

Distr.: General
23 December 2021

Original: English Only

Economic Commission for Europe

Inland Transport Committee

Global Forum for Road Traffic Safety

Eighty-fourth session

Geneva, 7-11 March 2022

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

Convention on Road Traffic (1968):

Automated driving-Vehicles with automated driving systems:

The concept of activities other than driving

**Convention on Road Traffic (1968):Automated driving-
Vehicles with automated driving systems: The concept of
activities other than driving**

Submitted by the Chair

At the December 2021 special session, in order to facilitate discussion, the WP.1 Chair agreed to table ECE/TRANS/WP.1/2021/2 as an informal document. Informal document No. 1 provides a marked up, draft version of ECE/TRANS/WP.1/2021/2 with observations and notes made in December.



Economic and Social Council

Distr.: General
9 July 2021

Original: English

Economic Commission for Europe

Inland Transport Committee

Global Forum for Road Traffic Safety

Eighty-third session

Geneva, 20-24 September 2021

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

Convention on Road Traffic (1968):

Automated driving-Vehicles with automated driving systems:

The concept of activities other than driving

Global Forum for Road Traffic Safety (WP.1) resolution on safety considerations for activities other than driving undertaken by the driver when the automated driving system is exercising dynamic control

Submitted by Canada, Finland, France, Germany, Japan, Luxembourg, Netherlands, Sweden and United Kingdom

This document contains an alternative text for a proposed WP.1 resolution on “activities other than driving” in the context of automated driving.

I. Preamble

1. The Global Forum for Road Traffic Safety (WP.1) of the United Nations Economic Commission for Europe;

(a) Aiming at providing a reference for Contracting Parties to the ~~1949 and 1968 and 1949~~ Conventions on Road Traffic, to offer safety considerations to help these parties in establishing domestic traffic laws for drivers performing activities other than driving in a vehicle with an automated driving system that issues transition demands; ADOPTED

(b) Considering that road traffic safety will be increasingly defined and influenced by the combination of and interaction between automated driving system capabilities, human behaviour, infrastructure and other interactions; ADOPTED

~~(c) Noting that the advent of driving under the control of an automated driving system creates new circumstances in which the prohibition of certain non-driving related activities for manual driving is no longer justified on safety grounds;~~

~~THIRD ALTERNATIVE (UK supported by Finland, Sweden, Belgium, Netherlands, France, Portugal, Japan, Luxembourg, Russian Federation): Noting that the advent of automated driving system creates new circumstances in which activities (Slovakia: add “for drivers”) other than driving may be allowed.~~

Noting that the advent of automated driving systems creates the need for safety considerations addressing the circumstances in which activities other than driving may be allowed when the automated driving system is exercising dynamic control. ADOPTED

~~(d) Noting that automated driving systems may demand that the driver take dynamic control, and that it may be necessary for the driver to both be ready and able to take dynamic control of the vehicle; (Chair suggested deleting this para, supported by Russian Federation, Finland, France, Belgium) ADOPTED DELETED.~~

~~(de) Acknowledging that the enhancement of road safety will be informed by the ongoing development of technical requirements and/or validation methods to confirm the safety of automated driving systems and to confirm the ability of such systems to support a driver to safely undertake activities other than driving;~~

~~SECOND ALTERNATIVE BY USA supported by Russian Federation, Belarus, Canada, UK, France, Japan, Luxembourg, Sweden: Acknowledging that the ongoing development of safety requirements and/or validation methods will continue to enhance automated driving systems and road safety.~~

(number?) Acknowledging that the development of safety requirements and/or validation methods for automated driving systems will continue to enhance road safety. ADOPTED

~~(ef) Noting that in order to protect maintain road safety, especially where there are threats of fatalities or serious injuries, there is a need to take account of relevant scientific evidence or lack thereof, when regulating and introducing new road traffic technologies; (Canada supported by USA, UK, France, Japan, Luxembourg)~~

(number?)-Noting that when introducing new technologies impacting road traffic, there is a need to take into account the relevant scientific evidence in order to continue to improve road safety; ADOPTED

~~(fg) Recognizing there may be a need to further explore the variety of human roles in automated driving;~~

ALTERNATIVE by Chair supported by Belarus, Netherlands, USA, Canada: Recognizing there is a need to further explore, research and study human roles in automated driving; DELETED ADOPTED

has prepared and adopted this Resolution on [date]. ADOPTED

II. (BWS) Scope and Definitions

(BWS insert “scope”, FIN, UK, OICA supports) This resolution contemplates only automated driving systems that issue transition demands...

2. For the purposes of this Resolution:

(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, P: with the need for human intervention as a fall-back to ensure road safety, FIN, S against, A: refer to elsewhere). ~~An advanced driver assistance system is not an automated driving system;~~ Reservation by Belgium, Portugal: vehicles to which this resolution applies

~~(Chair, B, P, UK, FIN against FIN change the title, remove bit “Automated driving system issuing transition demand” refers to OICA delete a vehicle equipped with an automated driving system that while exercising dynamic control might request human intervention as a fall-back to ensure road safety)~~

~~(b-c)~~ “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 signaling for manoeuvres; ADOPTED

~~(ed)~~ “Transition demand” refers to an instruction from the automated driving system to the driver to exercise take over dynamic control. ADOPTED

III. Recommendations regarding automated driving systems issuing transition demands

3. Automated driving systems issuing transition demands should:

(a) Safely exercise dynamic control when engaged and (Chair, supported by Canada, not supported by Austria) interact with the driver through an effective and intuitive human-machine interface; (original text supported by Austria)

~~(b) — Safely exercise dynamic control when engaged; (Chair supported by Austria)~~

~~(c) — Monitor whether the driver is ready and able to respond to a transition demand;~~

~~(bd)~~ Monitor the driver’s availability and manage the driver’s attention ~~if necessary~~ to ensure that the driver is ready and able to respond to a transition demand;

~~(ce)~~ Issue a transition demand when appropriate, in an effective manner with sufficient lead time for the driver to safely assume dynamic control;

~~(df)~~ After issuing a transition demand, continue exercising dynamic control during the lead time, and until the driver has intentionally taken dynamic control of the vehicle;

~~(eg)~~ Transition dynamic control safely and predictably in a clear and foreseeable manner to the driver;

~~(fh)~~ Verify that the driver is exercising dynamic control at the end of a transition demand;

~~(gi)~~ Perform a risk mitigation manoeuvre if the driver does not exercise take over dynamic control.

IV. Recommendations for drivers

4 Drivers should:

(a) Comply with applicable laws, including when performing activities other than driving. Prior to any road use, drivers should familiarise themselves with how to operate the vehicle and the requirements regarding activities other than driving;

ALTERNATIVE by Chair, supported by Russian Federation, UK, Austria: Prior to any road use, drivers should familiarise themselves with how to operate the vehicle and the requirements regarding activities other than driving;

(b) Maintain physical and mental ~~skills-ability~~ to safely ~~exercise-take over~~ dynamic control of the vehicle; (proposal by Chair supported by UK; Russian Federation, Slovakia, Portugal suggest deleting whole para)

(c) Respond to a transition demand by ~~exercising-taking over~~ dynamic control in an appropriate and timely manner ~~when required to do so by national regulations, traffic rules or guidance;~~

(d) ~~Refrain from activity other than driving if that activity may impede this response or is unsafe;~~

ALTERNATIVE by Chair: Refrain from performing activities other than driving if those activities impede the take over of dynamic control when a transition demand is issued;

(e) Refrain from interfering with the automated driving system in a way that could compromise the safe functioning of the system and road safety in general.

(f) Belarus: insert text to cover when the driver is handling back dynamic control to the system

V. Recommendations for manufacturers of automated driving systems issuing transition demands

5. Manufacturers of automated driving systems issuing transition demands should:

(a) Ensure that the performance of the automated driving system is consistent with the above recommendations for automated driving systems over the course of the vehicle's and the system's life cycles;

~~including consistency with applicable laws;~~

(b) Inform and educate drivers about ~~their role in~~ the safe operation of the automated driving systems in the vehicle; ~~including the above recommendations for drivers;~~

(c) Refrain from misleading names, descriptions, or marketing that could encourage improper use of the automated driving system;

(d) Consider measures to avoid tampering of the system to safeguard road safety;

(e) Consider additional measures, as appropriate to ensure proper use of the automated driving system and to ~~otherwise~~ promote road traffic safety; ~~as automated driving systems technology evolves and additional best practices are observed.~~

VI. Recommendations for Contracting Parties

6. Contracting Parties are encouraged to:

~~(a) Consider appropriate domestic measures to address activity other than driving;~~

(a) Consider appropriate domestic measures taking into account the recommendations of this Resolution; ADOPTED

(b) Consider appropriate domestic measures ~~the roles focusing on~~ of driver education and driver testing ~~to~~ ensure that drivers have the skills and knowledge necessary to manage the demands of new technologies; ADOPTED

(c) Continue the cooperation within and between the Global Forum for Road Traffic Safety (WP.1) and the World Forum for Harmonization of Vehicle Regulations (WP.29), including safety considerations in the context of automated driving ~~on activity other than driving in the context of automated driving.~~ ADOPTED

VII. Conclusion

7. ~~This Resolution will be periodically reviewed and updated to address technological and/or regulatory developments concerning vehicles equipped with an automated driving system, as well as further the development of human roles in interacting with an automated driving system.~~

This Resolution will be periodically reviewed and updated to address:

- (i) technological and/or regulatory developments concerning vehicles equipped with an automated driving system, and
- (ii) emerging scientific evidence concerning safe human interactions with an automated driving system.

.