

## **Invitation to the 5<sup>th</sup> Session of the GRVA Informal Working Group on Functional Requirements for Automated/Autonomous Vehicles (FRAV)**

The fifth session of the FRAV informal group is scheduled for 15 October 2020 between 13:00 and 16:00 CET via web conference.

### Session Objectives

The session agenda will focus on the following items:

1. Review of the FRAV status and areas of consensus to date
2. Seek consensus on conceptual definition of “safe performance”
3. Agree on near-term work plan for “top-down” elaboration of performance requirements
4. Preparation for WP.29 November session
5. The 6<sup>th</sup> FRAV session is tentatively scheduled for 29 October

**The main objective of this session is to agree on starting points and next steps for the top-down elaboration of performance requirements.**

### Submissions

Given the constraints imposed by the web conference format, the co-chairs wish to adhere to a fixed schedule with time limits for each agenda item. Documents may be submitted for consideration; however, the co-chairs may need to postpone their presentation to a future session. All documents prepared for the session, including the session agenda, will be posted on the [FRAV-05 webpage](#) as available. Please send any submissions to the [FRAV Secretary](#) on or before 14 October.

### Additional Background

During the 4<sup>th</sup> session, FRAV agreed to develop performance requirements through step-by-step iterations beginning with the broad concepts of “system safety”, “free of unreasonable risks”, and the AV Framework Document Safety Vision and contents. FRAV noted a need to distill these various concepts and terms into a starting point for elaborating performance requirements. The group decided that “system safety” covered not only performance requirements but also methodologies pertinent to the work of VMAD. Therefore, “System Safety” was removed as a chapter of Document 5.

In order to facilitate agreement on an appropriate starting point, the FRAV leadership would like the stakeholders to consider the following concepts as a basis for capturing the safety aspects that should be addressed by the performance requirements:

1. ADS should drive safely.
2. ADS should interact safely with the user.
3. ADS should manage safety-critical situations.
4. ADS should safely manage failure modes.
5. ADS should maintain a safe operational state.

These items are intentionally broad and limited in number to facilitate discussion and the organization of future work.

Item 1 aims to cover expectations for normal ADS driving behaviors within the control of the system, such as adapting to traffic conditions, respecting traffic laws, and signaling to other road users.

Item 2 aims to cover the interactions between the user of the ADS and the ADS, such as related to communications/messaging, transfer of control, and/or preventing misuse or user confusion.

Item 3 aims to cover ADS responses to events outside the control of the ADS, such as responding to actions of other road users and collision events.

Item 4 aims to cover detection of and response to system failures, such as related to damage or malfunction in DDT-related functions.

Item 5 aims to cover in-use safety throughout the useful life of the ADS, such as related to software updates, cybersecurity assurance, or obsolescence.

The above statements are purely indicative. The aim is to agree on starting points that enable FRAV to methodically identify safety goals per the step-by-step approach. If acceptable, the FRAV leadership proposes to request stakeholders to identify no more than ten more specific safety goals under each item for the 6<sup>th</sup> session. The limit on the number of goals is intended to ensure that FRAV stays at a relatively high level before proceeding to further elaborate performance requirements in future sessions.