

Draft Proposal for Terms of Reference of ITS/Automated driving informal working group (IG-ITS-AD)

I. Introduction

1. Automated driving technology for road vehicles is increasingly featuring in vehicle manufacturers technology plans and this is creating a higher level of media and public interest in many markets across the world. Inevitably this type of technology due to the potential scale of impact on drivers, road users and wider society creates many uncertainties but also offers huge potential benefits for a safer and more efficient road transport network. Capturing these benefits while enhancing the promotion of technology in the international market is a key objective for the international regulatory community – tackling both the vehicle regulations as well as taking into account the responsibilities for drivers.

2. The work of the WP29 ITS informal working group has so far developed our understanding of topics relating to automated driving such as the definitions of automated driving technology, Guidelines on establishing requirements for high-priority warning signals, and Design principles for Control Systems of Advanced Driver Assistance System (ADAS), etc.

3. In response to growing interest and application of these technologies, as well as recognizing the recent amendment of the 1968 Vienna Convention, it is proposed that the ITS Informal Group, should refocus its discussion on automated driving technology and, as a result, change its name accordingly to "Informal Group on ITS/Automated Driving (IG-ITS-AD)", and that IG-ITS-AD, while keeping in mind establishment of internationally harmonized technical regulations in the future, discuss relevant issues for the practical application of this technology and, where appropriate, to consider administrative legal and social aspects.

[4. Discussion is expected to be taken forward on 2 groups.]

II. Working items to be covered (details see Annex 1)

5. Prepare a proposal with harmonized definition of Automated Driving Technologies

6. Determine discussion items for establishment of internationally harmonized regulations on Automated Driving Technologies enabling drivers to benefit from a higher degree of automation of the driving task ("Highly Automated Driving" /HAD – term still to be defined, cp. No. 5 above).

7. Prepare a proposal on harmonised general guidelines for eSecurity [and eSafety] in motor vehicles

8. Other

(i) Consideration of guidance regarding HAD when requested to WP29 by GRs

- (ii) Exchange of views and information from each Contracting Party about the most advanced technology including full autonomous driving technology (driverless vehicles), such as research results including field tests, information on the national legal system and measures, events, conventions, etc.
- (iii) Exchange of views and information on fully autonomous driving technologies (driverless vehicles) will also be taken forward. This latter activity might be concurrent with above discussion on HAD.

III. Timeline

(a) Approval process

November 2014 Submission of draft TOR of IG-AD to WP29 for consideration
 March 2015 Formal approval of TOR of IG-AD

(b) Definition of Automated Driving Technology

March 2015	Submission of outline
November 2015	Submission of preliminary draft
March 2016	Submission of draft Definition and recommendation

(c) Recommendation HAD regulations with recommendation for GRs

March 2015	Submission of outline
November 2015	Submission of preliminary draft
March 2016	Submission of draft Definition and recommendation

(d) Development of security guidelines

November 2015	Submission of outline
June 2016	Submission of preliminary draft
March 2017	Submission of draft Definition and recommendation

(e) Other

Necessary discussion will be made at appropriate times.

IV. Annex 1

This annex gives a detailed overview for the discussion and tasks related to the working items of section II.

Working item 5. Definition Automated Driving Technologies

- (i) compare existing definitions for the levels of automated driving
- (ii) determine the differences between HAD and fully automated driving
*Clarification of terms of “Driver in the loop” / “Driver out of the loop (driver less OK)”
- (iii) identify typical systems / (use case scenario) that would be assumed as HAD
- (iv) relationship of HAD and those technologies subject to the Vienna Convention and possible advantages of categorizing HAD in groups from a legal perspective
- (v) develop a globally harmonized proposal for WP.29 on definitions for the different levels of autonomous driving

Working item 6. HAD Regulations

The relevant issues for the practical application of Highly Automated Driving technologies (HAD) will be identified and the group will scrutinise the current regulatory measures and identify and propose areas for consideration by WP29. WP29 may then propose to the appropriate GR to consider developing an internationally harmonized regulation for that HAD technology in parallel with IG-ITS-AD.

- (i) agree on the principle on how to make regulations for individual systems and clarification of the area to be covered by WP29.
- (ii) give recommendation to WP29 regarding mandate of each GR based on the above consideration
- (iii) consider recommendations to other entities for topics beyond the remit/scope of WP.29
- (iv) discuss new measures to ensure that HAD systems retain their integrity and operation in-use (such as OBD)

Working item 7. Security Guidelines

- (i) consider and recommend ideas to ensure adequate security (prevention of hacking, tampering) and malfunction for vehicle systems

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- (ii) develop harmonized security guidelines for the protection of vehicles and vehicle systems against unauthorized access through connectivity technologies.
 - (iii) submit a full set of harmonised guidelines to WP.29 for consideration