Progress Report GRE TF AVSR

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Pre-conditions by WP.29 and GRVA/FRAV

The Report of the 188th session of WP.29 (WP.29/1168, para.19) stated:

- 19. WP.29 reviewed WP.29-188-21, summarizing the guidance provided by AC.2 on the items raised by GRVA at its September 2022 session. Following AC.2 recommendations,
 - (i) WP.29 recommended that GRE conducts analysis of research and establishes high level principles related to light-signalling for ADS operational status,
 - (ii) WP.29 endorsed the amendment proposal to the table in the FDAV,
 - (iii) WP.29 noted the coordination of work between the different GRs regarding the screening of UN Regulations and UN Global Technical Regulations (UN GTRs) as requested by WP.29 in March 2022 (ECE/TRANS/WP.29/1164, para. 30),

. . .

Summary of GRVA14-15 rev.3*

GRVA does not recommend mandatory requirements for additional light-signalling devices under WP.29 beyond those requirements established for manually driven vehicles.

GRVA believes that existing light-signalling devices may be suitable (if permitted) to signal initiation of an automated fallback response designed to place the ADS vehicle in a minimal risk condition.

GRVA recommends the establishment of uniform provisions for a light signal to communicate the ADS operational status under certain conditions, should it be required or permitted by an individual Contracting Party.

GRVA recognises that it **remains the prerogative of the Contracting Parties** to regulate the use of such a signal.

GRVA notes that means other than light-signalling may be suitable to achieve safety needs.

GRVA recommends continued monitoring of research into ADSsignalling and the safety of interactions between other road users and ADS vehicles.

*) https://unece.org/sites/default/files/2022-09/GRVA-14-15r3e.pdf

Exchange of views during 9th & 10th meetings of TF AVSR

- GRVA In general, GRVA is against an external light signal for ADS to communicate the operational status but rather recommends other means of communication. However, GRVA recognises that it remains the prerogative of the Contracting Parties to regulate the use of such a signal. If fitted, such a signal should have uniform provisions and should be an optional signal.
- France is in favour of such a signal to clearly identify autonomous vehicles in autonomous state. No specific requirements ideas at this stage, open for discussion, has suggested the possibility to use the existing lamps to switch from normal conditions to autonomous conditions.
- Japan Japan is in favour of having an external light signal and also of the policy proposed by GRVA. Japan believes that further discussion is needed on detailed regulatory requirements.

Japan now requires manufacturers to affix a sticker to automated vehicles. In addition, Japan has amended its Road Traffic Law to require autonomous vehicles without a driver to display the external signal.

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Exchange of views during 9th & 10th meetings of TF AVSR (cont'd)

UK UK is not in favour of such a signal and wants to come to a common understanding as expressed by GRVA. UK clearly wants to have a provision to ban such signals on their roads.

Australia's general view is that, in the initial stages of deployment and while there is a mixed fleet of ADS and Non-ADS vehicles, there may be benefit in communicating to other road users that a vehicle's ADS is operating.

Australia suggests GRE continues to coordinate work with GRVA and conducts analysis of research and establishes high level principles related to light-signalling for ADS operational status which is in accordance with the outcomes from WP.29's November 2022 session.

China China does allow such a signal; however, it is yet not required by GB-standards but already defined inside the new, draft GB standard for light-signalling devices

Korea is recently doing a study if and how to implement an ADS signal, however, no specifications available yet.

SAE SAE has established a recommended practice (SAE J3134) about ADS marker lamps.

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Outcome

- 1. It remains the prerogative of each Contracting Party to regulate the use of such a signal;
 - → the ADS status indicator shall be optional
- 2. In the case of **Contracting Parties** which are **not in favour** of the application of the ADS status indicator, it is necessary to give these Contracting Parties **the possibility to have a provision to ban such signals** on their roads (such as 'mandatory deactivation in certain countries');
- 3. If fitted, the ADS status indicator should have uniform provisions.

Conclusion

With regard to the conclusions and the resulting legal aspects, because only some Contracting Parties are in favour of having an external light signal to show the autonomous mode, the following three options for the definition of the technical and the installation requirements are possible:

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Option 1

Functional specifications in UN-R148

and

Installation requirements in UN-R48

There are legal arguments against this, as it is not possible for a Contracting Party to only partially accept an UN regulation and to prohibit in this case the installation of the ADS status indicator.

Option 2

New, standalone device Regulation for functional specifications of an ADS status indicator (UN-RXXX)

and

still installation requirements in UN-R48

Option 3



New hybrid Regulation (UN-RXXX)

functional specifications and installation requirements in one Regulation

Whereby the questions of switching conditions should then be specified in a Regulation governed by GRVA.

Additional remark in UN-R48 about such devices necessary!

Question to GRE

Does GRE share the view of the TF AVSR to create a new Hybrid Regulation?

Question to GRE about the legal base of TF AVSR in case of developing such a regulation

Should this Group work further on

- as a Task Force like until now?, or
- as an Informal Working Group?

And should this Group continue on the basis of

- a Work Plan, or
- Terms of References?

Possible use cases to address for ADS status indicator:

e.g.

- for law enforcement of the interested countries
- cameras, traffic monitoring

- Pedestrians
- Cyclists
- Other road users

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Thank you for your attention!