

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)Working Party on Lighting and Light-Signalling (GRE)Informal Group on Group on Visibility, Glare and Levelling (VGL)**Report of the 1st meeting of the
GRE Informal Working Group on Visibility, Glare and Levelling (VGL)**Palais des Nations, Geneva
October 19-20, 2015

1.	Welcome and opening remarks	ECE/TRANS/WP.29/ GRE/73 par.18, 20 ECE/TRANS/WP.29/ 1116 par.51
Mr. Manz, Chairman and Mr. Targosinski, co-chairman of the Informal Working Group, opened the meeting welcoming all the participants.		
2.	Introduction of participants and organizations	VGL-01-04
The list of all participants is available in document VGL-01-04.		
3.	Adoption of the agenda	VGL-01-01
The agenda was adopted.		
4.	Terms of Reference Starting Draft Proposal <ul style="list-style-type: none"> - Introduction - Scope - Objective of the Proposal - Operating Principles / Rules of Procedure - Work Plan and Time Schedule 	VGL-01-02 VGL-01-06 (revised version of the ToR made during the meeting)
Mr. Manz introduced the document VGL-01-02 : <ul style="list-style-type: none"> - providing an overview of the objectives and the challenges of the group to solve the glare concern while ensuring good visibility (comfort/safety for the occupants of the vehicle and for the other vulnerable road users) and - especially on the necessity for the group to make a work based on performance and not on technology. So we have to develop independent criteria from technology. - He also introduced the problem of the type of Light Sources and resumed the WP.29 report. He reminded that the WP29 required from our group to solve the LED issue on technology neutral requirement. 		

The document was reviewed carefully by the participants and several comments and improvements have been made.

The most significant topics to be worked that were agreed by the IWG VGL:

- Compromise to be find between glare and visibility with criteria based on performance
- There are different approaches on the table on performance. Who should decide which one is the correct one? How define the performance of the lamp on the road
- If additional studies are decided, then we will need time. In addition, Mr.Manz reminded we already have some data which can be used
- Different topics must be included to the work of this group on glare and visibility:
 - Criteria of decision for the type of levelling device
 - Beam pattern
 - Headlamp regulations with other aspects to be taken into account as hot spot, adjustment of the cut-off, color white/blue, direct visibility of the LS, ...
 - Cleaning device
 - Transitional provisions
- The work must be done in 2 steps: 1st for installation (UN-ECE R48) – 2nd for headlamps
 - The 1st step must be done quickly
 - Be careful in the management and interactions of these two steps to avoid going back and forth between them
- The dates remain in brackets to be discussed at next GRE session

A revised version of the terms of reference was developed and agreed by the group.

This is available as document VGL-01-06.

This document will be presented at next GRE session in October 2015.

5.	Review of the work before List of documents <ul style="list-style-type: none"> - Identification of intentions of stakeholders - Items to be included - Analysis of common and disputed issues - Missing components (knowledge) 	VGL-01-03 GRE-73-17 GTBWGFL245 GRE-71-32 VGL-01-08
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The documents were reviewed carefully by the participants and several comments have been made.

Please find below the most significant topics to be thought and worked according to the discussions during the meeting of the IWG VGL

Mr. Manz introduced the document VGL-01-03 as proposal for a running order after discussion of Term of Reference:

- Levelling device not used in North America → a better understanding could be useful
- What is important to ensure a good illumination of the road?
 - Amount of light on the road is important
 - What is the good pattern?
 - What is the good visibility distance?
 - Impact of ADB on glare and visibility?
- Maximum height of the lamps?
- Impact of glare is mainly discomfort – no data of accident because of glare
- Cost impact to be taken into account according to the solution chosen
- Light sources do not really affect or play a role so they must not be punished

- Scope of the group?
Reminder: currently the automatic levelling technology is not available for the trucks
- Necessity of the cleaning device because no reduction of the glare or at least not sufficient reduction?

Conclusion of chair:

We have to look UN-R48 and beam pattern.

But to do in parallel, it is a little bit challenge, so he prefers to start to get a simple solution for UN-R48 aspects and to have a look on what we need for the other aspects (as requirements needed for headlamps) in a second phase.

It is a pragmatic approach and maybe not a pure scientific but we must be a little bit realistic.

Mr. Manz introduced document GRE-73-17 from Germany and Japan which mandates the automatic levelling for all dipped beam headlamps whatever the type of their light sources.

- This proposal is different of the OICA/GTB proposal but some attendees consider it is also based on performance
- For others attendees, the deletion of the requirement does not solve the problem of glare and the work done during few years was to improve the parameters and not to delete simply the requirements. It is technological neutral but not based on performance
- Information for proposal of deletion of the cleaning device:
 - cleaning device is not really helpful to avoid in principle glare - to avoid glare this device is not so good with only a short time effect
 - cleaning device is good especially with snow conditions and it is supported by some attendees – it can be effective for dusts but not for all conditions
 - ➔ When the headlamps need to be washed or not?
 - ➔ Pollution impact on the road (water tank, CO₂)?
 - ➔ Potential advantage of this device for people in the North or in mountains areas
 - ➔ Safety issue?
- It is needed to study the previous studies to be able to improve the beam pattern and identify other potential parameters to be taken into account

Mr. Manz presented document GTBWGFL245 / GRE-71-32 for the study in Klettwitz

- Tests based on the glare problem and the visibility was done by calculation. The study was limited with 25 vehicles – for more results, we need more vehicles, more time, more money
- Choice of the 50% loading condition based on the normal loading condition of a standard vehicle + investigations in France on accidents with a majority without load + other investigations in Germany with complex analysis
 - What is the normal traffic conditions?
- We have to be sure that vehicles with more than 50% will cause no problem
- 100% loading condition does not happen so often – nevertheless this loading condition is supported by some attendees

Reminder: this idea with the 50% and 100% loading conditions has never been discussed in GRE

- The behavior of M1 vehicles and other categories of vehicles (trucks, buses, ...) is different
- Scope to be clarified because of Klettwitz tests made on M1 vehicles – trucks and buses should not be included in the future proposal because no technology available for the time being

Investigations to be done for the vehicles of other categories and especially N category

- Predict the impact of the 50% & 100% loading condition in an earlier stage of the design of a vehicle is very complex
 - Possibility to get an answer about the suspension and the loading condition and then to do other investigations?
 - More data from cars manufacturers are needed to have a good sampling collection, to find the way out and to find a better solution – nevertheless to go ahead, for the time being, there is not enough information → how can we get this information/guidance on how to collect the data?
 - Different opinions from some attendees of the group with this 50/100% approach
 - the percentage of the automatic device could be decreased while it is a safety device – it must not be the impact from any proposals – the number should increase and not to be reduced – expectation is to have less and less manual levelling devices especially because quiet hard to touch
 - the number of automatic device should remain the same than today – possibility to have some figures from Industry? – the performance shall not be decreased
 - all the current loading conditions in the Regulation must be kept in addition to these 50/100% loading conditions
 - The 0/50/100% loading conditions are used to choose the correct levelling system – 100% loading condition must be included

- Polish proposal based on performance – it takes into account all types of vehicles - it should increase the number of automatic levelling devices

- The attitude of the vehicle seems to be a good way to find a compromise between glare & visibility
 - But not the only factor with impact on glare: geometry of the road, ...

- Explanation of the diagram of decision taking into account glare & visibility → see document **VGL-01-08e**

We have to find a compromise between glare and visibility and we should have some glare to maintain the good visibility

6.	Development of a Working Program (Running Order)	
To be decided at next meeting in January 2016		
7.	Next Steps	
<ul style="list-style-type: none"> - Presentation of the Terms of Reference at next GRE 74 (20-23 October 2015) for adoption at WP.29 in March 2016 - Preparation of an informal document for consideration at the GRE 75 (April 2016) and GRE 76 (October 2016) - The final objective is to present an informal document at GRE 77 (April 2017) for the 173th session of the WP.29 (November 2017) 		
8.	Home Works	
No home works defined		

9.	Any Other Business	
No other business		
10.	Next Meeting	
To be organized in January 2016 according to		
11.	Adjourn	
The Chairman thanked all the participants for their fruitful contribution and closed the meeting.		

Working documents listed in the agenda are available via the INTERNET:
<https://www2.unece.org/wiki/pages/viewpage.action?pageId=26903055>