Informal document GRVA-18-25 18<sup>th</sup> GRVA, 22-26 January 2024 Provisional agenda item 4(d)

# Activities/Deliverables of IWG on EDR/DSSAD

January 2024

## Mission of the EDR/DSSAD IWG

ToR of the IWG (ECE/TRANS/WP.29/1147 Annex VII) (adopted in the 178th WP.29 in June 2019)

The IWG shall <u>develop draft proposals</u> for <u>Event Data Recorder (EDR) for conventional</u> <u>vehicles and automated/autonomous vehicles</u> and for <u>Data Storage System for Automated</u> <u>Driving (DSSAD) for automated/autonomous vehicles</u>. These categories shall be understood as systems collecting and storing a determined range of vehicle data, including:

- a. Information related to collisions valuable for accident reconstruction (EDR);
- b. The status of the automated/autonomous driving system and the status of the driver (DSSAD).

To this effect, the IWG shall address the following issues:

- a. Define the scope and specific objectives of and differences between EDR and DSSAD,
- b. Define EDR and DSSAD requirements.

In particular, the IWG will consider defining the categories of data recorded, the events triggering recording, as well as technical specifications in terms of performances of such systems, such as the required endurance, accessibility, storage capacity or the specific security requirements, as well as the required privacy and data protection by design features.

## Overview of the IWG activities

Projects Completed	Current Work	Future Work
Comparison between EDR and DSSAD (WP29-179-19, Nov. 2019)	<ul> <li>DSSAD performance elements guidance document (June 2024)</li> </ul>	
DSSAD requirements (ALKS (UNR157)) (181st WP.29, June 2020) (189th WP.29, March 2023)  Updating consolidated document of domestic activities on DSSAD (188th WP.29, Nov. 2022)  Primary purposes of DSSAD, Prioritization of discussion topics		
EDR requirements (UNR 160 00/01 series) (183rd WP.29, Mar. 2021), and amendments (186th WP.29, Mar. 2022)  Acceleration Data Accuracy Verification Procedures (125th GRSG, 2023/11&15 etc.)  EDR for HDV (UNR 169, 191st WP.29,	<ul> <li>EDR performance elements for ADS (Nov. 2024)</li> <li>Supplement for 8-12t (Nov.2024)</li> </ul>	• EDR Step 2 (March 2025)
	Comparison between EDR and DSSAD (WP29-179-19, Nov. 2019)  DSSAD requirements (ALKS (UNR157)) (181st WP.29, June 2020) (189th WP.29, March 2023)  Updating consolidated document of domestic activities on DSSAD (188th WP.29, Nov. 2022)  Primary purposes of DSSAD, Prioritization of discussion topics  EDR requirements (UNR 160 00/01 series) (183rd WP.29, Mar. 2021), and amendments (186th WP.29, Mar. 2022)  Acceleration Data Accuracy Verification Procedures (125th GRSG, 2023/11&15 etc.)	Comparison between EDR and DSSAD (WP29-179-19, Nov. 2019)  • DSSAD performance elements guidance document (June 2024)  DSSAD requirements (ALKS (UNR157)) (181st WP.29, June 2020) (189th WP.29, March 2023)  Updating consolidated document of domestic activities on DSSAD (188th WP.29, Nov. 2022)  Primary purposes of DSSAD, Prioritization of discussion topics  EDR requirements (UNR 160 00/01 series) (183rd WP.29, Mar. 2021), and amendments (186th WP.29, Mar. 2022)  Acceleration Data Accuracy Verification Procedures (125th GRSG, 2023/11&15 etc.)  EDR for HDV (UNR 169, 191st WP.29,

## Activities of EDR/DSSAD IWG since GRVA #17

•	SG-EDR #38	Novem	ber 2	20	)
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- SG-DSSAD #17
   November 21
- TF EDR(8-12ton) #1 December 11
- TF EDR(8-12ton) #2 January 19

## Summary of Recent Activities on DSSAD

- Group is focusing on discussion of DSSAD Performance Elements Guidance Document to submit to WP.29 June 2024.
- The guidance document consists of the following chapters:
  - 1. Introduction
  - 2. Purpose
  - 3. Terms and Definitions
  - 4. Data Storage and Security
  - Data Format
  - Data Retrievability/Accessibility
  - 7. Performance Elements
  - 8. Misc. Specifications

#### DSSAD Performance Elements GUIDANCE DOCUMENT

#### 1. Introduction:

- 1.1 This section provides background information concerning the deliberations to enable:
  - 1.1.1 Monitoring and evaluation of ADS performance in use for Data Storage System for Autonomous Driving (DSSAD), and
  - 1.1.2 To Complement the crash reconstruction data collected by the vehicle's event data recorder, and
  - 1.1.3 To identify if the ADS was operating the vehicle at a certain point of time.

#### 2. Purpose:

- 2.1 This document provides recommendations concerning Data Storage Systems for Automated Driving (DSSAD) to support deliberations under the 1958, 1997, and/or 1998 Agreements as may be applicable.
- 2.2 Usage of the verbal forms "shall" (indicating an obligatory provision) and "may" (indicating a permissive provision) should be understood within the context of providing recommendations per the preceding paragraph.
- 3. Terms and Definitions: (Source: FRAV/VMAD integrated document)

This section defines terms used in this document. Use of these terms and their definitions is recommended in the development of legal requirements related to ADS and ADS vehicles.

- 3.1 Automated Driving System (ADS) means the vehicle hardware and software that are collectively capable of performing the entire Dynamic Driving Task (DDT) on a sustained basis.
- 3.2 (ADS) function means an ADS hardware and software capability designed to perform a specific portion of the DDT.

<sup>&</sup>lt;sup>1</sup> This definition is based on SAE J3016 and ISO/PAS 22736 (Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles). These standards define levels of driving automation based on the functionality of the driving automation system feature as determined by an allocation of roles in DDT and DDT fallback performance between that feature and the (human) user (if any). The term "Automated Driving System" is used specifically to describe a Level 3, 4, or 5 driving automation system.

## Challenging topics for the group...

- Agreement on the common objectives of a data storage system
- Whether DSSAD should continuously record, rather than rely on timestamped data.
- Justifications for requesting data from OEMs
- Should authorities have access to the data without needing to request from the OEM.
- There should be references to data element standardization, i.e., what kind of standardization there should be. The report itself should be standardized, not the data itself.
- There may be personal data and the vehicle owner should be the one who
  decides if the DSSAD is read out in the case of liability purposes.

## Current Schedule for EDR/DSSAD IWG

• SG-DSSAD #18 January 30

SG-EDR #39 February 26

• SG-DSSAD #19 February 27

EDR/DSSAD IWG #24 (hybrid in Tokyo, Japan) April 9-11

## Thank you!