AGENDA

4th meeting of the Informal Working Group (IWG) on Event Data Recorder (EDR) and Data Storage System for Automated Vehicle (DSSAD)

29-30 January 2020,
Tokyo (JASIC offices)

Time:

Wednesday 29 January	9:30 – 17:30
Thursday 30 January	9:30 -16:00

Venue: Venue: Torakyo Hall, Yotsuya-sannchome 3rd Floor, Zennihon Truck Sogo Kaikan Building
Address: 3rd floor, Zennihon Truck Sogo Kaikan., 3-2-5 Yotsuya, Shinjuku-ku, Tokyo 160-0004
https://www.jasic.org/e/03_location/location.htm

Contact: Mrs Yuko Babbish

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Chairpersons:

The Netherlands:	Mr. Tim Guiting
Japan:	Mr. Tetsuya Niikuni
USA:	Mrs. Jane Doherty

Secretariat: OICA Mr. Scott Schmidt

1. General:

1.1. Welcome and Introduction

1.2. Anti-trust rules

Industry specific anti-trust compliance guidance was presented

1.3. Approval of the report of the previous session

Document: EDR-DSSAD-03-01-r2 (Chairs)

The report was adopted as presented.

1.4. Approval of the agenda

Document: EDR/DSSAD-04-01 (Chairs) Agenda of 4th EDR-DSSAD meeting-Rev 3

The agenda was adopted as presented.

2. Organization of the work

2.1. Confirm timelines and deliverable of both IWG and drafting subgroups

At beginning of this session, a brief summary of the IWGs next steps was presented. At the conclusion, a more detailed roadmap was developed and is summarized in the following table:

Meeting/Conf Call/Activity	EDR (deliverable for meeting)	DSSAD for ALKS (deliverable for meeting)
GRVA-05 10-14 Feb		GRVA to review progress and existing national activities/way forward document (just collection of CP inputs) and DSSAD informal document – Documents to be submitted Feb 6th
Special GRVA-06 (March 3-4 2020) Topics to be covered: • ALKS • DSSAD • Cyber		EDR-DSSAD (action depending upon GRVA decisions)
WP.29 – 180 March 10-13	EDR - Review progress and existing national activities/way forward document from EDR-DSSAD IWG to WP.29 Indicate that document is currently only a collection views and not yet reviewed by GRSG – For information only – work in progress. Chairs reminded the group that documents are to be prepared as a series of technical requirements that would fit under both 1958 regulations or 1998 GTRs or guidelines.	DSSAD Informal Documents (review progress and existing national activities/way forward document) and DSSAD working document. Document to be submitted by GRVA to WP.29
SG-EDR EDR-DSSAD March 16-19	2 March deadline for delivery of data elements from CP's and OICA (ref latest document from Alix/TRL) CPs and OICA to also fill in missing elements – data format and whether element are for Nov 2020 for future Finalize EDR working document during meeting and forwarded to GRSG as an informal document	DSSAD – Depends on GRVA/WP29 decisions – Complete any remaining work that might be needed. Way forward for DSSAD – with common understanding section included to be presented to GRVA - 07
GRSG – 118 March 30-April 3	Report on progress. GRSG reviews way forward document and EDR working document	

	GRSG forward documents to WP.29 as informal document	
SG-EDR EDR-DSSAD May 12-14	Work on amendments to working document – Convert working document into an informal document for GRSG Oct session	DSSAD – continue to work on way forward document for submission to GRVA 0-07
WP.29 – 181 June 23-26	Review informal documents to WP.29 and "way forward" as a formal document to November meeting	TBD
SG-EDR EDR-DSSAD - September	TBD	TBD
GRVA-07 September 21-25		Report on DSSAD and "way Forward" document progress
GRSG- 119 October 6-9	Review the informal EDR document that amends the wp 29 formal document and forward to WP 29 as an informal document	
WP.29-182 – Nov 2020	Adopt EDR Formal Document [status of Washington session] Together with informal document from GRSG October session [work from IWG May – Sept]	Determine if document from GRVA session on way-forward is ready to submit

2.2. Review updated meeting schedule

Development of updated meeting scheduled was tabled to the conclusion of the session and is summarized in the table at the end of this document.

3. DSSAD

3.1. Review of DSSAD drafting group output and any remaining open items to resolve regarding DSSAD for ALKS

Document: EDR-DSSAD-03-16 (Co-Chairs) DSSAD ALKS SG modified (clean version)

IWG reviewed and revised the draft DSSAD for ALKS working document.

Updated draft is posted on UNECE SG-DSSAD-02 webpage as:
EDR-DSSAD-03-16 (Co-Chairs) DSSAD ALKS text SG modified (clean jan 29th version).docx

At the completion of this draft the Chairs were concerned that many significant aspects of the draft were still in square brackets. To resolve this the Chairs called a Contracting party only meeting to review the items in square brackets for Friday morning before the start of that day's IWG session.

Subsequent to that session a revised draft was developed. However, since China was not able to participate in the session, the revised draft was sent to China for their review and concurrence. Once that is obtained, the document will be posted to the SG-DSSAD and EDR-DSSAD websites.

3.2. Discussion to identify DSSAD performance elements appropriate for automated driving systems beyond ALKS

Document: EDR-DSSAD-04-07 Western Digital Data Recording rev 1 as presented

Western Digital presented details of posted presentation covering the history and trends of automotive data storage, data storage types and recording scenarios, as well as considerations of data storage for future AD applications.

NL – questioned the benefits for the two-step approach using both DRAM and NAND memory verses just recording to NAND flash memory?

A - The answer is very application specific, however, there are cost and complexity benefits for the elimination of the DRAM memory.

Continental – Can you give your impression of what is the highest capacity for crash resistant systems?

A - There is really no difference between the two scenarios (DRAM/NAND and NAND only) since the crash protection is mostly in the protective packaging/case. With respect to capacity, currently available capacity will increase in future. SSD 2 terabyte – can go up to 16 drives of 2 terabytes. Size is very small – easy to package.

Bosch – CLEPA commented that manufacturers need to consider speed of writing (not just amount of data – but need high speed write capability).

3.3. Review of the existing national / regional activities and a proposed way forward for DSSAD Contracting party input

Document: EDR-DSSAD-04-04 Consolidated Review of Contracting Party DSSAD Activities & Way Forward Rev 3

Chair verbally reviewed the contracting party input received to date. It was noted that there were some incomplete contracting party contributions/sections missing. Those CPs were actioned to get their remaining input to the secretary for consolidation as soon as possible.

EDR-DSSAD-04-06 ITU-T SC17 DSSAD Activities and Way Forward

ITU contribution was noted for the record but not presented.

4.   **EDR**

4.1. Review of EDR drafting group output and any remaining open items to resolve regarding EDR for Nov 2020 delivery

Document: SG-EDR-01-02-EDR Working Draft – Rev 3

SG-EDR Chair presented the status of the EDR working draft. Mark-ups in brackets to the document were focused on the scope section. Specifically:
- [Clarify that EDR regulation does not require systems to be fitted to a vehicle
- Define "mandatory if-equipped"
- Clarify that retrofitted devices are not in the scope

- Clarify that any requirements on the VIN are excluded from the regulation (subject to national law)
- US would like clarifying language indicating that nothing in the regulation should require changes to existing architectures]

Chair initiated a discussion of key issues focused on the development of requirements/performance elements to support a Nov 2020 WP 29 delivery.

With respect to the CP combined data elements spreadsheet there was general agreement (except for China which indicated several of the Part 563 data elements might be hard to implement since some vehicles might not have hardware specific to the data element) that the current US Part 563 (elements 1-47) would be the basis for consideration. There was discussion about whether some of the "if recorded" or "if equipped" elements should become mandatory.

US indicated that they are not prepared to agree to additional requirements, including making "if recorded/if equipped" mandatory without supporting research and data justifying the safety need and technical feasibility. Such rulemaking will require time and thus could not be completed within the time allotted for delivery to WP 29 (Nov 2020).

EC felt that if specific data elements are available on the vehicle, they should be recorded.

With respect to the inclusion of additional data elements, the US reiterated its previously stated position.

Insurance representatives indicated data elements for ADAS systems would facilitate better "effectiveness research" of those systems.

OICA indicated that a lack of clear definitions for ADAS systems could lead to misunderstandings between jurisdictions especially since these systems can have different levels of features/capabilities resulting in one jurisdiction considering a system "present" and another "not".

Germany added that there is a need to develop "generic" definitions for key ADAS (and other) technologies.

OICA questioned whether defining system technologies was in the scope of EDR WG.

US wanted to only consider data elements that relate to systems that are safety relevant and not strictly driver comfort systems.

Other parties pointed out that it may be hard to distinguish since many driver comfort systems have demonstrated safety impacts.

Chair indicated that drafting subgroup would attempt to develop general definitions for any technologies included.

It was mentioned that the SG EDR discussed the creation of two parallel workstreams one for 58 agreement and another appropriate for the 98 agreement. US pointed out that the goal of this group is to define harmonized technical requirements not specific to either agreement.

EC indicated that some contracting parties need to have a 58-agreement regulation by 2022 to fulfil European General Safety Regulation (GSR) requirements and deadlines. They also indicated a strong desire to include additional data elements in the "first step".

UK indicated that the inclusion of GPS/GNSS location data would be useful to law enforcement, but they have not yet worked through the personal identification legal issues.

DE supported capturing GPS/GNSS location data.

EC does not support capturing GPS/GNSS location data.

US indicated that national legislation (FAST act) prohibits collection of personally identifying GPS/GNSS data.

CITA indicated that this element may need to be reconciled to individual national privacy requirements.

Action - With respect to GPS/GNSS data, the IWG should ask GRSG for guidance.

With respect to exclusion of retrofitted equipment from scope, the UK questioned if "retrofit" included software updated.

It was clarified that this exclusion should cover hardware added after first registration. Might need to make sure text appropriately clarifies the distinctions between the hardware and software issues.

US indicated a need to avoid the burden of imparting new requirements on existing production vehicles with older architectures. Scope should not specify architectural changes for vehicles currently in production or where architectures are already set (past "design freeze").

Action – Contracting parties to further review data elements and fill in any missing aspects such as elements, formats, etc.

Action - SG-EDR to work on Definitions (especially for ADAS systems if inclusion desired)

Action - OICA to provide input on the potential data elements – response should include evidence-based arguments.

US asked that CP's also provide evidence -based justifications of the safety needs for proposed elements for inclusion.

Action – OICA to provide its views on system storage capacity and recording speed capabilities.

SG-EDR-01-06 (China) Proposal for Standardized EDR Data Retrieval.pptx

China presented their proposal for a standardized data retrieval system. It would specify:
• Unified data retrieval connector,
• Unified data retrieval ID
• Unified data retrieval protocol
• Unified data arrangement (range, accuracy, resolution, and data arrangement order)

Japan questioned the use of certain CAN Id's (0x7DF and 0x7F1) since they are already used for other functions and each ID can only be used for one function.

EC indicated that this should be approached with caution and not specified in the regulatory requirements.

NL indicated this was technically "too deep" for inclusion in UNECE regs.

US could be a separate standard but should not include at this time.

UK Agreed that it was "too deep" and prescriptive for inclusion. Would rather see standardized data formats.

EC may consider supporting unified data arrangement (reporting format) section.

CITA OEMs are naturally coalescing to common protocols. Consider making reference to current industry practices/standards.

CITA also referenced its SG-EDR-01-05 presentation and indicated that they now believe that it might be best to leave data retrieval methods out of UNECE requirements as thus subject to national legislation.

At this time there was no consensus for adoption of the proposal but can be discussed further. Can be put on agenda.

EDR-DSSAD-04-08 (CITA) Out of Scope Proposal.pdf

CITA indicated that this document was intended to be consider for DSSAD, however, many of the elements were also applicable to EDR.

They believe that certain items should be excluded so that they can be dealt with at a national level.

EC indicated that VIN might also be a candidate for exclusion as well.

4.2. Discussion to identify EDR performance elements appropriate for automated driving systems beyond Nov 2020 delivery to WP 29.

Discussions were primarily focused on the immediate objective of delivery to WP 29 by Nov 2020. Some general discussion focused on aspects of implementing progressively staged versions of EDR requirements or potential implementation dates after 2022.

4.3. Review of the existing national / regional activities and a proposed way forward for EDR Contracting party input

Document: EDR-DSSAD-04-05 Consolidated Review of Contracting Party EDR Activities & Way Forward Rev 2

Contracting Parties verbally presented their input. It was noted that there were some incomplete contracting party contributions/sections missing. Those CPs were actioned to get their remaining input to the secretary for consolidation as soon as possible.

5.   List of action items

Carry over (From EDR-DSSAD #3)

Organization of the work
-   (completed – only "special" GRVA – March 3-4 – no "special GRSG) Chairs to ask the GRSG/GRVA Chairs to organize a special session around June 2020

DSSAD
-   (completed) Subgroup to work on the main elements of the document EDR-DSSAD-12

- (completed) Outcomes of subgroup to be reviewed by plenary informal group in January 2020

Review of the existing national / regional activities and a proposed way forward for DSSAD
- (partially completed – CPs to complete submissions for DSSAD) All contracting parties to provide data to the secretary, for both DSSAD and EDR, templates on the web page
- (completed) New Secretary details to be provided to the group.
- Deadline 17 January

EDR
- (In progress) Contracting parties to provide inputs by 17 January about mandatory vs. optional data elements (for EDR Step 1), using the TRL table as a template (deadline for next submission 2nd of March) - OICA homework for elements to be included/deleted.
- (in progress) Missing specifications (in the working document):
  - Standardized format
    - (in progress – see latest draft being considered) Next session to decide on the data format
    - (completed) ROK to provide a written contribution in advance of the 4th meeting
    - (completed) FSD/CITA to produce an explanatory presentation, in collaboration with the interested parties
  - EDR malfunction: item to be brought forward to GRSG for guidance
- (in progress) Test procedures
  - All to collect field data about survivability for the next meeting
  - All to make a position wrt survivability
  - (partially completed – CP's to complete submission – As soon as possible) All to provide existing regional/national activities wrt to EDR experience and research (VRU)

Action Items EDR-DSSAD #4

- Action - IWG to ask GRSG for guidance on GPS/GNSS data.

- Action - SG-EDR to work on Definitions (especially for ADAS systems if inclusion desired)

- Action – OICA to provide its views on system storage capacity and recording speed capabilities.

- Contracting Parties who have not completed their national activity and way-forward submissions were actioned to provide that information to the secretary as soon as possible.

- Secretary to finish consolidation of compendium of national activities and way forward (highlighting common areas of general agreement) and submit to GRVA – date xx

- Contracting parties and industry (OICA) to review EDR data elements (filling in any missing elements, formats, etc) and provide justifications for inclusion or deletion – deadline for submission 2nd March.

6. Dates and venues of next meetings

Meeting	Dates	Venue	Note
GRVA-05	10-14 February 2020	Palais des Nations	
Special GRVA-06	3-4 March 2020	Geneva	
WP.29-180	10-13 March 2020	Palais des Nations	
Subgroup EDR-02	16 -17 March 2020	USA	
EDR-DSSAD-05	18-19 March 2020	USA	
GRSG-118	30 March – 3 April 2020	Palais des Nations	
EDR-DSSAD-06	12-14 May	Germany Bonn	Subgroup meeting schedule

			to be decided
WP.29 - 181	23-26 June	Palais des nations	
GRVA-07	21-25 September 2020	Palais des Nations	
GRSG-119	6-9 October 2020	Palais des Nations	
WP-29 - 182	10-13 November	Palais des Nations	