

Issues related to Automated Driving Technology and Possible Guidance to GRRF

1. Background

- Vehicle manufacturers are individually developing technologies related to the automated driving system such as automated lane change system, integrated and advanced lane change support system, deadman system, etc. These technologies are closer to practical use.
- These technologies are supposed to contribute to road traffic safety if they are introduced properly. The deployment of such technologies in appropriate manner, therefore, should be promoted.
- Currently, the Automatically Commanded Steering Function is restricted to operate only under 10km/h by R79.
- Whether the existing R79 should be amended could be discussed from the view points of introducing requirements for such technologies to be introduced safely.

2. TOR of Informal Group on ITS / Automated Driving (IG-AD)

- TOR of IG-AD indicates that IG-AD will discuss practical applications of the Highly Automated Driving technologies (HAD) which are in live with current Vienna and Geneva Conventions, and the outcome of the discussion will be submitted to WP29 (refer to TOR 5). Meanwhile, discussions on Fully Autonomous Driving Technologies will remain exchange of views and information in each CP (refer to TOR 6).
- Therefore, in parallel with discussions in IG-AD on definition of Automated Driving Technology from the legal point of view, practical applications of the Automatically Commanded Steering Function on the basis of TOR 5 and consequent possible amendments of R79 could be discussed in GRRF .

Categories of Automated Driving in TOR	Related laws and Regulations	Schedule
Highly Automated Driving technologies (Advanced Drivers Assistance System only)	Automatically Commanded Steering Function(R79)	From January, 2015 till November, 2015
Fully Autonomous Driving technologies (including semi Autonomous Driving technologies)	—	From January, 2015

3. Possible discussion items on Highly Automated Driving Technologies

3-1. Concept of “designed to assist drivers”

While discussion in related GRs on driver assistance technologies would be limited to technologies “designed to assist drivers” on the basis of Vienna and Geneva Conventions, it would be necessary to first discuss in IG-AD what technologies should be regarded as complying with the Conventions. Having said that, since it would be clear that at least the technologies with the assumptions written below would be within the scope of the both conventions, guidance by WP29 to start the discussion on such technologies with the assumptions could be made to the related GRs.

- (1) A driver always monitors the controls of driving or system operation and he / she drives or operates if necessary.
- (2) The driver’s intention shall be reliably reflected.

3-2. Others

The discussions on cybersecurity, OBD, EDR, etc. could also be made in IG-AD.

4. Guidance to GRRF (provisional draft)

<Scope of considerations >

Technological requirements for Automatically Commanded Steering Function should be considered based on the points of sections 1 and 2 written above.

<Targeted systems >

Targeted systems would be driver assistant systems functioning in normal condition where a driver can always override its control.

<Possible points to note >

- 1) When the control mode makes a transition from a system to a driver, how to ensure the transition safe.
- 2) How to prevent adverse effects on other vehicles and other traffic.
- 3) The following should also be considered depending on the system; a limited use in specific road environment where safety can be ensured.(e.g. the expressway where the ongoing vehicle lanes are separated by a median from the oncoming vehicle lanes)
- 4) “Minimum safety measure provision” should be considered so as not to inhibit current development of such systems.