25th Session Status Review and Session Orientation

Web Conference

15-16 February 2022

FRAV

Adoption of the agenda

15 February		
1. Adoption of the agenda	12:45-12:50	FRAV-25-01
2. Session orientation and status review	12:50-13:00	FRAV-25-03
3. Coverage of Document 5 open issues	13:00-13:30	
4. Feedback on VMAD "lane-keeping" scenario 4.1. SAE AVSC behavioral competences presentation 4.2. Discussion of "lane-keeping" scenario	13:30-14:30	FRAV-25-[06] (SAE)
5. Feedback on ADS and light-signaling 5.1. Adaptation of "driver" references to ADS 5.2. Response to AC.2 request for FRAV consideration	14:30-15:10	
6. First day conclusion	15:10-15:15	

16 February		
7. Workstream updates on status and plans 7.1. ADS performance of the DDT 7.2. ADS interactions with ORU 7.3. ADS user safety 7.4. ADS performance data and EDR/DSSAD feedback	12:45-14:30	
8. FRAV progress expectations and objectives 8.1. GRVA May and September sessions 8.2. WP.29 March, June, and November sessions	14:30-15:00	
9. FRAV status and next steps 9.1. Next session: 15-16 March 9.2. Future sessions (tentative) 9.2.1. 19-20 April 9.2.2. 19-20 May 9.3. Any other business	15:00-15:15	

Agree on task management (open issues, workstream plans and frameworks), feedback to other groups, expectations for Document 5 elaboration and any submissions to GRVA and WP.29 during 2022.

FRAV status

- Submitted high-level recommendations to GRVA
  - Safety provisions framework (terms, ADS description, safety provision structure)
  - General safety recommendations and directions for further work
  - Open points pending and to be determined
- Short-term tasks
  - Feedback to VMAD on lane-keeping scenario
  - Illustration of ADS data elements for EDR/DSSAD
  - Feedback to AC.2 on FRAV role in ADS external light-signaling
- Mandate and deliverables
  - FRAV mandate (Neutral text adaptable under 1958, 1997, and 1998 Agreements)
  - AV Framework (Proposal for WP.29 guidelines on ADS safety requirements for June WP.29)

Document 5 open points

Document open to change with items for further consideration.

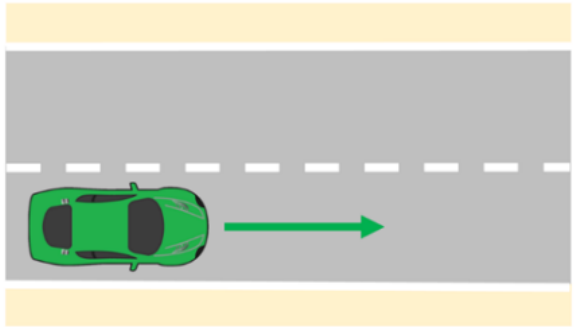
- Inclusion of ODD in ADS definition (2.1.)
- ADS determination that driver qualified (2.5.)
- Differentiation of “dynamic control” and DDT (2.6., 2.7.)
- Clarification of ORU (2.7.2.1.2.)
- Consideration on animals (2.7.2.1.2.)
- Clarify perception “in vehicle path” versus in vehicle environment (2.7.2.1.2.)
- ADS conspicuity functions and relevance of “gesturing” (2.7.2.3.4.)
- Fallback user: “Fallback-ready user” under SAE/ISO
- MRC: Consideration of SAE/ISO definition
- ODD: Inclusion of illustrative examples under definition
- Clarification of operational and tactical function definition per literature (2.12., 2.17.)
- Transition of control: Attention to verification of driver control by completion (2.18., 4.2.5.)
- Further consideration of ADS user definition (2.19.)
- ODD elements to be expanded and to be measurable/verifiable (3.3.)
- Consider roles of traffic laws in defining readiness obligations of fallback users (3.4.3.1.)
- Clarify manufacturer obligations in describing user roles and responsibilities (3.4.3.1.)
- Clarify targets of user HMI information (3.4.3.5.)
- Clarify addressable misuse and error foreseen by 4.2.3.
- Address steps in transitions of control, including verification that user has assumed driver role/control of vehicle (4.2.5.)
- Clarify intended recipients of information and tools for understanding ADS functionality and operation (4.2.7.)
- Clarify 4.3.3. regarding ADS response to accident/collision.
- Unauthorized modifications: consider tampering and unintentional/inadvertent (4.4.4.)
- Clarify permission for continued operation in presence of fault/failure (4.4.5.)
- Reconsider scope of maintenance—addressable outside FRAV? (4.5.)

Feedback on VMAD scenario

4.1 SAE AVSC Best Practice for Evaluation of Behavioral Competencies for Automated Driving System Dedicated Vehicles (ADS-DVs)

4.2 FRAV feedback on lane-keeping scenario

- “FRAV to check if the 24 safety requirements and their detailed provisions are applicable to lane keeping [scenario].”
- FRAV response due mid-February.



UN R48: Driver references

- Term “driver” used 46 times in Revision 12.
- Usages refer variously to
  - Driver adjustment of lighting device settings
  - Conditions under which driver may activate certain lamps (e.g., fog)
  - Informing driver of lighting device status
  - Setting lighting orientation with person in driver’s seating position
  - Prohibitions on causing discomfort to driver
  - Warnings if lighting device left on after engine shut-off/vehicle exit
- What “AV terms” should be used to adapt provisions to ADS vehicles?

AC.2, GRVA, and GRE interaction

November 2021 WP.29/AC.2 session

17. AC2 discussed the coordination of work on Automated Driving Systems (ADS). AC.2, for the sake of global harmonization, decided tasking:

(a) First, GRVA and the Informal Working Group on Functional Requirements for Automated Vehicles (FRAV) to determine the conditions, if any, under which an ADS external lighting signal should be activated and recommend to GRE to whom the signal should be displayed (drivers in other vehicles, other road users) and from where it should be visible (e.g. front, rear, side);

(b) Then, GRE (and Task Force on AVSR or an IWG) to harmonize performance requirements for an ADS light according to the conditions prepared under (a). GRE will specify the requirements for ADS lamps and their installation if needed, in cooperation with GRVA (and the IWG on FRAV);

(c) GRE and GRVA (and their respective IWG) to align the proposal on ADS lamps, if any.

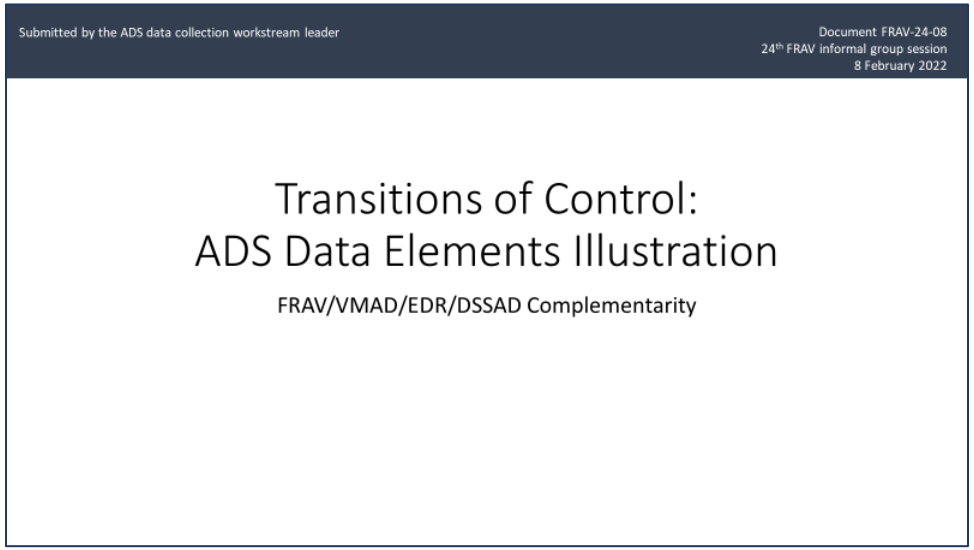
Note: AC.2, in consultation with the Chairs of GRVA and GRE, will confirm deadlines during the March 2022 session of AC.2.

- AC.2 to discuss deliverables and deadlines next March.
- FRAV needs general view for 7-11 March WP.29 session.
  - Relevant issues and time needed to fulfill item (a).
- Considerations
  - Benefits and/or risks of external signaling
  - If signaling needed for safety:
    - What might be signaled?
    - Directed to whom?
    - Visible from where? (Front, rear, side)
    - Under what conditions?
    - ORU workstream to elaborate?

Workstreams: Status and Plans

- ADS performance of the DDT
  - Performance Models
  - Consideration of traffic scenarios
- ADS interactions with other road users
  - ORU properties, behaviors, and functions
  - Detectable properties approach applied to OEDR framework (FRAV-24-07)
- ADS interactions with system/feature users
  - ADS user roles (driver, fallback, passenger)
  - Derivation of specifications from detailed provisions
- ADS performance data collection recommendations
  - TOC illustration of ADS aspects and applicability (FRAV-24-08)

EDR/DSSAD feedback



EDR subgroup meets 22 February

Any tasks coming out of FRAV-VMAD-EDR/DSSAD leadership discussions?

- Illustration of FRAV recommendations
  - Based on transitions of control (TOC)
  - Highlight views on ADS data elements
- Main points
  - TOC apply to subset of ADS.
  - TOC involve action sequences (initiate, verify response, etc.).
  - Sequences will differ (user or ADS-initiated, successful or unsuccessful, etc.).
  - FRAV and EDR/DSSAD should regularly share draft documents to ensure consistency and compatibility.

Expectations, objectives, and tasks

- FRAV mandate: “neutral text adaptable under 1958, 1997, and 1998 Agreements”
  - Implies text suitable for decisions on legal instrument development (Resolution, GTR, UN Regulation, UN Rule)
  - No explicit deadline: Timeline for “detailed provisions with verifiable criteria”?
- June WP.29: “Proposal for WP.29 guidelines on ADS safety requirements”
  - Something different than Document 5 text submitted to GRVA in January?

Outlook for next steps

FRAV Calendar

Session 26: 15-16 March

[Session 27: 19-20 April]

[Session 28: 19-20 May]

Two-day March session to:

Consider workstream progress and proposals to amend Document 5.

Plan submissions to GRVA and WP.29 sessions in May and June for FRAV discussion in April and confirmation in May.