

Proposal for key works of FRAV

I. Background

ECE/TRANS/WP29/2019/34 contains the strategic vision for the activities of WP29, GRVA and its informal working groups with respect to automated vehicles. This framework document directs GRVA and its working groups to use the issues, topics and deliverables from that document as guidance to inform further discussions, activities and outcomes.

As noted in document ECE/TRANS/WP29/2019/34 as amended, the IWG shall:

- Develop functional (performance) requirements for automated/autonomous vehicles, in particular, the combination of the different functions for driving: longitudinal control (acceleration, braking and road speed), lateral control (lane discipline), environment monitoring (headway, side, rear), minimum risk manoeuvre, transition demand, HMI (internal and external) and driver monitoring. This work item should also cover the requirements for Functional Safety;
- Do this in line with the following principles/elements: a. System safety, b. Failsafe Response, c. HMI / Operator information d. OEDR (Functional Requirements) described in document ECE/TRAN/WP29/2019/34 as amended.

II. China recommendation

As noted in document ECE/TRANS/WP29/2019/34, the informal group shall focus on the following items:



A. The Requirements of Normal Driving

The following functions should be considered:

- a. Identification and response of traffic signs, marking lines, signal lamps and participants (OEDR)*
- b. Automated stop & going*
- c. Following the front vehicle*
- e. Following a defined path*
- f. Overtaking*
- g. Turning (intersection)*

B. The Requirements of Transition demand

The following questions should be considered:

- a. What is the transition demand in normal driving?*
- b. What is the transition demand when the automated system fails or exceeds the ODD?*
- c. Should the automated system monitor and evaluate the driver's ability? And what are the requirements of the monitor and evaluate function?*

C. Minimum risk maneuver

The following questions should be considered:

- a. What is the definition of minimum risk maneuver ?*
- b. How to use a consistent standard to evaluate the rationality of the maneuver ?*

D. General Requirements

- D.1 Complex electronic control system requirements
 - D.2 Cybersecurity
 - D.3 Software update
 - D.4 Human-machine interface
 - D.5 Event data recorder and data storage system for automated driving (EDR & DSSAD)
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