

Invitation to the 14th Session of the GRVA Informal Working Group on Functional Requirements for Automated Vehicles (FRAV)

The 14th session of the FRAV informal group is scheduled for 20 May 2021 between 12:45 and 15:15 CET via web conference. Further details and participation can be found in the agenda as posted on the [session wiki page](#).

Session Objectives

This session is expected to address the following items:

1. Germany's concept for a "guardrails approach" to safety requirements
2. Framework for considering safety requirements related to ADS performance of the DDT
3. Framework for considering safety requirements related to ADS user roles
4. Framework for considering safety requirements related to ADS interactions with other road users.
5. Framework for responding to the EDR/DSSAD request for FRAV recommendations on data collection requirements

The main objective of the session is to reach a working level of consensus regarding the output of the workstreams on DDT functions, ADS users, Other Road Users (ORU), and recommendations regarding data collection for ADS vehicles.

The first three workstreams aim to result in general safety requirements later this year. Therefore, the desired "working consensus" is confirmation within FRAV that these workstreams are moving in directions acceptable to the group towards this end. The intention is for this consensus to provide context for reviewing the safety topics towards moving closer to proposals for safety requirements.

The request from the EDR/DSSAD informal group involves a different workstream intended to result in recommendations for data collection relevant to ADS vehicles. FRAV has been requested to suggest data elements that might be appropriate in meeting ADS safety objectives.

Additional context

Guardrails approach

Germany proposed a "guardrails approach" to the elaboration of safety requirements in its comments on the safety topics (FRAV-10-07). Germany has offered to further explain this concept for FRAV consideration.

DDT functions

This workstream has resulted in an explanation of factors relevant to ADS performance of the entire DDT (FRAV-13-06). The consolidated comments on the safety topics (FRAV-12-08) make repeated references to the DDT, suggesting a need for a common understanding of the DDT and the elements that comprise the DDT. This common understanding can provide context useful in elaborating the current safety topics for greater precision on items that should be verified during the assessment of an ADS. During the session, FRAV will review the workstream outcomes to determine whether the outcomes provide an acceptable basis for further consideration of the safety topics.

ADS users

This workstream has resulted in an explanation of various roles users may have vis-à-vis an ADS (FRAV-13-09). These roles raised issues for further discussion, including degrees of ADS reliance on a user to fulfill responsibilities or assist in the navigation of conditions. The outcome highlights the complexity of

possible user interactions that can provide useful context in further elaborating the safety topics relevant to HMI and ADS user interactions with the system. During the session, FRAV will review the workstream outcomes to determine whether the outcomes provide an acceptable basis for further consideration of the safety topics.

Other Road Users (ORU)

This workstream produced a proposal to consider ORU cases towards identifying common and special physical, functional, and/or behavioral properties of other road users. For example, “emergency vehicles” share common physical and behavioral characteristics; however, within the general category of “emergency vehicles”, police vehicles have special functions for law enforcement. Understanding such common and special properties may provide context useful in determining needs that should be addressed by the ADS safety requirements. During the session, FRAV will review the workstream outcomes to determine whether the outcomes provide an acceptable basis for further consideration of the safety topics.

EDR/DSSAD

This workstream produced a “data elements matrix” to illustrate differences in possible data collection elements (FRAV-13-08). In order to address the diversity of ADS applications, the matrix suggested a need to categorize data collection elements based on the purposes of the data collection (e.g., crash analysis, general performance reporting/research), the ADS configuration and uses, and the modality (e.g., on-board/off-board). This outcome suggested a framework for considering data elements, including alignment with FRAV’s approach to ADS requirements and to support the VMAD in-service monitoring pillar. During the session, FRAV will review the workstream outcomes to determine whether the outcomes provide an acceptable basis for further consideration of FRAV’s response to the EDR/DSSAD request for recommendations on data collection elements.