Germany to allow some movement of the head of the driver (limited by the constraints of the restraint system) to increase the visibility of the monitor. If under this condition the full view of the monitor cannot be guaranteed the reversing motion system shall be extended with an additional warning by means of a detection system. Some members of the group expressed their positions on this proposal:

- UK remains concerned and argued that:
  - Drivers will have an excuse of not being able to see a VRU because of a temporary obstruction of the monitor.
  - Moving the head would be an additional task for the driver.
  - An additional warning triggered by a detection system could be supported.
- CLEPA stated that the proposal would lead to more tasks for the driver which makes it more complex and mentioned to expect issues with Market Surveillance when there are no clear test protocols for the Technical Services.

The experts from Germany and France explained that the obscuration is likely to be small as only a small movement of the head is acceptable, not a movement of the complete torso. Also, the proposal was based on the practice of Regulation No. 121 in order to keep consistency between the different regulations. For understanding the issue, LDS showed an example of the obscuration of the monitor view by a turned steering wheel in an existing truck CAD model. The expert from UK stated that conventional mirrors and monitors regulated by Regulation No. 46 may also not be obscured and asked the industry to indicate where the monitors for Regulation No. 158 could be placed. JAMA explained that in Japan typically a separate monitor is installed for the rear-view camera systems. No final conclusions were made, the discussion will be postponed to the next meeting.

A proposal from CLEPA with consultation from of the expert from Japan regarding modification of the view as de-activation of the rear-view image was briefly discussed. The objective of the proposed change is to only allow a modification of the view initiated by the driver as long as the awareness for the manoeuvring action is kept in the modified view. The expert from UK recognizes the intention of the proposal but indicated to need more time for further consideration. The expert from France suggested to consider the text and conditions of paragraph 16.1.1.1.1 (Temporarily modified view) of Supplement 7 to the 04 series of amendments of Regulation No. 46. Furthermore, the remark was made to check if it would be useful to combine this proposal with a proposal for amendment related to the definition of the backing event where OICA is currently working on. OICA may prepare this topic for further discussion in the next meeting.

6. Direct Vision

6.1. Continuation of discussion on proposals for amendments from Germany and Spain

Documents: GRSG-123-08 (Germany)
GRSG-123-25 (Spain)

GRSG-123-26 (Spain)
VRU-Proxi-24-06 (Apollo Vehicle Safety)
VRU-Proxi-24-07 (Germany)
VRU-Proxi-24-08 (Germany)

The expert from Germany indicated that the proposal GRSG-123-08 has not been discussed in the last GRVA session and explained to work on a new regulation regarding an urban emergency braking system (UEBS) aiming for a discussion in GRVA. The expert showed draft text proposal VRU-Proxi-24-07 and presentation VRU-Proxi-24-08. It was proposed to consider this new regulation as an "if-fitted" regulation that could be used as an alternative for some specific requirements of the Direct Vision and MOIS regulations. The expert indicated that for direct vision it could relax or exclude only the separate limit value for level 3 vehicles and not the limit value for the combined view or for other level vehicles. For now only the front side has been considered but extension to the side (related to BSIS) could be possible if the alternative testing procedure is followed in order to avoid too early interventions. After the meeting the document and presentation were updated and provided by the expert from Germany.

In relation to the documents from Spain the experts discussed about an alternative proposal to solve the raised issue about the distance between the front axle and the foremost point of vehicle as one of the parameters to describe a 'vehicle type'. Apollo Vehicle Safety drafted a proposal (VRU-Proxi-24-06) to refer to the Accelerator Heel Point instead of the center of the front axle to make it independent of the different front overhang configurations for basically the same vehicles with identical driver positions. The group agreed with this proposal and the Secretary was asked to submit the proposal as a Working Document for the next GRSG.

6.2. Direct Vision Regulation Phase 2

Document: VRU-Proxi-24-04 (DV Taskforce)
VRU-Proxi-24-05 (LDS)

The Chair of the Taskforce Direct Vision presented the status of the Taskforce regarding the following tasks:

- Alternative testing method for innovative vehicle designs (technical neutrality)
- Vehicles with competing objectives

Regarding the alternative testing, work is ongoing on different proposals with the goal to seek the best compromise between good design neutrality and equivalence of level of stringency with the current regulation. LDS explained in VRU-Proxi-24-05 the status and the opportunities of the design neutrality options. The aim is to check the correlation with an increased sample of vehicles from 10 to 15. Option 3 has currently the best correlation but the location of VRUs further away from the side of the cab can strongly skew the results. LDS will work on option 4 with reduced width of the front zone up to 2 meters from both sides of the cab. An initial check with some vehicles showed that option 4 may result in a better correlation than option 3 and looks promising that this will address all concerns.

Regarding to the vehicles with competing objectives the Chair did have a chat with AVERE (European Association for Electromobility) and explained that AVERE is interested in this discussion. The expert from Sweden stated that the EU GSR Phase 2 is not demanding direct

vision on its own but that a holistic approach shall be taken for vehicles with competing objectives like High Capacity Transport (HCT) vehicles. This transport manner is not only important for the Scandinavian area but also for other Contracting Parties that allow high capacity / EMS vehicles. For the next meetings the expert from Sweden will prepare a proposal with vehicle parameters to distinguish between HCT and 'other' level 3 vehicles.

The Chair mentioned that he was preparing a document with a "fiche" for these vehicles. As soon as this document is available it will be shared with the group and posted on the UNECE-wiki.

7. Blind Spot Information System (R151)

Document:

This subject has not been discussed as no documents or proposals were submitted.

8. Frontal and Lateral Driver's Awareness M1/N1

Document:

This subject has not been discussed as no documents or proposals were submitted.

9. Component Approval

Document:

The Chair explained having an internal discussion about the implementation of Component Approvals in the regulations drafted by VRU-Proxi. Towards next VRU-Proxi meeting more information will be prepared. The experts from CLEPA and Japan indicated to be willing to take part in this discussion. The expert from Japan mentioned that the Japanese Body Builder Industry Association (JABIA) also wants to be involved in this discussion. The Chair will contact the parties that are interested in Component Approval for further considerations towards the next meeting.

10. Next meeting

25th meeting: [provisional dates are 2 days out of 27, 28 or 29 of September 2022 (2 morning sessions) to be decided appr. 1 month ahead of the meeting, web meeting TBD]

11. Any Other Item

No further items were discussed.