

Draft Terms of Reference (ToR) for an IWG on AEBS (HDV)

Drafted after deliberations at its kick-off meeting

(Also contains editorial improvements from the Secretary of the kick-off meeting)

I. Proposal

A. Terms of Reference

1. The Informal Working Group (IWG) shall develop a draft regulatory proposal to revise UN Regulation No. 131 with the aim to adapt the Regulation to the state of the art technology and to align it with new concepts which were developed for Advanced Emergency Braking Systems (AEBS) for M₁ and N₁ vehicles (UN Regulation No. 152).
2. In particular the IWG shall address the following issues:
 - a. Assess the accident situation for heavy duty vehicles in regions where UN Regulation No. 131 is presently applied, looking at the effectiveness of the current performance requirements, differentiated between M₂/N₂-vehicles and M₃/N₃-vehicles, and differentiated after accident collision partner (specifying car, Vulnerable Road Users (VRU), construction vehicles, others).
 - b. Investigate the feasibility of a generic marker triggering AEBS reaction with the purpose to increase safety in road servicing areas and at railroad crossings.
 - c. Define state of the art performance requirements, especially for collisions involving stationary vehicles and the relevant targets based on the results from the action item above.
 - d. Review the values for the target speed reduction for M₂ and N₂ vehicles (as requested in Annex 3 of UN Regulation No. 131) before November 2021.
 - e. Review AEBS on
 1. Vehicle to Car (V2C),
 2. Vehicle to Pedestrian (V2P)
 3. Vehicle to Bicycle (V2B)
 4. Others,For heavy duty vehicles, and taking into account the performance requirements as specified under item 2c.
 - f. Contemplate and incorporate as relevant new concepts from UN Regulation No. 152 on AEBS for M₁ and N₁ vehicles (e.g. definition of requirements for a range of parameters).
3. The IWG shall take full account of developments and work in full cooperation with other subsidiary Working Parties (GRs) of WP.29 and their IWGs.
4. The IWG should take into account existing data, research and voluntary standards available in the contracting parties in developing its proposals.
5. Text shall, to the fullest extent possible, be performance based and technology neutral.
- 6.

[Option 1: The IWG shall deliver the technical requirements for AEBS for heavy duty vehicle according to paragraphs 2.e.1. to 2.e.3 as a revision of UN-Regulation No. 131 in November 2021, then the necessary adjustments and administrative text (including the transitional provisions attached to the introduction of the different series of amendments) at the GRVA session of February 2022.

Option 2: The IWG shall deliver the complete regulatory text for AEBS for heavy duty vehicle requirements according to paragraphs 2.e.1. to 2.e.3 as a revision of UN Regulation No. 131 in November 2021. This target date shall be reviewed at the GRVA session of September 2021 according to the progress achieved by the informal group.]

B. Rules of Procedure

1. The IWG shall report to GRVA and is open to all participants of WP.29.
2. Two Co-Chairs and a Secretary will manage the IWG.
3. The Co-Chairs may invite experts (at their discretion), including non-participants of WP.29, to assist in the development of technical standards.
4. The working language of the IWG will be English.
5. All documents and/or proposals must be submitted to the Secretary of the relevant group in a suitable electronic format in advance of the meeting. The group may refuse to discuss any item or proposal which has not been circulated five working days in advance to the meeting.
6. An agenda and related documents will be circulated to all members of the IWG in advance of all scheduled meetings.
7. Decisions will be reached by consensus. When consensus cannot be reached, the Co-Chairs of the group shall present the different points of view to GRVA. The Co-Chairs may seek guidance from GRVA as appropriate.
8. The progress of the IWG will be reported routinely to GRVA – wherever possible as an informal document and presented by the Co-Chairs.
9. All documents shall be distributed in digital format. Meeting documents should be made available to the Secretary for publication on the dedicated website.
10. Final decision on proposals rests with WP.29 and the Contracting Parties.

II. Justification

1. Germany has a strong interest in improving road safety in general and especially considers AEBS for heavy duty vehicles making a significant contribution in this regard.
2. Over the past years Germany has therefore conducted extensive national research regarding the effectiveness and performance of AEBS for heavy duty vehicles and evaluated the current state of the technology. The final report of the Federal Highway Research Institute is publicly available¹ (currently in German language only).
3. Germany continues, in particular and based on the outcomes of the national research project, to see a great potential to improve vehicle and road safety by increasing the performance of AEBS for heavy duty vehicles.
4. An initial review of the current technical requirements in UN Regulation No. 131 was presented by Germany as proposal at GRVA in September 2018 (documents ECE/TRANS/WP.29/GRVA/2018/4, GRVA-01-30 and GRVA-01-31). At the time

¹ https://www.bast.de/BASSt_2017/DE/Publikationen/Berichte/unterreihe-f/2020-2019/fl33.html

during the session, several Contracting Parties expressed their general interest to join deeper expert discussions.

5. Germany took the lead in this work stream and invited interested stakeholders to several virtual and physical meetings. Unfortunately, hardly any progress was made within the group, since many interested stakeholders raised the issue of not being able to prioritize this work within their organization or participate in these meetings, due to the status of the group. It was therefore suggested to request GRVA for a clear directive in order to continue activities with an official mandate.
6. Since Germany is furthermore convinced an improvement of the performance requirements of AEBS for heavy duty vehicles (as they are currently requested in UN Regulation No. 131) is technically possible and an utmost important step to increase road safety in general, Germany proposes to establish a dedicated Informal Working Group with a determined scope of work and time frame. Additionally, Germany also believes the timing is right to enhance the commenced activities, since the gained knowledge and experience from the IWG on AEBS for passenger cars whilst developing UN-Regulation No. 152 regarding new concepts of writing Regulations, could be taken into account to improve the robustness of AEBS for heavy duty vehicles.
7. Japan also has a strong interest in enhancing road traffic safety especially for further protection of VRUs such as pedestrians and cyclists. We particularly consider that AEBS for heavy duty vehicles is one of the significant and effective technology to mitigate the impact of collisions with vehicles and VRUs, therefore support the proposal for establishing the new IWG from Germany (GRVA-07-03).
8. In addition to enhancing technical requirements based on the current UN-Regulation No. 131, Japan is willing to engage in making technical standard on AEBS (VtC, VtP, and VtB) for heavy duty vehicles by incorporating from UN-Regulation No. 152 on AEBS for M1 and N1 vehicles, considering the evaluation of the current state of the technology. Japan believes that the result of this IWG will contribute to all the CPs and stakeholders, which wish to decrease more serious accidents especially involving VRUs.
