

**Revised Draft Report of the 23rd Session of the
GRSG Informal Working Group on
awareness of Vulnerable Road Users proximity
in low speed manoeuvres (VRU-Proxi)**

Dates: 18th and 19th of May 2022
Venue: Webex meeting
Chair: Mr. Romain Ladret Piciorus (European Commission)
Secretary: Mr. Johan Broeders (OICA)

1. Welcome and introduction

The new Chair Mr. Romain Ladret Piciorus from the European Commission welcomed the members of the group and introduced himself.

2. Adoption of the agenda

Document: [VRU-Proxi-23-01 Rev1 \(Chair\) Draft agenda.docx](#)

The group adopted the updated agenda.

3. Adoption of the report of the 21st VRU-Proxi session (online meeting)

Document: [VRU-Proxi-22-10 \(Chair\) Draft report.docx](#)

No comments to the report of last meeting were received, the report was adopted.

4. Outcome of the 123rd session of GRSG

Document: [ECE/TRANSP/WP.20/GRSG/102](#)

The Chair informed the group about the following outcome of the 123rd session of GRSG:

- *Terms of Reference were adopted as amended in GRSG 123 (Annex II of GRSG report)*
- *R151 BSIS: GRSG/2022/9 was adopted as amended in GRSG 123 (Annex III of GRSG report)*
- *R158 Reversing Motion:*
 - 1) *GRSG/2022/10 was adopted as amended in GRSG 123 (Annex IV of GRSG report)*
 - 2) *GRSG-123-31 paragraph 16.1.3.1 ("temporary obstruction of monitor view") needs further discussion in VRU-Proxi*
- *R159 MOIS: GRSG-123-11-Rev.1 and GRSG-123-32 adopted as amended in GRSG 123 (Annex V of GRSG report)*
- *New Regulation for Front and Side Close Proximity: GRSG/2022/6 adopted as amended in GRSG 123 (Annex VI of GRSG report)*

- *New Regulation for Direct Vision:*
 - 1) *GRSG/2022/7 adopted as amended in GRSG 123 (Annex VII of GRSG report)*
 - 2) *Proposal from Germany to be discussed in VRU-Proxi and to be discussed in GRVA for consistent definitions)*
 - 3) *Proposal from Spain to be discussed in VRU-Proxi*

General statement from DE was that in case there is no consensus in the IWG the Chair has report this and present the different views to GRSG as laid down in the Terms of Reference. According DE the different views were not clearly presented and respected in the last GRSG. The Chair took note of this statement and indicated to make sure that the presentation to GRSG shall reflect the discussions in the IWG.

5. Moving-Off Information System (R159)

Document: [GRSG-123-11 Rev1](#)
[GRSG-123-32_0](#)

The group discussed about the submission of GRSG-123-11 Rev1 as a Working Document to the 124th session of GRSG as requested by GRSG in its 123rd session. UK proposed to replace “following conditions...” by “the following conditions ...”.

OICA mentioned that GRSG-132-32 has been adopted and proposed to be submitted to WP.29 by GRSG. The Chair asked the group to check this document again before the next VRU-Proxi meeting.

6. Direct Vision

6.1. Discussion proposals for amendments submitted by Contracting Parties to GRSG 123

Documents: [GRSG-123-08 \(Germany\)](#)
[GRSG-123-25 \(Spain\)](#)
[GRSG-123-26 \(Spain\)](#)

- The expert from DE presented and explained the different elements from their proposal sent to the 123rd session of GRSG. It was only proposed to present alternative solutions for the visible volumes to a specific side, not an alternative for the total visible volume. The expert will revise the document by removing the references to autonomous vehicles (as it needs to be addressed to GRVA) and will prepare a list with minimal requirements for an active system to achieve a similar level of safety as aimed by the direct vision regulation. The expert clarified that the proposal can be a good basis for the alternative approach for vehicles with competing objectives.
- UK and DK experts argued that a minimum direct vision level must be kept and additional systems need to be discussed within GRVA. DE expert stated not proposing lower specific direct vision requirements to the side but to allow an alternative that is equivalent to the current vision requirements as accident data showed “blind spot” and “driver not looking properly” as being the main causes for accidents with VRUs.
- The last part of the proposal from DE expert considering the list of items to be exempted for the direct vision assessment was discussed. The expert from LDS stated that it may have a significant effect on the visible volume and it would require re-

calculation of all cab samples. Also, for the moment, it seems incompatible with the direct vision approach agreed on within UNECE.

- The experts from VRU Proxi (FR and others) shared their initial concerns regarding the interaction of active systems with the direct vision regulation:
 - Definition and exemption for automated vehicles must be outside of the Direct Vision regulation. It is up to the WVTa regulation to exempt the automated vehicles for compliance with the Direct Vision regulation.
 - The Chair explained that, to be consistent with the European GSR phase 2, active systems shall not be allowed for compensation of direct vision.

The Chair recommended to assess this proposition as a feedback from experts with deep understanding of the issue to solve for a system that would be safe if a Contracting Party decided to allow it in the future – i.e. not as an alternative to the current General Safety Regulation requirement on Direct Vision (for EU CPs).

- The proposal from ES GRSG expert was discussed in the group, and the conclusion is to either apply directly the proposal to remove this vehicle parameter as the other parameters are probably descriptive enough without misinterpretation. The other alternative is to revise the parameter by using the accelerator heel point (defined in 2.16) as a reference.
- The follow-up task for experts is to contact their Technical Services and collect their assessment if a revision of the sentence is needed to improve the interpretation. The Chair will contact the GRSG experts from ES to get their feedback for the next meeting.

6.2. Direct Vision regulation Phase 2

Document: [VRU-Proxi-23-03 \(LDS\)](#)

Alternative testing method for innovative vehicle designs

- The expert from LDS presented the status of their work on the design neutrality issue and showed a new proposal for the front assessment volume. This new proposal covers the frontal assessment zone up to 2 m from the side of the vehicle at both sides. LDS will continue this work and will check if correlation is good for the new option.
- The experts from the Taskforce Direct Vision presented the current situation regarding the amendment to the alternative testing method for innovative vehicle designs. VRU Proxi is requested to consider the definition of technology neutrality that is to be considered for this work – mainly to define what is the front of the vehicle and how to characterize it. The A-pillar themselves are not necessary to determine the front, on the other hand the width of the A-pillars has a direct effect on direct vision. Additional feedback from experts is still welcome for this discussion.

Vehicles with competing objectives

- The experts introduced various possible candidates for vehicles with competing objectives: high capacity transport, battery powered electric vehicles, hydrogen powered electric vehicles.
- For high capacity transport SE expert mentioned requirements such as: 3+ axles, 320+ kw and maximum vehicle combination weight of 44+ tons were proposed, but experts from the group considered that these requirements are not high or specific enough to distinguish between high capacity vehicles and other long distance or construction vehicles. SE expert will further work on a concept and definition for high capacity

- vehicles.
- DE expert stated that next to high capacity vehicles also new powertrains need space and require higher cab mountings. OICA is requested to provide more info on this.
 - To further help to keep track of the possible candidates for this phase 2 approach, a fiche will be created by the interested parties and updated by the group. The fiche will include the up-to-date answers to the following questions:
 - What are the competing objectives?
 - Why can't vehicles meet those and L3 requirement for vision?
 - How do we differentiate these vehicles from others without those objectives?
 - How many vehicles are in the category and where do they travel?
 - What level of direct vision is appropriate for this category?
 - What level of 'safety compensation' is appropriate for this category?
 - It was proposed to make further progress with this topic in the Taskforce Direct Vision with the comment that the work must be based on quantified data as stated in the Terms of Reference.

7. Blind Spot Information System (R151)

The BSIS (R151) regulation has not been discussed as there were no proposals for changes tabled by the group.

8. Reversing Motion (R158)

Document: [GRSG-123-31](#)
[VRU-Proxi-23-02 \(France\)](#)

On request of GRSG the group discussed about the issue on the “temporary obstruction of the monitor view”:

- The alternative proposed by DE expert during GRSG was allowing a possibility for the driver to move slightly to get the information displayed. Experts indicated that this action (as used in R122) was not adapted to the scenario covered in R158 where it is time critical and where it concerns VRU’s safety. On the other hand an expert from JAMA shared his support for this proposal because it has the same expected “default” behaviour from the driver when reversing without support from systems.
- UK expert expressed concern that drivers may use the obstruction as excuse for not having seen a VRU, and raised also a concern to protect the driver when the optimal view is not available for the driver.
- FR expert has concerns about the size of the spokes and proposed to improve the system with specifying an additional warning provided by a detection system (i.e. if it will refer to the requirements from R158 or will include a specificity for the situation). DE and SE experts are supportive, UK expert as well but mentioned the need for full a detection system, not a simplified one.
- The Chair recommended to the expert from FR to share the draft to the experts for a discussion in next meeting.

An expert from CLEPA noticed that a clarification is needed for the requirements described in paragraph 16.1.1.3. “Deactivation”, specifically “Modifying the view means to switch to

any other camera views.". Together with the expert from JP a rewording will be proposed for the next meeting.

The experts from FR shared a document with a proposal to add the description of the R-point directly in R158. This proposition was approved by consensus of the group, with explicit support from several Contracting Parties.

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

The newly adopted regulation for Frontal and Lateral Driver's Awareness for M1/N1 category of vehicles has not been discussed as there were no proposals for changes tabled by the group.

10. Next meeting

24th meeting: 6th and 7th of July 2022, hybrid meeting / European Commission

Note: 19th of July 2022 is the deadline for sending a working document for GRSG's October session

11. Any Other Item

The expert from CLEPA raised the necessity to add an item to be followed-up in this group on the consideration of a component approval within the new regulations (when possible). It is also a requirement from the GSR. The first step is to identify the expert who can help the group for this adaptation. Experts from JP indicated that the situation is different in their country regarding component approval.