

**Revised Draft report of the 26th Session of the
GRSG Informal Working Group on
awareness of Vulnerable Road Users proximity
in low speed manoeuvres (VRU-Proxi)**

Dates: 7th and 8th of December 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 26th session of the IWG VRU-Proxi.

2. Adoption of the agenda

Document: [VRU-Proxi-26-01 Rev1 \(Chair\)](#)

The Chair explained the proposed agenda and running order. The running order was adapted at the beginning of the meeting based on the availability of some experts. The group adopted the agenda and the revised running order.

3. Adoption of the report of the 25th VRU-Proxi session (online meeting)

Document: [VRU-Proxi-25-06 \(Chair\)](#)

No comments were received concerning the report of the previous VRU-Proxi meeting. The report was adopted by the group.

4. Feedback from 124th GRSG (October 2022) and 188th WP.29 (November 2022)

Document: [ECE-TRANS-WP.29-GRSG-103 \(GRSG\)](#)
[ECE/TRANS/WP.29/1168 \(WP.29\)](#)

The Chair informed the members on the outcome of the 124th session of GRSG and 188th session of WP.29.

Two new regulations drafted by VRU-Proxi were submitted by GRSG to WP.29 and adopted in the 188th session of WP.29:

- Regulation No. [166] on Vulnerable Road Users in Front and Side Close Proximity
- Regulation No. [167] on Vulnerable Road Users Direct Vision

GRSG asked WP.29 for guidance concerning the work on the proposal for an Urban Emergency Braking System (UEBS) in relation to possible shared responsibility of GRVA.

WP.29 agreed to have a clearer understanding of the direction of work related to the proposal before starting this activity under GRSG or GRVA.

The Chair asked the expert of DE if more information could be provided regarding the proposal for UEBS that was submitted by Germany to GRSG and GRVA. The expert of DE mentioned that no further information is available at this moment.

5. Reversing Motion (R158)

Document: [VRU-Proxi-25-05 \(Chair\)](#)
[VRU-Proxi-26-02 \(France\)](#)
[VRU-Proxi-26-02 Rev2 \(Secretary\)](#)
[VRU-Proxi-26-03 \(IWG VRU-Proxi\)](#)
[VRU-Proxi-26-07 \(Japan\)](#)

Concerning Regulation No. 158 Reversing Motion the following subjects were discussed:

1. Temporary obstruction of the monitor view (paragraph 16.1.3.1):

- The expert of FR prepared document VRU-Proxi-26-02 and explained the proposal with 2 options for amending 16.1.3.1 to allow temporary obstruction of the monitor view or temporary obstruction of the field of vision.
- The expert of DE agreed with the proposal and suggested to not require the visibility of the whole monitor but to limit it to the required field of vision (option 2) as manufacturers may limit the monitor size to field of vision only to comply with the regulation. The expert from FR understood the comment and argued that in option 1 the whole monitor view was chosen to cover also turning reversing manoeuvres.
- The expert from CLEPA questioned if dynamic location of the field of vision within the monitor view, e.g. depending on steering wheel angle would be acceptable. The expert from FR could accept this proposal. The expert from J stated that from legal perspective this could be accepted, however it shall not confuse the driver.
- There was discussion about the definition of the height of the driver and whether monocular or binocular vision shall be considered (tallest / smallest). The expert of J provided VRU-Proxi-26-07 with a proposal for drafting text. It was agreed that the manufacturer has to demonstrate to the Technical Service that extreme driver heights are covered. Besides that, binocular vision may be used for this analysis.

The group preferred the second option in the proposal from France and agreed to reduce it to the field of vision only and to require the field of vision to be always in the same location on the screen of a monitor (no dynamic location). These modifications including changes concerning the height of the driver and binocular vision are reflected in VRU-Proxi-26-02 Rev2 for consideration in the next VRU-Proxi meeting. In particular OICA is asked to give feedback on this proposal.

2. Modification of the view (paragraph 16.1.1.3):

- The expert of CLEPA submitted VRU-Proxi-26-03 containing a proposal for an amendment of paragraph 16.1.1.3 to allow a temporarily modified view.

- Reference was made to a similar requirement in paragraph 16.1.1.1.1 of Regulation No. 46 (as laid down in Revision 6 Amendment 5).

There was a broad consensus to accept this proposal. The expert from CLEPA will adapt the proposal on the basis of the same rules as defined in Regulation No.46.

3. Deactivation / definition of backing event (paragraphs 15.1.1. & 17.1):
This subject has not been discussed in this session as there was no input from the members.

6. Direct Vision

6.1. Direct Vision Regulation Phase 2 – Design neutrality

Document: [VRU-Proxi-26-04 \(LDS\)](#)
[VRU-Proxi-26-05 \(ACEA\)](#)
[VRU-Proxi-26-06 \(Taskforce Direct Vision\)](#)

- The expert from LDS presented VRU-Proxi-26-04 and explained the status of the alternative method for achieving technology neutral requirements for the frontal vision zone. Two options (3 and 4) were presented and compared on aspects as correlation to VRU-distance and effect of changes to the dashboard on passenger side. The expert of LDS showed that both options have good correlations with option 4 having the best correlation. The changes to the dashboard show improvements for both options but LDS questioned the relevancy of the location of the additionally achieved visible volume.
- The expert from FR suggested to use also other models for determination of the correlation as in the current analysis only Volvo truck models were used. The expert from LDS responded that Volvo models were used because of their large variance in correlation.
- The Chair of the Taskforce Direct Vision gave with VRU-Proxi-26-06 a status report of the Taskforce. A very good explanation was given about the pro's and the con's of the different options to meet the objective for design neutrality.
- ACEA indicated with VRU-Proxi-26-05 that the great benefit of option 3 for VRU safety is the opportunity to get also improvement of turning safety for level 2 and 3 vehicles as these vehicles don't need to comply with separate volume requirements at the near side. In addition, according to ACEA option 4 would not fully cover the currently regulated frontal volume anymore (indicated as high risk area).
- LDS noted that independent of the option that will be chosen, equivalence with the current method is needed which would require additional time. It was noted that this additional work would not be feasible before the deadline for Working Documents for the next GRSG.
- As a way forward it was suggested to propose option 3 together with safeguards meaning additional requirements that VRUs at certain positions need to be seen in addition to the required visible volume.
- The expert from FR mentioned to be supportive to option 4 due to the better correlation and less variance from technical neutrality perspective but also open for option 3 (possibly

with safeguards) if the Industry can show that this option is challenging enough to improve the cab designs. The expert of UK shared the opinion from FR.

- DE, SE and TK are supportive to option 3.
- The Industry is asked to contact the experts of FR and UK after the meeting for further detailed discussions.

No final decision was made. It was agreed to submit a Working Document to GRSG to replace paragraph 5.3 of Regulation no. [167] and propose both options by placing them in between square brackets. The final decision and other changes can be submitted later by means of an Informal Document prior to the next GRSG session.

6.2. Direct Vision Regulation Phase 2 – Vehicles with competing objectives

This subject has not been discussed in this meeting and has been postponed to the next meeting.

7. Moving-Off Information System (R159)

As there were no proposals submitted, this subject has not been discussed during this meeting.

8. Blind Spot Information System (R151)

As there were no proposals submitted, this subject has not been discussed during this meeting.

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

As there were no proposals submitted, this subject has not been discussed during this meeting.

10. Component approval

~~The expert from J stated that J will work on the Component Approval subject and will provide input in one of the next IWG sessions in 2023.~~ The expert from the EC mentioned this will be taken up with ~~J and~~ CLEPA offline.

11. Next meeting

27th meeting: meeting to be planned in the 3rd week of January 2023, exact dates to be determined by a Doodle poll, web meeting.

12. Any Other Item

No other items were discussed in this meeting.