UK Comments on the Regulation of Lane Departure Warning Systems

Please note as the UK is preparing for a general election we are unable to provide a formal UK DfT position for this meeting. The comments below are provided by officials and reflect relevant published information.

**HMI Warnings**

A minimum of two modes (haptic, audible and / or visual) to warn the driver when the vehicle departs from its lane of travel will improve driver detection.

A single warning is more likely to be missed by a distracted driver and therefore will reduce the effectiveness of the system. Requiring “at least two modes” (rather than being prescriptive) provides flexibility for manufacturers to determine the most effective HMI for their vehicle type.

Precedence for dual warnings is also found in Regulation 79.

Different criteria for separate (optional) early warning, i.e. a separate warning provided before the vehicle is 0.3m out of lane could be considered by the group.

**Comments on warning modes:**

**Haptic feedback** – In many cases haptic feedback is likely to provide the driver with the most effective warning but for some vehicle types this may be difficult to incorporate. The manufacturer is well placed to choose the relevant component, and the amplitude and frequency of the feedback which offers the most effective warning to the driver. Replicating “rumble strips” or raised bumps, often found at the edge of the road may be one approach that could be transmitted via a vibrating seat or steering wheel. The effectiveness of the frequency and amplitude parameters may need to be covered or at least considered in the Regulation or approval process.

**Acoustic warning** - could easily be missed in noisy environments or by hearing impaired drivers and therefore should not be used as a sole means of warning the driver. Information to support the actual tone and sound power of the warning chosen by the manufacturer should be available if the technical service questions its effectiveness in alerting the driver.

**Visual warning** - could easily be missed by a distracted driver and certainly by a drowsy driver and should not be used as a sole means of warning the driver.

*Note. These comments were informed by the work of the UNECE ITS informal group and their draft paper (ITS-18-04 rev1). We would expect manufacturers to design systems where appropriate in accordance with best practice and to provide justification where best practice has not been adopted.*

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