

Report on the GRRF brainstorming session (9 December 2008) concerning

Automatic Emergency Braking and

Lane Departure Warning Systems

Palais des Nations. Geneva

Chairman Mr. I. Yarnold (UK), GRRF Chairman

1. 59 experts were registered for the session
2. The session was divided in two parts: the morning session focussed on sharing information on the policy requirement, existing systems, industries' views and information from ISO on current standards work. The afternoon considering possible actions and sought to define the general requirements of AEB and LDW Systems.
3. The session focussed on the strategy for the regulatory activity rather than developing proposals to amend Regulations. In principle, the session agreed that provisions shall be performance based rather than technology specific
4. The presentations and informal documents from the session are available at the GRRF website under "informal documents/Special session"
<<http://www.unece.org/trans/main/wp29/wp29wgs/wp29grrf/grrfS08.html>>
5. The European Commission and TRL (GRRF-S08-07 and S08-11) explained the background to the Commission's proposals for a new European Community regulation – that included requirements for AEBS and LDW. The intention is to introduce the systems to heavy vehicles initially – possibly followed by light duty applications. A summary of existing standards and possible future approaches was provided. Impact assessments are available from the Commission's website.
6. Japan presented document (GRRF-S08-12) showing progress on the advanced safety systems in their country along with information on the design guidelines followed by manufacturers.
7. OICA (GRRF-S08-10) and CLEPA (GRRF-S08-03 and S08-06) presented their preferred approach to the new systems. OICA prefer a new regulation rather than amending existing (ie R13 or R79). They recognised that Brussels could make systems mandatory but felt it was important for the UN-ECE to adopt a permissive "if fitted" approach. By contrast, CLEPA preferred amending existing regulations rather than creating new standards, and for these to be mandatory within the scope of the amended regulations. They also provided outline system specifications.

8. ISO explained their work on existing standards through technical committees 204 (ITS) and 22 (vehicle systems) - which are summarised in document GRRF-S08-09. Information was also provided by the work group leader concerning the verification requirements of Forward Vehicle Collision Mitigation Systems (see GRRF-S08-08).
9. On the guidance of the Chairman, (see para. 2 above), the group did not consider the amending proposals to Regulation No. 79 (Steering equipment) by Germany (GRRF-S08-02), Regulation No. 13 (Braking of heavy vehicles) by CLEPA (GRRF-S08-04) and Regulation No. 13-H (braking for M₁ and N₁ vehicles) by CLEPA (GRRF-S08-05) – instead preferring to defer these to the informal group for consideration.
10. The session considered accident scenarios that could realistically be addressed by the advanced systems. It was agreed that, as a first step, only rear collision mitigation of moving vehicles, and vehicles decelerating to stationary should be included. Stationary vehicles, pedestrian and cyclist should be considered in a further step due to the challenge of sensing these road users at a proportionate cost coupled with the risk of introducing a high false detection (negative error).
11. The session considered hierarchy, decision controls and driver warnings. Legal issues relating to automatic systems and drivers were noted, as were possible overlaps with the Vienna Convention, but the session agreed the chairman's recommendation to highlight this to WP29 – while continuing to develop the technical specifications.
12. Where appropriate, driver controls, if any, should be included into Regulation No. 121 (Identification of controls, tell-tales and indicators). The need of having optical, tactile and/or audible signals was also considered and should be considered by the informal group (see para. 13 below).
13. Failure warning was also expected to be included along with consideration of failure modes. In-use assessment, either for routine repair or roadworthiness inspections were considered essential requirements.
14. It was agreed to establish a single informal group to develop the regulatory measures. A proposal will be submitted to GRRF in February and to WP.29 in March – along with decisions on chairman for the group. The secretariat of the informal group will be provided by OICA. Japan offered to support the development of technical requirements in the informal group.
15. The Terms of Reference of the informal group will be drafted by the GRRF Chairman and will be submitted to WP.29 for endorsement.
16. In conclusion the chairman summarised as follows.

- a. An informal group will be established to develop performance based technical specifications for AEBS and LDW.
- b. The group will prepare regulatory texts for GRRF, and aim to conclude its activity within 2 years (mid 2011). It will not consider cost/benefit issues or legal considerations.
- c. Driver warning issues associated with system application will be considered and included in regulatory proposals if appropriate. Failure warning issues and measure to address roadworthiness examination should be addressed.
- d. Decisions concerning new Regulations or amending current Regulations will be determined by GRRF and WP.29.
- e. The focus shall be N₂, N₃, M₂, and M₃ vehicles of Classes B, II and III.
- f. Vehicles of category M₁ and N₁ may be covered in a later stage.
