Proposal for amendments to para. 8 in GRVA-05-07-Rev.3

8. Data Storage for Automated Systems (DSSAD)

8.1.   Each Vehicles equipped with ALKS (the system) shall be fitted with a DSSAD that meets the requirements specified below.

8.2.   Recorded occurrences

8.2.1.   Each vehicle equipped with a DSSAD shall at least record an entry for each of the following occurrences:

     a)   Activation of the system

     b)   Deactivation of the system

         1.   Use of dedicated means for the driver to deactivate the system

         2.   Override on steering control

         3.   Override by accelerator control while holding steering control

         4.   Override by braking control while holding steering control

     c)   Transition Demand by the system, due to:

         1.   Planned event

         2.   Unplanned event

         3.   Driver unavailability

         4.   System failure

         5.   System override by braking input

         6.   System override by accelerator input

     d)   Suppression of driver input

     e)   Emergency Manoeuvre

     f)   Detected risk of imminent collision

     g)   Detected end of imminent risk of collision

     h)   Event Data Recorder (EDR) trigger input

     i)   Collision detected
         Note: This may be reviewed to be in line with 5.1.1.

     j)   Minimal Risk Manoeuvre engagement by the system

     k)   Severe ALKS failure

     l)   Severe vehicle failure

     m)   [Detected deviation of lane of travel]

     n)   [Detected deviation of lane of travel]

     o)   [Demist on

     p)   Demist off

     q)   Windscreen wipers on

     r)   Windscreen wipers off

     s)   Headlamp on

     t)   Headlamp off]

Each entry of Occurrences n) – s) shall be recorded if relevant functions are installed on the vehicle.

8.3.   Data elements

8.3.1. For each event listed in para. 8.2., the DSSAD shall record the following data elements in a clearly identifiable way:

- The occurrence flag, as listed in ~~section~~ para. 8.2

- Reason for the occurrence, as appropriate, and listed in para. 8.2.

- Software versions relevant to the system

- Date (Resolution: yyyy/mm/dd)

- Timestamp

  o Resolution: hh/mm/ss/ms timezone e.g. 12:59:59:500 UTC

  o Accuracy: +/- 0.01 s)

8.3.2. The sampling interval shall be chosen such that at least the TD, MRM, EM and overriding related data sequences are recorded with separate timestamps. A single timestamp may be allowed for multiple elements recorded simultaneously within the timing resolution of the specific data elements. If more than one element is recorded with the same timestamp, the information from the individual elements should indicate the chronological order.

8.4. Data availability

8.4.1. DSSAD data shall be available subject to requirements of national and regional law.[1]

8.4.2. Once the storage limits of the DSSAD are achieved, existing data may [only] be overwritten following a first in first out procedure with the principle of respecting the relevant requirements for data availability.

8.4.3. The data shall be retrievable even after an impact of a severity level set by UN Regulations Nos. 94, 95 or 137, or other relevant national crash test procedures. If the main on-board vehicle power supply is not available, it shall still be possible to retrieve all data recorded on the DSSAD, as required by national and regional law.

8.4.4. Data stored in the DSSAD shall be easily readable in a standardized way via the use of an electronic communication interface, at least through the standard interface (OBD port).

8.4.5. Instructions from the manufacturer shall be provided on how to access the data.

8.5. Protection against manipulation.

8.5.1. It shall be ensured that there is adequate protection against manipulation of stored data, such as anti-tampering design.

8.6. Availability of DSSAD operation

8.6.1. DSSAD shall be able to communicate with the system to inform that the DSSAD is operational.

8.7. Verifications by the Technical Service:

8.7.1. The Technical Service shall verify, using the standard interface defined in 8.4.4., after having performed the tests specified in Annex 5, that DSSAD is recording occurrences and the relevant data elements with the appropriate resolution, accuracy and sampling interval according to the provisions above.

8.7.2. Until testing provisions are being defined, the Technical Service shall verify the documentation provided the Manufacturer demonstrating the retrievability of data as requested in para. 8.4.3.

8.7.3. The Technical Service shall verify the documentation provided by the manufacturer that demonstrate that a data integrity self-check function and that adequate protection against manipulation of stored data are implemented.

The comment box on the right:

Commented [FG2]: This is to clarify the resolution. According to the Cambridge dictionary, usually a date is a day in a month but in certain cases a date can be a year (example provided: the date on the coin is 1789).

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[1] (NOTE: Based on a recent CP data study, the IWG on EDR/DSSAD is considering that the text specifies several timestamps specifications of 2500 timestamps to correspond with a period of 6 months of use.