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Convention on Road Traffic (1968)

Submitted by the secretariat

The secretariat has prepared this document upon request of the WP.1 Chair. It contains three parts: 1. Detailed comments on and suggested text for the Resolution; 2. Excerpts from Regulation 157, and 3. Copy of ECE/TRANS/WP.1/2019/3/rev.2 with general comments superimposed on it.

Some fundamental considerations for drafting

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

- Principles – what are they?
 - In the context of road traffic conventions (or according to them), can a driver undertake activities other than driving? If so, to what extent?
 - Is it obligatory for a driver to resume dynamic control from ADS when requested? If not, should it be obligatory?
 - Is this Resolution integrated with (or linked to, consistent with) Vehicle Regulations Agreements, in particular with VR 157 (Automated Lane Keeping Systems)?
- **Principles**
 1. In a Contracting Party to the 1968 Convention on Road Traffic, domestic legislation related to driver's activities other than driving when the automated driving system is exercising dynamic control (thereafter "DAOD domestic legislation") shall be fully consistent with the country's international obligations.
 2. The current Article 8 (6) states that "A driver of a vehicle shall at all times minimize any activity other than driving". This means that the Convention unequivocally prohibits not minimizing activities other than driving at all times. As a result, amending Article 8 (6) appears to be the necessary condition/prerequisite.
 3. In a Contracting Party to the 1949 Convention on Road Traffic, DAOD domestic legislation shall be fully consistent with the country's international obligations.
 4. In other words, **the Resolution must be fully consistent with traffic conventions and vehicle regulations agreements.**
 5. Road traffic conventions (agreements) contain legally binding provisions (not "principles") while road users are to comply with domestic traffic laws (not with "requirements").
 6. The 1958 and 1998 Vehicle Regulations Agreements – albeit currently only Regulation 157 (Automated Lane Keeping System) – should be the fundamental sources for any considerations to introduce and/or amend international road traffic rules to accommodate technological progress. Any new traffic rules are to be – to the extent possible - consistent with Vehicle Regulations Agreements in the area of in-vehicle technology.
 7. The 1968 Convention on Road Traffic already provides the relevant provisions on many issues related to any new DAOD domestic legislation and there is no reason to repeat them. For example, Article 7 (1) (Road users shall avoid any behaviour likely to endanger or obstruct traffic...); Article 7 (5) (The wearing of seatbelts is compulsory for drivers...); Article 8 (3) (Every driver shall possess the necessary physical and mental ability and be in a fit physical and mental condition to drive.); Article 8 (4) (Every driver of a power-driven vehicle shall possess the knowledge and skill necessary for driving the vehicle); Article 41 (1) (c) (Domestic legislation must lay down requirements for obtaining a driving permit. In particular, it shall

specify the minimum age for holding a permit, the medical conditions to be fulfilled and the conditions for passing the theoretical and practical exams;).

8. While the Resolution is a resolution of the Global Forum for Road Traffic Safety (WP.1) of the United Nations Economic Commission for Europe, the ultimate objective of this resolution is to provide common, international traffic rules and/or guidance related to driver's activities other than driving to all Global Forum members and to all Contracting Parties to the 1949 and 1968 Conventions on Road Traffic. It is also hoped that Contracting Parties to the 1958 and 1998 Vehicle Regulations Agreements – not members of the Global Forum nor Contracting Parties to the traffic conventions – will also adopt and/or use this Resolution.

- **Road traffic conventions and activities other than driving**

A possible text to be included in the draft Resolution:

The Global Forum for Road Traffic Safety (WP.1) adopted this Resolution mindful of:

1. Article 7 of the 1949 Convention on Road Traffic stipulating that “Every driver, pedestrian or other road user shall conduct himself in such a way as not to endanger or obstruct traffic; he shall avoid all behaviour that might cause damage to persons, or public or private property.”
2. Article 10 of the 1949 Convention on Road Traffic stipulating that “The driver of a vehicle shall at all times have its speed under control and shall drive in a reasonable and prudent manner. He shall slow down or stop whenever circumstances so require, and particularly when visibility is not good.”
3. Article 8(6) of the 1968 Convention on Road Traffic stipulating that: “A driver of a vehicle shall at all times minimize any activity other than driving. Domestic legislation should lay down rules on the use of phones by drivers of vehicles. In any case, legislation shall prohibit the use by a driver of a motor vehicle or moped of a hand-held phone while the vehicle is in motion.”

This Resolution may infringe on Article 8 (6) and thus it is recommended that Contracting Parties begin the work to amend it. A reasonable starting point for future negotiations is proposed – without prejudice - as follows:

Article 8 (6)

“A driver of a vehicle, **when exercising dynamic control**, shall at all times minimize any activity other than driving. Domestic legislation should lay down rules on the use of phones by drivers of vehicles. In any case, **domestic legislation** shall prohibit the use by a driver of a motor vehicle, **moped and cycle** of a hand-held phone **or any other communications device** while the vehicle is in motion.”

Article 8 (6) bis

“A driver of a vehicle (in motion), **when not exercising dynamic control, shall not necessarily be obliged to minimize any activity other than driving. Domestic legislation shall lay down applicable rules. Contracting Parties shall endeavour to reach regional agreements on these rules.**”

In addition, the following text may also be included in the Resolution:

This Resolution aims at providing guidance to Contracting Parties to the 1949 and 1968 Conventions on Road Traffic relating to drivers undertaking activities other than driving when they are not exercising dynamic control of the vehicle (in motion). The objective is to assist Contracting Parties in establishing domestic – and, to the greatest extent possible, internationally standardized - traffic rules applying to the drivers who are in position to undertake activities other than driving when the automated driving system is exercising dynamic control. This objective is fully consistent with the preambles to the 1949 and 1968 Conventions on Road Traffic (respectively):

“The Contracting States, desirous of promoting the development and safety of international road traffic by establishing certain uniform rules”

and

“Desiring to facilitate international road traffic and to increase road safety through the adoption of uniform road traffic rules”

- **Is resumption of dynamic control obligatory or voluntary?**

The first four paragraphs below may be used in the beginning of the Resolution.

The automated driving systems (ADS) in scope of this Resolution are those systems which issue requests to the driver to exercise - or more precisely to resume - dynamic control. “ADS” and “dynamic control” concepts used in this Resolution are the same (see below) as those used in the “Resolution on the Deployment of Highly and Fully Automated Vehicles in Road Traffic” and in the 2020 proposal to amend the 1968 Convention on Road Traffic.

✓ “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.”

✓ “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, responding to events in the road traffic environment, and planning and signalling for manoeuvres.”

This Resolution does not apply to any driver assistance systems where the driver is obliged to monitor the vehicle and road continuously and consequently to exercise dynamic control to the extent it is necessary to ensure safety. Neither does it apply to automated driving systems that do not issue requests to the driver to resume dynamic control.

Under normal circumstances, the driver would be expected to resume dynamic control when requested, nevertheless, the resumption must be – from the perspective of traffic rules - voluntary.

The voluntary nature of resuming dynamic control by the driver must be based on the fact that not in all circumstances the driver will be capable of recognizing – upon the “transition demand/request” – all the relevant traffic risks and act on them appropriately. **These scenarios are numerous and complex and thus largely impossible to predict and describe as part of a driver’s learning process.** While resuming dynamic control by the driver cannot be mandatory, it must be noted that it is not without consequences. In the context of VR 157, if the transition demand/request is not acted upon, the vehicle will decelerate and stop in the lane it travelled.

This may have traffic flow and/or safety consequences, but it must remain a valid option albeit potentially (depending on specific circumstances) other riskier options.

It should be noted that Article 7 (1) in the 1968 Convention on Road Traffic stipulates that “Road users shall avoid any behaviour likely to endanger or obstruct traffic ...” so no acting upon the transition demand/request to resume dynamic control (with full knowledge that the vehicle will stop in the lane travelled) may be a proper (and safest) action depending on the circumstances. Finally, VR 157 (Introduction) states that “When the ALKS is activated, it shall perform the driving task instead of the driver, i.e. manage all situations including failures, and shall not endanger the safety of the vehicle occupants or any other road users.” and “The activated system shall perform the DDT [sic] shall manage all situations including failures, and shall be free of unreasonable risks for the vehicle occupants or any other road users.” (5.1.1).

It should also be noted that there is an amendment proposal to VR 157 to have the vehicle during the minimum risk manoeuvre move to the shoulder/right lane (instead of decelerating and stopping in the lane travelled).

- **The 1958 “Agreement concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations” and 1998 “Agreement concerning the establishing of global technical regulations for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles”**

Some text that may be considered for inclusion into the draft Resolution:

The Global Forum for Road Traffic Safety (WP.1) has adopted this Resolution mindful of:

1. The need to provide guidance to support the safe, global deployment of technology that relies on requesting the driver resume dynamic control of the vehicle.
2. The expectation that road users, vehicles, and traffic flows will be increasingly affected by changes in “in-vehicle” technology and in road infrastructure technology.
3. The necessity of close cooperation between the Global Forum for Road Traffic Safety (WP.1) and World Forum for Harmonization of Vehicle Regulations (WP.29). This is to ensure that traffic rules guidance, which is intricately related to the evolution of automated driving system technologies improves road safety and remains up-to-date.
4. The current existence of Automated Lane Keeping System (ALKS) technology and corresponding vehicle regulation (VR 157) which is – at this time – the only tangible and credible source for developing commensurate traffic regulations related to ADS and dynamic control.

Vehicle Regulation 157 – Automated Lane Keeping Systems – some useful definitions/quotes:

Note: text in bold added by the secretariat.

This Regulation includes general requirements regarding the system safety and the failsafe response. When the ALKS is activated, it shall perform the driving task instead of the driver, i.e. **manage all situations including failures, and shall not endanger the safety of the vehicle occupants or any other road users**. There is however always the possibility for the driver to override the system, at any time.

The Regulation also lays down requirements on how the driving task shall be safely handed over from the ALKS to the driver including the capability for the system to come to a stop in case the driver does not reply appropriately.

... the Regulation includes requirements on the Human-Machine Interface (HMI) to prevent misunderstanding or misuse by the driver.

"*Transition demand*" is a logical and intuitive procedure to transfer the Dynamic Driving Task (DDT) from the system (automated control) to the human driver (manual control). This **request** is given from the system to the human driver.

"*Transition phase*" means the duration of the transition demand.

"*Planned event*" is a situation which is known in advance, e.g. at the time of activation such as a journey point (e.g. exit of a highway) etc. and which requires a transition demand.

"*Unplanned event*" is a situation which is unknown in advance, but assumed as very likely in happening, e.g. road construction, inclement weather, approaching emergency vehicle, missing lane marking, load falling from truck (collision) and which requires a transition demand.

"*Imminent collision risk*" describes a situation or an event which leads to a collision of the vehicle with another road user or an obstacle which cannot be avoided by a braking demand with lower than 5 m/s².

"*Minimum Risk Manoeuvre (MRM)*" means a procedure aimed at minimising risks in traffic, which is automatically performed by the system after a transition demand without driver response or in the case of a severe ALKS or vehicle failure.

"*Emergency Manoeuvre (EM)*" is a manoeuvre performed by the system in case of an event in which the vehicle is at imminent collision risk and has the purpose of avoiding or mitigating a collision.

A transition demand shall not endanger the safety of the vehicle occupants or other road users.

If the driver fails to resume control of the DDT during the transition phase, the system shall perform a minimum risk manoeuvre. During a minimum risk manoeuvre, the system shall minimise risks to safety of the vehicle occupants and other road users.

The manufacturer shall take measures to guard against reasonably foreseeable misuse by the driver and tampering of the system.

The activated system shall recognise all situations in which it needs to transition the control back to the driver. **Types of situations in which the vehicle will generate a transition demand to the driver shall be declared by the vehicle manufacturer** and included in the documentation package required in Annex 4.

In case of a planned event that would prevent the ALKS from continuing the operation, a transition demand shall be given early enough to ensure the minimal risk maneuver, in case the driver would not resume control, would bring the vehicle to standstill before the planned event occurs.

In case of an unplanned event, a transition demand shall be given upon detection.

The system shall comprise a driver availability recognition system.

The **driver availability recognition system shall detect** if the driver is present in a driving position, if the safety belt of the driver is fastened and if the driver is available to take over the driving task.

The system shall detect if the driver is available and in an appropriate driving position to respond to a transition demand by monitoring the driver.

The manufacturer shall demonstrate to the satisfaction of the technical service the vehicle's capability to detect that the driver is available to take over the driving task.

A transition demand shall be initiated according to paragraph 5.4. if any of the following conditions is met:

- (a) When the driver is detected not to be in the seat for a period of more than one second; or
- (b) When the driver's safety belt is unbuckled.

The system shall detect if the driver is available and in an appropriate driving position to respond to a transition demand by monitoring the driver.

The manufacturer shall demonstrate to the satisfaction of the technical service the vehicle's capability to detect that the driver is available to take over the driving task.

The driver shall be deemed to be unavailable unless at least two availability criteria (e.g. input to driver-exclusive vehicle control, eye blinking, eye closure, conscious head or body movement) have individually determined that the driver is available in the last 30 seconds.

"*Other activities than driving*" through on-board displays available upon activation of the ALKS shall be automatically suspended (i) as soon as the system issues a Transition Demand or (ii) as soon as the system is deactivated, whichever comes first.

The system shall become active only upon a deliberate action by the driver and if all the following conditions are met:

- (a) The driver is in the driver seat and the driver's safety belt** is fastened according to paragraphs 6.1.1. and 6.1.2.;
- (b) The driver is available to take over control** of the DDT according to paragraph 6.1.3.;

The system shall detect if the driver is attentive. The driver is deemed to be attentive when at least one of the following criteria is met:

- (a) Driver gaze direction is confirmed as primarily looking at the road ahead;
- (b) Driver gaze direction is being confirmed as looking at the rear-view mirrors; or,
- (c) Driver head movement is confirmed as primarily directed towards the driving task.

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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

Revised safety considerations for activities other than driving undertaken by the driver in a vehicle when its automated driving system is engaged

Submitted by Canada, France, Germany, Japan, Luxemburg, the Netherlands, Sweden and the United Kingdom

This document proposes a draft text for a resolution on “activities other than driving” that the driver of a vehicle equipped with an automated driving system may be permitted domestically to undertake when the automated driving system is engaged.

Global Forum for Road Traffic Safety (WP.1) resolution on safety considerations for activities other than driving undertaken by the driver in a vehicle when its automated driving system is engaged

demands” - has this requirement been established?

1. The automated driving systems (ADS) in scope of this Resolution are those which issue transition demands to the driver. Drivers using such automated driving systems need to be ready and able to exercise dynamic control, and may be expected to do so on a transition demand. This resolution does not apply to advanced driver assistance systems (ADAS) where the driver has to monitor the driving environment continuously and intervene immediately whenever necessary (as with manual driving). Furthermore, it does not apply to automated driving systems that do not require the driver to take dynamic control, as these automated driving systems do not issue transition demands.

Drivers need to be “present”, “available” to use and also “attentive” to deactivate (ECE Veh. Reg. 157).

I. Background

This Resolution does not appear to be based on these provisions.

2. The Global Forum for Road Traffic Safety (WP.1) of the United Nations Economic Commission for Europe has prepared and adopted this Resolution based on the following provisions:

- (a) 1968 Convention on Road Traffic in regard to the duty to ‘minimise any activity other than driving’ (Article 8(6)), and
- (b) 1949 Convention on Road Traffic, in regard to the duties to:
 - (i) ‘conduct himself in such a way as not to endanger or obstruct traffic’ (Article 7),
 - (ii) ‘avoid all behaviour that might cause damage to persons, or public or private property’ (Article 7), and
 - (iii) ‘drive in a reasonable and prudent manner’ (Article 10).

Article 8(6) of the 1968 Convention on Road Traffic provides:

Ignored?

A driver of a vehicle shall at all times minimize any activity other than driving. Domestic legislation should lay down rules on the use of phones by drivers of vehicles. In any case, legislation shall prohibit the use by a driver of a motor vehicle or moped of a hand-held phone while the vehicle is in motion.

Article 7 of the 1949 Convention on Road Traffic provides:

Every driver, pedestrian or other road user shall conduct himself in such a way as not to endanger or obstruct traffic; he shall avoid all behaviour that might cause damage to persons, or public or private property.

Article 10 of the 1949 Convention on Road Traffic provides:

The driver of a vehicle shall at all times have its speed under control and shall drive in a reasonable and prudent manner. He shall slow down or stop whenever circumstances so require, and particularly when visibility is not good.

II. Preamble

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

4. Considering that road traffic safety and traffic flow will be increasingly defined and influenced by the combination of and interaction between automated driving system capabilities, human behaviour and infrastructure requirements;

5. Noting that automated driving systems may in some circumstances 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 and to do so;

These are not « equivalent requirements » nor equivalent provisions.

6. Noting that, in its seventy-fifth session, WP.1 confirmed that the following principles will be applied by the Contracting Parties to the 1968 Convention on Road Traffic as well as followed by those applying the 1949 Convention on Road Traffic's equivalent requirements in Articles 7 and 10:

“When the vehicle is driven by vehicle systems that do not require the driver to perform the driving task, the driver can engage in activities other than driving as long as:

It is not about « preventing » but about the mandatory vs voluntary nature; if mandatory, then it is about the timing

(a) these activities do not prevent the driver from responding to demands from the vehicle systems for taking over the driving task, and

(b) these activities are consistent with the prescribed use of the vehicle systems and their defined functions”;

The manufacturers' "prescribed use" cannot be used as traffic laws

7. Noting the need to take account of relevant scientific evidence or lack thereof, when regulating and introducing new road technologies in order to protect road safety, especially where there are threats of fatalities or serious injuries;

8. Noting the necessity of close cooperation between the Global Forum for Road Traffic Safety (WP.1) and World Forum for Harmonization of Vehicle Regulations (WP.29) to ensure that guidance pertaining to the conduct of other activities continues to evolve based on scientific evidence and data, the evolution of automated driving system technologies and the development of WP.29 safety requirements; and

9. Without prejudice to exploring further human roles when an automated driving system is engaged;

has prepared and adopted this Resolution on [DATE].

III. Purpose of this Resolution

This cannot be said until Article 8(6), 1968 C on RT, assigns this domestic legislation.

10. This Resolution aims at providing a framework for Contracting Parties to the 1968 and 1949 Conventions on Road Traffic, relating to drivers undertaking activities other than those related to exercising dynamic control of the vehicle. This is intended to help these parties in establishing domestic traffic laws for performing other activities while automated driving systems are engaged.

IV. Recommended application of this Resolution: assumptions

11. This Resolution acknowledges 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.

ADS of ALKS (VR 157) is already defined, so no need to assume what the system will do.

12. Recognizing this, it is assumed that automated driving systems will support the following outcomes:

(a) Safe interaction between the driver and the automated driving system through an effective and intuitive human-machine interface;

(b) Automated driving system responsibility for the safe execution of dynamic control, when the automated driving system is performing the driving task;

(c) A safe, predictable transition phase, which includes sufficient lead time for the driver to complete a safe process to take dynamic control;

« Sufficient lead time » depends on the specific situation/scenario and technology.

(d) The ability to determine that the driver is ready and able to respond to a transition demand from the automated driving system, and to react appropriately depending on whether the driver intentionally takes dynamic control;

(e) The performance of emergency manoeuvres, as drivers cannot be expected to take dynamic control in situations that are safety- and time-critical; and

(f) The performance of appropriate risk mitigation manoeuvres (including where the automated driving system takes action if the driver disregards a transition demand or if it is determined that the driver is not ready and able to respond to a transition demand from the automated driving system).

13. Based on the assumptions listed above, WP.1 has established four criteria for drivers to undertake activities which are unrelated to exercising dynamic control of the vehicle. These criteria are outlined in the following framework and should be considered in conjunction with automated driving system safety requirements developed by WP.29:

V. Recommended framework comprising four criteria for drivers to engage in activities other than driving

Hypothetical guidance?

14. Based on the assumptions listed above, a driver using a vehicle in which an automated driving system is engaged may undertake activities other than driving provided all four of the following criteria are met:

(a) These activities do not prevent the driver from responding to demands from the automated driving system for taking dynamic control;

(b) These activities are consistent with the prescribed use of the automated driving system and its defined functions;

(c) The driver complies with traffic laws applicable in the country regarding activities other than driving; and

(d) The driver has and maintains the capabilities necessary to fulfil their respective duties regardless of whether an automated driving system is engaged.

15. The above criteria are expanded and explained below.

Criterion a:

16. Each time the automated driving system issues a clear transition demand, the driver is expected to take timely, safe and proper dynamic control of the vehicle.

17. Any activities other than driving undertaken by the driver should not compromise the ability and readiness of the driver to comply with an expectation to take dynamic control.

18. It is important to manage the driver's attention, so that they are alert enough to be ready and able to take dynamic control from the automated driving system. The automatic suspension of activities other than driving that rely on technologies integrated with, or connected to, the vehicle in case of a transition demand has been identified as one effective measure to offer activities other than driving in a safe way.

19. In all cases the driver must not interfere with any part of the automated driving system in a way that could compromise safety.

Criterion b:

20. Criterion "a" should be considered by the manufacturer in the design of the system's human-machine interface (including the transition phase and the lead time provided for a safe transition).

21. Consideration should be given to how to determine driver availability to respond to a transition demand from the automated driving system. A means to confirm that the driver has intentionally taken dynamic control of the vehicle before the system is deactivated should also be considered.

The manufacturers' "prescribed use" cannot be used as traffic laws

**8 (3) Every driver shall possess the necessary physical and mental ability and be in a fit physical and mental condition to drive.
8 (4) Every driver of a power-driven vehicle shall possess the knowledge and skill necessary for driving the vehicle**

By definition, any other activity will always "compromise" it.

**What would be "unsafe and improper"?
At a unclear demand?**

?

"Transition phase" means the duration of the transition demand (VR 157).

Drivers need to be "present", "available" to use and also "attentive" to deactivate (ECE Veh. Reg. 157).

VR 157: traffic flow will ALWAYS be disrupted as the vehicle will decelerate and stop in its lane.

22. Road safety and traffic flow should not be disrupted if the driver does not take safe and proper dynamic control in response to a transition demand.

23. The manufacturer of the automated driving system should provide the driver with clear explanations about the prescribed use of the vehicle system before the driver uses it, and consequently the driver must be aware of these explanations before using the system. This should include the implications for the driver's responsibilities and their expected behaviour in the case of a transition demand, according to applicable international and national law. In addition, the manufacturer should not use misleading names, descriptions and promotional material which could encourage improper use of the system.

24. The automated driving system should communicate clearly with its driver so that the driver can understand any instruction given by the system.

Instructions are mandatory ?

Criterion c:

25. Contracting Parties to one or both Conventions are encouraged to consider measures to address the undertaking of activities other than driving as appropriate.

Should comply?

26. Prior to any on-road use, drivers should familiarize themselves with requirements regarding the undertaking of activities other than driving while the automated driving system is engaged. Drivers should comply with the requirements that apply in the country in which the automated driving system is used. Contracting Parties should consider enabling drivers to obtain the necessary competence to manage the demands of new technologies in vehicles through driver education and verifying this competence in a driver test or by further training. The driver must also hold the necessary driving permit corresponding to the vehicle category.

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Criterion d:

27. The driver of a vehicle equipped with an automated driving system must have and maintain the necessary physical and mental capabilities and sufficient skills to drive that vehicle regardless of whether the automated driving system is engaged.

28. Drivers should consider their individual capabilities to resume driving when deciding whether to engage in activities other than driving when the automated driving system is engaged. A driver should not engage in an activity other than driving if the activity itself, the driver's individual circumstances, or other conditions could prevent the driver from safely responding to a transition demand in a timely manner.

29. Drivers should be informed and educated about the importance, for safety, of a timely response to transition demands and about the decisions, behaviours, and circumstances that may prevent such a response. Contracting parties and manufacturers of automated driving systems should consider their respective responsibilities to communicate this information to the driver.

VI. Conclusions about the recommended framework within which activities other than driving are permitted

assumptions?

30. Provided that the assumptions and criteria set out above are met, a driver may then undertake activities other than driving.

31. As it is not feasible or adequate to provide a complete list of the acceptable activities other than driving, this Resolution defines four criteria to which these activities should conform. Further research on how to manage the driver's attention so as to support road safety and safe traffic flow is needed as these technologies develop.

VII. Terminology

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

33. “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, responding to events in the road traffic environment, and planning and signalling for manoeuvres.”

34 “Advanced driver assistance systems” or “ADAS” refers to systems, for example Lane Keeping Assist Systems, Adaptive Cruise Control, and Active Park Assist, that merely support the driver in exercising dynamic control. Therefore, activities other than driving in the context of manual and/or assisted driving are typically restricted to, for example, setting radio, navigation system, air conditioning, heating system, etc., in order to avoid driver distraction.
