Terms of Reference of the informal working group on ITS/Automated Driving (IWG on 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 (IWG on ITS-AD)" , and that IWG on 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.

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

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

5. Identify the main horizontal issues and legal obstacles to automated driving technologies and, where possible and appropriate, those not within the remit of WP.29.

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 ("Automated Driving Technologies" /ADT – term still to be defined, cp. No. 5 above).

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

   (eSecurity is the protection against unauthorized access from outside; eSafety is the protection against failures (e.g. system failures, redundancy in the system, event data recorders for failure tracking in case of an accident). Both, eSecurity and eSafety is important for electronic systems especially for systems with autonomous functionality).

8. Others
   (i) Consideration of guidance regarding ADT 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 ADT.

   (iv) Necessary discussion will be made at appropriate times.

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

June 2015   Submission of outline

November 2015   Submission of preliminary draft

March 2016   Submission of draft Definition and recommendation

(c) Identify the main horizontal issues and legal obstacles to wider uptake/implementation of ADT

June 2015   Submission of outline

March 2016   Submission of preliminary draft

November 2016   Submission of conclusions

(d) Recommendation ADT regulations with recommendation for GRs

June 2015   Submission of outline

November 2015   Submission of preliminary draft

March 2016   Submission of draft document

(e) Development of security guidelines

November 2015   Submission of outline

June 2016   Submission of preliminary draft

March 2017   Submission of draft document

(f) Other

Necessary discussion will be made at appropriate times.

IV. Rules of procedure

The following rules of procedure describe the functioning principles of the informal working group.

(a) Following the Rules of Procedure of WP.29. Chapter 1, Rule 1, the IWG is open to all experts from any country or organization of WP.29 and its subsidiary bodies.

(b) Two Co-Chairs (Japan and United Kingdom) and a Secretary (NTSEL) will manage the IWG.

(c) The working language of the IWG will be English.

(d) All documents and/or proposals shall be submitted to the secretary of the group in a suitable electronic format, preferably in line with the UNECE guidelines in advance of the meetings. The group may refuse to discuss any item or proposal which has not been circulated 5 working days in advance of the scheduled meetings.

(e) The IWG shall meet regularly in conjunction with the WP.29 sessions, presuming the availability of meeting rooms. Additional meetings will be organized upon demand.

(f) An agenda and related documents will be circulated to all members of the informal working group in advance of all scheduled meetings.

(g) The work process will be developed by consensus. When consensus cannot be reached, the Co-Chairs of the informal group shall present the different points of view to WP.29. The Co-Chairs may seek guidance from WP.29 as appropriate.

(h) The progress of the informal group will be routinely reported to WP.29 orally or with an informal document by the Co-Chairs or the Secretary.

(i) All documents shall be distributed in digital format. The specific ITS/AD section on the UNECE website shall be used for this purpose.

V. Annex 1

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

Working item 4. Definition Automated Driving Technologies

(i)   compare existing definitions for the levels of automated driving
(ii)   determine the differences between ADT 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 ADT
(iv)   relationship of ADT and those technologies subject to the Vienna Convention and possible advantages of categorizing ADT 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 5. Main horizontal issues

(i) Identify the main horizontal issues (e.g. liability) and legal obstacles (e.g. traffic rules) to automated driving technologies including, where possible, those not within the remit of WP.29.
(ii) Clarify the tasks to be done within WP.29 and, where appropriate, those to be addressed in other fora and legal/instruments.

Working item 6. ADT Regulations

The relevant issues for the practical application of Automated Driving Technologies (ADT) 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 ADT 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 ADT 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

(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

Working item 8. **Other**

(i)   Necessary discussion will be made at appropriate times.