

**Draft report of the 20th Session of the
GRSG Informal Working Group on
awareness of Vulnerable Road Users proximity
in low speed manoeuvres (VRU-Proxi)**

Dates: 7th, 8th and 9th of September 2021
Venue: Webex meeting
Chairs: Mr. Peter Broertjes (European Commission)
Mr. Yasuhiro Matsui (Japan)
Secretary: Mr. Johan Broeders (OICA)

1. Welcome and introduction

The Chairs welcomed and thanked the members of VRU-Proxi for joining and supporting the work of the Informal Working Group. There was a special welcome to the new delegates from MLIT Japan, Mr. Yamamura and Mr. Honda.

The Chairs also especially thanked Mr. Vuthy Phan as representative from OICA, who has chosen for another challenge in his career, for his dedicated diligence for this IWG and the creation of many presentations and documents for GRSG.

2. Adoption of the agenda

Document: VRU-Proxi-20-01 (Chair)

Agenda was adopted by the group.

3. Adoption of the report of the 19th VRU-Proxi session (online meeting)

Document: VRU-Proxi-19-16 (Chair)

OICA made a remark to table 2 in report VRU-Proxi-19-16 that it should be clear that the values for the separated VRU-distances shall be considered as indicative / average values and not as limit values. It was decided to make this more explicit by expressing this in a footnote to the table in the report VRU-Proxi-16 and in VRU-Proxi-19-13. After agreement of the changes the revised report was adopted.

4. Preparation of presentation for GRSG

The Chair explained the proposal for the presentation of the direct vision regulation in the 122nd GRSG in October 2021. The intention is to present the philosophy, concept and proposed ambition level in an easy to understand and neutral way to GRSG. No detailed

discussion shall take place in GRSG. The EC is planning to also discuss the proposal and ask the opinion of the EU Member States in the EU Technical Committee Motor Vehicles (TCMV) of 30th September 2021.

D mentioned that it shall be highlighted that the group reached broad consensus on topics as differentiation and the method but also that there is no full commitment yet on the limit values.

UK added that it is important to mention that there is no gap between direct and indirect vision for all vehicles with specific further improvements for urban vehicles.

After the TCMV the presentation for GRSG and the drafting text will be distributed to the group before submitting to GRSG.

5. Reversing motion

Document: VRU-Proxi-20-07 (Japan)

Proposals for changes (corrections) were explained by J. It was agreed to submit the document to the 122nd GRSG session in October 2021 with some minor changes (e.g. removal of square brackets as it was already adopted by GRSG) as a supplement without transitional provisions.

6. Forward motion regulation

6.1. Vehicle turning (Blind Spot Information System Regulation No. 151)

Document: VRU-Proxi-20-02 (Germany)
VRU-Proxi-20-03 (Germany)
VRU-Proxi-20-04 (OICA-CLEPA)
VRU-Proxi-20-14 (Germany)
VRU-Proxi-20-15 (Germany)

BAS^t presented in VRU-Proxi-20-02 and VRU-Proxi-20-03 the status of the investigations of the small working group regarding the alternative (robotized) testing method. Multiple envelopes for the vehicle to drive through during the test were investigated. For each kind of vehicle the relevant envelopes were defined.

ETSC noted that different test methods may lead to different requirements for the timing of the warning to the driver (last point of information). BAS^t stated it is not expected that the systems will be assessed differently depending on the test method as the intention is the same and the activation of the warning will be triggered in both cases in time to trigger the driver.

It was agreed that the documents with some further finetuning (e.g. starting conditions) will be distributed to the group for comments and finally submitted as informal documents (presentation and text proposal) to the 122nd GRSG in October 2021.

CLEPA-OICA presented VRU-Proxi-20-04 with the following proposals:

- Suppressing of the information signal at high time-to-collision (TTC) values to avoid

- annoyance or misunderstanding of the driver;
- Temporary de-activation in case of side loaders (refuse collectors), snow plough equipment at the side of the vehicle or when the vehicle is not ready to drive-off;
 - Pre-test conditioning for initialization of the sensor system.

The Chair proposed to some rephrasing as the de-activation shall not be considered as an exemption but only as a temporary overrule. It was agreed that the modified documents from BAST and CLEPA-OICA will be submitted together explaining presentations as informal documents on behalf of VRU-Proxi to the 122nd GRSG session in October 2021. Official documents will be prepared for the 123rd GRSG session in April 2022 in VRU-Proxi-21 in November 2021.

6.2. Forward motion: Vehicle taking off from standstill (M1/N1)

Document: VRU-Proxi-20-08 (Japan)
VRU-Proxi-20-09 (Japan)

J presented the draft regulation text VRU-Proxi-20-09 and the presentation with explanations VRU-Proxi-20-08 for vehicle taking off from standstill for categories of vehicles M1/N1. It was agreed to submit these documents as informal documents to the 122nd GRSG in October 2021 to explain the principle and concept of this new regulation.

The Chair proposed to have a line-by-line discussion of this proposed draft regulation in VRU-Proxi-21 in November 2021 with the aim to submit it as an official document in the 123rd GRSG in April 2022. Members were asked to review the draft regulation text and to give feedback to Dr. Hirao, the leader of the VRU-Proxi on this work, before the next VRU-Proxi.

7. Direct Vision regulation

7.1. Physical method testing

Loughborough Design School (LDS) explained that their work on the physical test method and the correlation with the virtual method is still ongoing. LDS indicated to continue the work on improving the correlation by examining the effect of measuring more sections of the assessment volume on different heights. Applying more sections would result in additional effort for performing the physical method. As a perfect fit may likely not be achieved, possibly an acceptable margin (or measurement tolerance) between the two methods need to be defined in the drafting text.

7.2. Differentiation, assessment approach and limit values

Document: VRU-Proxi-20-11 (LDS)

The differentiation was not discussed in this session as in previous meetings there was already a broad consensus reached on this topic. The proposal from SE for an amendment to high capacity vehicle configurations is still pending and therefore written between square brackets.

The technology neutrality of the assessment method has been discussed, especially for

vehicles with narrowed, tapered or non-conventional cab designs. These vehicles may get different A-pillars configurations and may be disadvantaged as the proposed boundary of the specific visible volume to the front is now depending on the A-pillar locations and designs.

Some ideas for improvement of the assessment method were generated and LDS explained that re-work would be needed which requires besides funding also a close cooperation with ACEA/OICA. The Chair expressed the expectation that this probably may not harm today's conventional cab designs and cab designs with double A-pillars (like the Mercedes Econic) as the latter vehicles already easily exceed the proposed thresholds for direct vision. The Chair proposed to implement this in a future update of the regulation. OICA did not fully agree and stated that this amendment shall be done on a very short notice after the introduction of the first regulation. There were no further objections or different views from CPs on this approach and it was agreed that LDS and ACEA-OICA shall further discuss how to continue with this work.

SE noted that high capacity transport must be considered in the proposal as well. D agreed and added that also European Modular Systems (EMS) applications must remain possible. The Chair asked if this could be covered by national approvals. Some CPs responded that it is not preferred to have two regulations covering the same aspects and it might also cause issues for cross-border traffic.

7.3. Direct Vision regulation for M2/N2

Document: VRU-Proxi-20-10

OICA presented the latest proposal for direct vision regulation for “low end” M2/N2 vehicles.

Basic concept is clear, open points are the definition of the height of the beltline and how to measure it as the beltline is mostly not a horizontal line. The Chair asked if there is a proposed way forward. OICA suggested to discuss this in the DV taskforce or in the next VRU-Proxi meeting.

In the latest proposal there is a fallback for M2/N2 to make use of the DV regulation for heavy vehicles as alternative for cases where the beltline measurement method is too ambitious. The group accepted the current concept, the exact methodology may need some further refining.

7.4. Direct vision draft regulation text

Document: VRU-Proxi-20-06 (DV Taskforce)
VRU-Proxi-20-12 (DV Taskforce)
VRU-Proxi-20-13 (DV Taskforce)

The Chair of the DV Taskforce led the group through the entire draft regulation text for Direct Vision (VRU-Proxi-20-06). The comments and agreed changes are implemented in VRU-Proxi-20-12 and a clean version VRU-Proxi-20-13 has been prepared for the 122nd session of GRSG in October 2021. This document will be mentioned (not presented) during the direct vision presentation from the Chair (European Commission).

8. Next meeting

21st meeting: 24th and 25th of November 2021 (half days for discussion), 26th of November (full day for drafting), web meeting

22nd meeting: [26th and 27th of April 2022, location TBD]

9. Any Other Item

No other items were discussed.