

# Justification of Changes to the draft Commission Delegated Act on Intelligent Speed Assistance (ISA)

This document accompanies the proposed changes to the text of the delegated act on ISA, as submitted by ETSC, ECF, and the International Federation of Pedestrians. The proposed changes are made to the draft Delegated Act on ISA as presented by the European Commission during the Motor Vehicle Working Group (MVWG) meeting on 8 October 2020.

This document sets out the justifications for the proposed changes, thereby aiming to provide a clearer overview of the proposed changes.<sup>1</sup>

The proposed changes include:

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<sup>1</sup> Conversely, the proposed text for the delegated act also contains the justifications as comments to the tracked changes.

## Removal of Cascading Warnings + Recital on Future Review of Alternative Modes of Feedback

We call on the European Commission to not include cascading acoustic (and vibrating) warnings, as there is no evidence on the appropriateness and effectiveness of these proposed systems, and since evidence from related systems (e.g. 'normal' auditory warnings) suggest that they will not be appropriate nor effective as is required by the co-legislators. Instead, we call on the European Commission to only include the haptic force feedback pedal and the speed control function (SCF). We furthermore call for cascading warnings in general not to be included in the delegated act, as they would reduce the effectiveness of ISA on speed compliance due to the delayed warning.

*References to cascading warnings have therefore been removed throughout our proposed changes to the delegated act.*

Instead, we propose a new Recital 9 which states that the Commission will consider amending the delegated act, if and when evidence becomes available that demonstrates that other or novel types of feedback are appropriate and effective. This will allow the delegated act to be adopted without delay, while providing additional time for research to be done into the effectiveness and appropriateness of alternative modes of feedback. The Commission is allowed, in accordance with Article 4(6) of the General Safety Regulation (GSR), to adopt such acts amending the delegated act on ISA.

*Additional justification:* the inclusion of the cascading auditory (and vibrating) warnings at this stage does not comply with the delegation by the co-legislators. The co-legislators have clearly required in Art. 6(2) of the GSR that alternative modes of feedback need to be 'dedicated, appropriate and effective'. As set out in more detail in ETSC's position paper, 'effectiveness' includes more than just 'speed compliance'. A system that is turned off will not be effective in assisting the driver to be speed compliant. Factors that influence the driver to turn off the system should therefore be taken into account when looking at effectiveness. Annoyance is such factor that influences drivers in this regard. The available evidence which show that acoustic warnings are highly unsatisfactory (Carsten, ACEA). We furthermore strongly feel that a system that annoys drivers cannot simply be seen as an appropriate system. We furthermore feel that the Commission satisfies the requirement to allow for an alternative to the pedal, as the speed control function (which is engine controlled) is included in the delegated act.

## High Performance Requirements for Speed Limit Determination

High performance requirements for speed limit determination should be set, in order to prevent driver annoyance which may lead drivers to turn off the systems thereby reducing effectiveness. Especially given that signs not complying with the requirements in points 2.4.2.2.2. and 2.4.2.2.3. are not counted towards the performance target. For more information, see ETSC's position paper.

*Point 2.4.2.4.2.* of our document on proposed changes to the delegated act therefore calls for a TP\_E as well as a TP\_D of 99%.

## Deactivating the ISA System to Require A Sequence of Actions

We call for the deactivation of the ISA system to require a sequence of actions by the driver, in order to make the difference between overriding and turning off the system clearer to the driver.

While the GSR requires that the ISA system can be switched off, it does not require that this needs to be done via a switch, thereby leaving room to require a sequence of actions by the driver to turn off the ISA system. We feel that the Commission should be more ambitious, especially given that there is ample legal room to do so, and moreover since the EU's road safety targets for 2020 are regrettably going to be missed by a landslide, and therefore more ambitious measures to improve road safety are justified. A sequence of actions to turn off the ISA system would therefore still comply with the requirements on ISA in the GSR, and would help drivers differentiate better between turning off the system and overriding it. Moreover, it would allow for harmonization with the requirements for other advanced driver assistance systems, such as AEBS and ELKS which already require a sequence of actions to switch.

*Point 2.2.1.* in our document on proposed changes to the delegated act therefore requires a sequence of actions by the driver to turn off, whether fully or partially, the ISA system.

The text has furthermore been enhanced to also allow for the partial deactivation of ISA systems with a SCF. The proposed changes as set out in the section “Visual Warnings to Accompany SCF Interventions & Overrides” would allow for a similar partial deactivation of the SCF as for the SLWF.

## Allowing Technical Services More Flexibility in Testing

We feel that the delegated act is too restrictive in terms of the possibilities for the Technical Services to perform tests they may want to conduct. We understand that the purpose of track tests in points 3.1.2. and 3.2.2. is to verify that the system correctly identifies (a sample of) the explicit and implicit speed signs, whereas the real world driving test seeks to assess reliability in the real world. However, we feel that the delegated act is too restrictive as it does not allow a technical service to assess more challenging situations in tests other than the real world test drive.

We feel that technical services should be allowed to complement the tests in points 3.1.2. and 3.2.2. with additional tests on a test track or in the real world under artificial conditions (e.g. by temporarily placing speed limit signs) that would allow the technical service to assess scenarios they would desire to test, but which can/could not be encountered during the real world test drive due to routing issues.

Such tests would currently be prohibited as part of points 3.1.2. and 3.2.2. due to the current text of the requirements (as well as the purpose of those tests). The prohibition stems from allowing only one speed limit sign in the field of view, and only allowing speed limit signs – and no other types of signs – to be placed.

Providing the technical services the discretion to perform additional “track” tests may furthermore help determining suitable routes more easily, as this would allow the technical service to subject the vehicle to more challenging situations they may wish to assess during additional tests.

We therefore call for a requirement that the technical service has to test [5] challenging situations in tests supplementing the tests in points 3.1.2., 3.2.2., and 3.3.. The provisions as included in our document on

proposed changes to the draft delegated act in *point 3.2a.* are flexible in the sense that they would allow the technical services to include these tests as part of the real world test drive, while at the same time give them the discretion to perform them separately upon their wishes and needs.

Four examples based on common traffic scenarios that would currently be prohibited during “track” tests due to the current wording, and which may not be encountered during the real world test due to routing issues are set out in the comment.

## Enhancing the Speed Limit Recognition Tests

We feel that with the removal of explicit speed signs from point 3.2.2., the total number of different signs that are required to be checked becomes too low. We therefore call for at least 10 different explicit speed limit signs in point 3.1.2. to be checked, and at least 10 different implicit speed limit signs to be check in point 3.2.2..

## (A)CC to Use SCF; Allowing Other Warnings in Specific Situations

We propose that when the driving speed of the vehicle is actively controlled by a vehicle system where the driver is not expected to be touching the accelerator control (e.g. cruise control), that the ISA system aims to reduce the driving speed to the perceived speed limit automatically by reducing engine power, for both the SLWF as well as the SCF. We propose that vibrating / acoustic warnings are only appropriate in situations where systems such as cruise control are aiming to keep the vehicle at the posted speed limit, while the driver wishes to accelerate using the accelerator controls. As the driver thereby, deliberate or undeliberate, overrides the SCF, an vibrating / acoustic warning should be provided to warn drivers they are speeding instead.

*Points 2.5.2. and 2.6.2.* in our document on proposed changes to the delegated act reflect this.

We furthermore propose that systems such as ACC may not accelerate the vehicle based on ISA speed limit information without driver confirmation to approve the acceleration, as reflected in point 2.6.2.1.

## Speed Limit to Always be Provided to the Driver

In order to aid the driver being aware of the applicable speed limit, we call for the speed limit information to always be provided to the driver, unless the ISA system is fully deactivated.

*Point 2.4.1.2. and 2.4.1.4.* in our document on proposed changes to the delegated act have been amended to respectively include and reflect such requirement.

## Visual Warnings to Accompany SCF Interventions & Overrides

We propose that a visual warning should accompany the SCF intervention, in order to inform the driver of the intervention. The requirement for the visual warning to last until stable speed control has been

achieved has been chosen to cover to warn the driver in situations where the SCF is unable to limit speeding (e.g. on a downhill stretch.). The requirement for a visual warning to be provided when overriding is to inform drivers that they have overridden the SCF and alert them that they are currently speeding. A *new point 2.1.6.9.* has been added in our document on proposed changes to the delegated act.

## SLIF to be Required to Set the Region

In the first draft of the delegated act, the European Commission had proposed that the system would have to take into account regions in point 2.4.2.1. This was removed following a stakeholder comment with the justification: “system does not need to know more than the driver.”

We call for regions to be included again in point 2.4.2.1., as depending on the country, the applicable region may have a significant effect on the applicable speed limit. For example, in Flanders the rural speed limit is 70km/h, whereas in Wallonia it is 90 km/h.

Moreover, drivers are required to know the applicable speed limit for the region they are driving in, and therefore the system would not have to know more than the driver.

*Point 2.4.2.1.* and relevant sub-points in our document on proposed changes to the delegated act therefore include region setting again.

In addition, the Commission added a provision in point 2.4.2.1.1. that the lowest relevant speed limit valid throughout the various regions of the country may be adopted. We fear that this will result in driver annoyance in those regions with a higher applicable speed limit, and have therefore deleted the provision in our document on proposed changes to the delegated act on ISA.

## Country or Region Setting to be Automatic

In order to enhance the ease with which drivers can use the ISA system, we call for the setting of the applicable region and/or country to be done automatically, while preserving the possibility for the driver to set it manually.

*Point 2.4.2.1.1.* in our document on proposed changes to the delegated act has been amended accordingly.

## Vehicle Categories, Time of Day and Time of Year

While understanding of the intentions of point 2.4.2.3.2., we feel that it exempts three key elements that can be known to the system: vehicle category, time of day and time of year. We feel that these should not be exempted, but instead should be required to be identified by the system. With regards to time of day/year, both the camera (reading subsigns) as maps (provided through the data) could identify that the road's speed limit is dependent on the time, which can then be checked against the system/vehicle time as set by the driver, automatically, or from other systems.

Given the importance of these three conditions to prevent false positives and therefore for user acceptance/annoyance, we call for ISA systems to be required to take these into account while determining the speed limit. *Point 2.4.2.3.2.* of our document on proposed changes to the delegated act has therefore been amended to clarify that vehicle categories, time of day and time of year should be taken into account.

## Periodic Roadworthiness Testing

We support the International Motor Vehicle Inspection Committee (CITA)'s proposal for the text on periodic roadworthiness testing, as we feel that the delegated act on ISA should facilitate the work of entities performing periodic roadworthiness testing as best as possible.

*Point 2.2.3.* in our document on proposed changes to the delegated act therefore reflects the suggested provision by CITA.

## Speed Limit Determination – Time vs Distance

The first draft of the delegated act required the applicable speed limit to be determined within 10 meters after the declared reference point. At 50km/h, this translates into 0.7 seconds. Allowing for up to 2 seconds would almost double the amount of meters at 50 km/h, and provides over 5.5 times the distance at 100 km/h. This in our view represents a serious weakening of the performance requirements. In order to take into account that 0.7 seconds would represent less than 10 meters at speeds lower than 50 km/h, we propose that for vehicle driving speeds below that value, it would remain acceptable that the applicable speed limit is determined within 10 meters.

*Point 2.4.2.2.1.* of our document on proposed changes to the delegated act on ISA reflects the justification above. *Points 2.4.2.3.1., 3.1.4.1., 3.2.4.1., and 3.2a.4.1.* have been amended accordingly as well.

## Incorrect Speed Limit Determination due to Erroneous Map Data should be included in the False Positive Rate

The original text would exclude incorrectly determined speed limits based on erroneous map data. We feel that false positives due to incorrect map data should count towards the FP\_E rate as well. Drivers will not differentiate in false positives resulting from either the camera or map - they will just perceive it as a false positive regardless. False positives due to incorrect map data - or any other source to stay technologically neutral - should therefore count towards FP\_E. An example to clarify this is in the case a map erroneously indicates a speed limit change, without there being a speed limit sign. In that case, there was no sign to take precedence over the other sources - the camera could not have picked it up - and it would therefore be unreasonable to exclude it from the TP\_E.

*Point 2.4.2.4.2.* in our document on proposed changes to the delegated act has been amended to delete the reference to road signs.

## Speed Limit Determination Requirements at the time of Approval

*Points 4.3.5.* would allow for changes to the applicable speed limit linked to a specific implicit speed limit sign in the twelve months prior to the type approval not to be taken into account. We call for the deletion of this paragraph, as we strongly feel that at the time of type approval, the system should know the correct speed limits for all catalogue speed signs. It would be difficult to understand for a consumer that their newly purchased vehicle does not know the 'new' speed limit of a sign that was changed possibly over a year earlier.

*Point 4.3.5.* has therefore been deleted from our document on proposed changes to the delegated act.

## Maintenance of Speed Limit Determination - Lifetime

We support the position of the FIA that the reliability of the speed limit determination should be maintained for the lifetime of the vehicle.

*Point 2.4.2.4.5.1.* in our document on proposed changes to the delegated act therefore proposes that the reliability of speed limit determination is maintained annually for the lifetime of the vehicle until scrapped.

## Maintenance of Map Data – At Least Quarterly Updates

In order to ensure reliability of map data, we feel that the update frequency should be clearly specified and propose that map data is updated at least on a quarterly basis.

The wording of *point 2.4.2.4.5.2.* in our document on proposed changes to the delegated act reflects this, while leaving room for manufacturers to be more ambitious (e.g. weekly or monthly updates).