

UK Comments on AEBS provisions

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 issues

A minimum of two modes (haptic, audible and / or visual) to warn the driver when the vehicle is in a critical situation will improve driver detection of the warning. As with LDWS a Haptic warning may offer an effective mechanism to warn the driver of an imminent collision. However, to avoid confusion regarding driver reaction to the warning the haptic feedback should be different from the approach adopted for LDWS. This could include a haptic brake warning and / or seat belt “tug”.

A common approach for haptic warnings might help to ensure drivers react in a predictable way in different vehicles. However, this may be more important for warnings that occur more frequently (e.g. LDWS)..

Durability and Safety

Autonomous braking systems can provide improved vehicle safety but regulation of this complex technology must consider effectiveness for the life of the vehicle. The regulation should include consideration of lifetime performance / durability / integrity of complex electronics and interaction of different systems / sensors.

The Regulation of this technology should consider failure modes and include an FMEA assessment. This is considered in R13 H (Annex 18) however, the R13 approach may need to be revised to cover durability and false activation risks. Technical Services with experience of Annex 18 may be well placed to provide comments.

Target

A single harmonised target for approval testing might help to ensure consistency in issuing approvals and in any subsequent COP testing by other Contracting Parties.

Radar Frequency

Our understanding of the position in Europe is as follows:

- 24 GHz narrow-band is covered by existing regulations. There are proposals for widening the band to provide better resolution (WLAM – Wide Band Low-activity Mode) under consideration.

- 24 GHz ultra wide band – This is OK until the end June 2013 see EC Decision at : <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:021:0015:0020:EN:PDF>

This sets out the time limit for the use of this band and the many other restrictions that have been applied.

- 76 GHz narrow-band. Used for automatic cruise control.
- 79 GHz ultra wide band. Within Europe the Commission see this as the frequency for long term use. However there are some technical problems associated with the use of such a high frequency but the band will provide better target resolution.

There may be implications if a regulation approval is granted for a system that uses a frequency not allowed in a particular region. To address this risk the regulation could simply state that the frequency used shall be visible on the vehicle (to ensure imported vehicles comply) and should not contravene local frequency allocations (ETSI / CEPT / ERC?) and related restrictions.

False Activation

False activation will reduce driver confidence in the system. In certain circumstances it may also be dangerous. An assessment that this risk has been considered and addressed by the manufacturer may provide greater confidence in the approval. This could be covered in a revised FMEA as discussed under Durability and Safety above.

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