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**Economic Commission for Europe****Inland Transport Committee****World Forum for Harmonization of Vehicle Regulations****Working Party on General Safety Provisions****117th session**

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Item 7(a) of the provisional agenda

**Awareness of proximity of Vulnerable Road Users:  
UN Regulation No. 46 (Devices for indirect vision)****Proposal for amendments to UN Regulation No. 46 (Devices  
for indirect vision)****Submitted by the expert from International Organization of Motor  
Vehicle Manufacturer\***

The text reproduced below is prepared by the expert from International Organization of Motor Vehicle Manufacturer. The modifications to the current text of UN Regulation No. 46 are marked in bold for new or in strikethrough for deleted characters.

**I. Proposal**

*Paragraph 16.1.5.2., amend to read:*

“16.1.5.2. The arrangement of the monitor(s) inside the vehicle shall be convenient to the driver.

Thus, the image of the right side field of view shall be presented to the right of the longitudinal vertical plane through the ocular reference point, defined in paragraph 12.6. The image of the left side field of view shall be presented to the left of the longitudinal vertical plane through the ocular reference point.

If the CMS shows more than one field of vision on ~~one the same~~ display, non-continuous images shall be clearly separated from each other. ~~Provided that~~ **If** the ~~required~~ field of vision ~~of from~~ different classes of devices for indirect vision are shown on the monitor(s) without hiding any part of the required field of vision, a combined continuous image ~~without clear separation~~ is allowed. **In this case, a clear separation of the different fields of vision is not**

\* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21/Add.1, Cluster 3.1), the World Forum will develop, harmonize and update UN regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



**necessary and any changes in magnification may be indicated to the driver using indication lines. Indication lines shall not hide information.”**

## **II. Justification**

1. The original intention of paragraph 16.1.5.2. allowed different fields of vision to be shown on the same display or on a single device. If two (or more) fields of vision are shown on such a display or single device, then those fields of vision must be separated so that the driver is able to see each single field of vision.
  2. Innovations in camera and image processing technology open up a large field of possibilities. This leads the manufacturers to offer devices able to show the driver more than one field of vision within the same display, as part of a continuous image. In this case, a clear separation between each field of vision is not desirable nor even possible, since the fields of vision are overlapping.
  3. Paragraph 16.1.5.2. can currently be interpreted so that a separation inside the combined field of vision is not allowed. So, to assist the driver in differentiating between changes in M-factors within the display, small indicative lines can be used to help the driver to discriminate.
  4. Those indication lines could be interpreted as a separation and would not be allowed. By defining the indication lines within the text, it would be possible to show a combined continuous image with small indication-lines to aid discrimination for the driver.
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