



Economic and Social Council

Distr.: General
19 December 2019

Original: English

Economic Commission for Europe

Inland Transport Committee

Global Forum for Road Traffic Safety

Group of Experts on Road Signs and Signals

Eightieth session

Geneva, 9-13 March 2020

Item 3 (c) (iv) of the provisional agenda

Convention on Road Traffic (1968):

**Automated driving-Amendment proposal to Article 34 in the
1968 Convention on Road Traffic**

Amendment proposal to the 1968 Convention on Road Traffic

**Submitted by Belgium, Finland, France, Luxembourg, Portugal,
Russian Federation, Sweden and Switzerland**

This document submitted by the Governments of Belgium, Finland, France, Luxembourg, Portugal, Russian Federation, Sweden and Switzerland proposes to amend Article 1 and insert a new Article 34bis of the 1968 Convention on Road Traffic to ensure greater levels of legal certainty due to increasing vehicle automation.

I. Proposed amendments

Article 1 – Definitions

Add new paragraphs (ab) and (ac), to read:

“(ab) “Automated driving system” refers to a vehicle system that uses both hardware and software to exercise dynamic control of a vehicle on a sustained basis.

(ac) “Dynamic control” refers to carrying out all the real-time operational and tactical functions required to move the vehicle. This includes controlling the vehicle’s lateral and longitudinal motion, monitoring the road environment, responding to events in the road traffic environment, and planning and signalling for manoeuvres.”

Insert a new Article 34bis, to read:

“Article 34bis

The requirement that every moving vehicle or combination of vehicles shall have a driver is deemed to be satisfied while the vehicle is using an automated driving system which:

(a) is in compliance with domestic legislation, and any applicable international legal instrument, concerning wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles, and

(b) is governed by domestic legislation for operation,
which must be consistent with the principles of this Convention.”

II. Explanatory Memorandum to the Proposed Amendments on the 1968 Convention on Road Traffic

A. Motivation

1. All the authors of this explanatory memorandum share the view that the 1949 and 1968 Conventions on Road Traffic should be consistent with the responsible use of automated vehicles in road traffic. The Global Forum for Road Traffic Safety has already recognized the potential of automated vehicles to increase road safety,¹ and these conventions aim to “facilitate international road traffic and to increase road safety through the adoption of uniform traffic rules.”²

2. However, the authors of this explanatory memorandum take differing views on the current legal status of automated vehicles under the 1968 Convention on Road Traffic. Much of this discussion has focused on the requirement in article 8 that “every moving vehicle or combination of vehicles shall have a driver.”³ Some authors have concluded that some automated vehicles do not have drivers and are therefore inconsistent with this language. Some authors have concluded that automated vehicles do have drivers and are therefore consistent with this language. And some authors have concluded that automated vehicles are not contemplated by and are therefore consistent with this language.

3. Moreover, the authors of this explanatory memorandum take differing views on the continuing validity of the 1949 Convention on Road Traffic, which similarly requires that “[e]very vehicle or combination of vehicles proceeding as a unit shall have a driver.”⁴ A country might be a party to only the 1949 Convention, to only the 1968 Convention, or to both conventions. Some authors believe that a party to both conventions is effectively bound under only the 1968 Convention because the 1968 Convention was intended to replace the

¹ ECE/TRANS/WP.1/2018/4/Rev.3 - Global Forum for Road Traffic Safety (WP.1) Resolution on the Deployment of Highly and Fully Automated Vehicles in Road Traffic

² Convention on Road Traffic done at Vienna on 8 November 1968 and Convention on Road Traffic done at Geneva on 19 September 1949

³ Convention on Road Traffic done at Vienna on 8 November 1968

⁴ Convention on Road Traffic done at Geneva on 19 September 1949

1949 Convention. Some authors believe that a party to both conventions is bound under the 1968 Convention vis-à-vis parties to the 1968 Convention and is bound under the 1949 vis-à-vis parties to the 1949 Convention that have not ratified the 1968 Convention.

4. These interpretive differences could lead to on-the-ground divergence among the parties. Certain forms of automated driving might be inconsistent with one party's view of the 1968 Convention and yet consistent with another party's view. Moreover, some proposals to address the former view risk undermining the latter view. These interpretive differences could stymie the pursuit of "uniform traffic rules." They could also raise concerns that the international legal framework does not create a level playing field for parties interested in facilitating automated driving.

B. Solution

5. All the authors believe that the proposed amendment to the 1968 Convention reflects a modest consensus and offers the most pragmatic path forward in the near term. The proposed amendment could help all parties lawfully accommodate and regulate automated vehicles even without a uniform interpretation of the conventions. Indeed, an extended effort to resolve these differences in interpretation could frustrate other important discussions on issues related to automated driving. Accordingly, the proposed amendment to the 1968 Convention does not attempt to resolve these underlying differences.

6. Instead, this proposed amendment seeks to achieve a shared goal in a way that is at least acceptable to all the parties. This required avoiding statements or implications that were unacceptable to some parties even if they were favored by other parties. The authors identified six of these "dealbreakers" based on previous discussions within the Global Forum on Road Traffic Safety and then drafted around them to reach the proposed language.⁵

7. This proposed language accordingly ensures that parties to the 1949 and 1968 Conventions may choose to facilitate the responsible use of automated vehicles under conditions that are acceptable to them and that are consistent with the broader safety principles of the conventions. Importantly, the amendment allows automated vehicles that, in the view of some parties, do not have traditional human drivers. Equally importantly, the amendment does not impose this particular interpretation of the original language on parties to either the 1968 Convention or the 1949 Convention.

8. The proposed amendment accomplishes this result by "deeming" the driver requirement to be satisfied under the conditions explained below.⁶ This is a legal term of art. For a party that believes that automated vehicles are not consistent with the driver requirement, it is equivalent to an exception from that requirement. For a party that believes that automated vehicles are consistent with the driver requirement, it is equivalent to an endorsement of that belief. In either case, a party to the 1968 Convention can conclude that automated driving is lawful under this convention, and a party to the 1949 Convention can maintain its conclusion that automated driving is lawful under this convention.

⁵ WP1-IGEAD-13-01 (Draft agenda to the 13th meeting of the Informal Group of Experts on Automated Driving), item 5

⁶ It is particularly important to stress that the final clause of the proposed amendment ensures that any domestic legislation is still in line with the principles of the Convention. In other words, as explained below, parties do not have completely free rein with respect to automated vehicles.

C. Conditions

9. Under the proposed amendment, a vehicle must be using an automated driving system. In other words, the automated driving system must be engaged or activated. As provided in the definitions, an automated driving system “carries out all the real-time operational and tactical functions required to move the vehicle.”⁷ An advanced driver assistance system is therefore not an automated driving system. Rather, only level 3, 4, and 5 features represent automated driving.⁸

10. Unlike the Resolution on the Deployment of Highly and Fully Automated Vehicles in Road Traffic, this proposed amendment does not define its scope by reference to levels of automation, rather covers any vehicle using an ‘automated driving system’, defined as a “vehicle system that uses both hardware and software to exercise dynamic control of a vehicle on a sustained basis”, but only if it satisfies conditions specified in the proposed amendment itself. The proposed language contains safeguards that will effectively require appropriate human availability during the use of these systems. In particular, the “deeming” provision applies only while the system is activated and—as noted below—the operation is subject to domestic legislation which in turn is subject to the safety principles of the Convention.

11. This automated driving system must comply with law related to vehicle design, which is typically the basis for type approval or self-certification. Some of this law may be domestic in origin, and “domestic legislation” is a term defined in the 1968 Convention.⁹ Some may be international in origin, and “international legal instruments concerning wheeled vehicles, equipment and parts which can be fitted and/or used on wheeled vehicles” is a reference to the 1958 and 1998 agreements on technical regulations. The qualification that these instruments be “applicable” ensures that the requirements of a technical agreement apply only in countries that are party to it and that apply these instruments under their certification system. The qualification also helps to ensure that parties can continue to authorize vehicles and vehicle systems that are not yet covered by these instruments or that have been excepted from requirements under these instruments.

12. Furthermore, operation of the automated driving system must be “governed by” domestic legislation. This language is similar in effect to language from earlier proposals but can be imported more easily and directly into some parties’ domestic legal frameworks. Domestic legislation could include a party’s general rules of the road; it need not be new or specific to automated vehicles. However, under this provision a party could also impose additional requirements on automated vehicles. For example, a party could specifically define the “driver” of an automated vehicle, could require every automated vehicle to have such a driver, and could impose specialized requirements on this driver. In this way, parties can continue to assign technical responsibilities for safe operation by allocating particular tasks to particular actors.

13. All this law—both domestic and international, and both design-oriented and operation-oriented—must be “consistent with the principles of the” 1968 Convention. “Principles” in this sense are broader and more abstract than the Convention’s individual provisions. The proposed amendment expressly notes that one of these provisions—the driver requirement—is deemed to be satisfied, and the proposed amendment’s reference to principles does not change this result. In short, this reference means that parties are to approach automated vehicles in a way that improves road traffic safety.

⁷ Document ECE/TRANS/WP.1/2018/4/Rev.3, paras III.3.(a) and (b) :

(a) “Automated driving system” refers to a vehicle system that uses both hardware and software to exercise dynamic control of a vehicle on a sustained basis.

(b) “Dynamic control” refers to carrying out all the real-time operational and tactical functions required to move the vehicle. This includes controlling the vehicle’s lateral and longitudinal motion, monitoring the road environment, responding to events in the road traffic environment, and planning and signalling for manoeuvres.

⁸ SAE J3016

⁹ Convention on Road Traffic done at Vienna on 8 November 1968

D Relationship to the conventions

14. The proposed amendment would be added as a new article 34bis to the 1968 Convention. This article 34bis would be entirely distinct from existing article 34. Because the definitions of “automated driving system” and “dynamic control” pertain only to this new article 34bis, they would also be incorporated within it.

15. An earlier proposal included additional language to clarify that amendment of the 1968 Convention does not imply that the 1949 Convention requires a similar amendment.¹⁰ As previously discussed, some authors have concluded that the 1968 Convention requires an amendment for the purpose of automated driving, and some authors have concluded that neither the 1968 nor the 1949 Convention requires an amendment. There was concern that any amendment of the 1968 Convention could undermine this latter conclusion. However, the authors ultimately concluded that the proposed amendment is consistent with this conclusion and therefore should not and will not constrain the interpretation of the 1949 Convention.

16. Finally, the Global Forum on Road Traffic Safety is currently taking steps to draft a new convention that is specific to automated driving.¹¹ The proposed amendment to the 1968 Convention is consistent with this effort. Even if a party to the 1968 Convention ratifies a new automated driving convention, it will still have obligations under the 1968 Convention vis-à-vis any parties that have not ratified the new convention. For this reason, it is important that parties to the 1949 and 1968 Conventions can satisfy themselves that these conventions are consistent with automated vehicles. This is the intent of the proposed amendment.

¹⁰ ECE/TRANS/WP.1/2019/8, paragraph 13

¹¹ Document ECE/TRANS/WP.1/169 (draft report of the 79th session of WP.1 – September 2019), paragraph 28.