**DRAFT AGENDA**

**EDR Accel Accuracy Experts Group**

**Conference Call Meeting**

(Secretary Notes in Red)

July 28, 2022

**Time:** Start: CET 13:00, EST 7:00, JST 20:00

End: CET 15:00, EST 9:00, JST 22:00

**Venue:** GoToMeeting Conference Call ONLY

**Contact:** Mr. Scott Schmidt (Cell: +1 202 841 2139)

**Email:** [sschmidt@autosinnovate.org](mailto:sschmidt@autosinnovate.org)

**Chairpersons**:  **The Netherlands: Mr. Tim Guiting**

**Japan: Mr. Hidenori Nonaka**

**USA: Mrs. Jane Doherty**

**Secretariat**: OICA Mr. Scott Schmidt

1. **General:**
   1. **Welcome and Introduction**

Chair deferred to the Secretary to lead the discussion on the development of suitable EDR Accuracy/tolerance specifications

* 1. **Anti-trust rules**

Secretary provided the industry delegates with antitrust guidance.

* 1. **Approval of the agenda**

Document: EDR Accel Accuracy Experts Group -01-01 Agenda

Agenda was approved as presented.

1. **Discussion regarding potential modification of R160 acceleration data element accuracy requirements.**

Documents: SG-EDR-19-02 (TESLA) ECE R160 - EDR Accuracy Assessment

SG-EDR-21-03 SAE EDR Accel & Delta V Tolerance Analysis

SG-EDR-22-04 Proposal for acceleration accuracy verification-China

SG-EDR-23-05 China Proposal for Acceleration Accuracy Validation

SG-EDR-24-04 sae\_edr\_accuracy analysis\_update

EDR Accel Accuracy Experts Group - 01-02 China - Progress on acceleration accuracy validation

China presented the results, conclusions, and recommendations from their latest research contained in document *“EDR Accel Accuracy Experts Group - 01-02 China - Progress on acceleration accuracy validation”.*

China recommended that:

“To verify the accuracy of acceleration, we suggest testing method into guidance or R160.

1. Make alignment of EDR data and lab data according to deployment time.
2. Shifting shall be considered because of the time aberration:
   1. Shifting range: -2ms~+2ms (the sampling rate of acceleration in R160 is 500Hz);
   2. Minimum shift step: reciprocal of recording frequency of EDR sensor.
3. Decide tolerance according to physical range of the EDR sensor.

It was clarified that the first step is to align the two acceleration traces based on air bag firing signal. Once these are aligned then the EDR data can be further shifted as much as a value derived from the specific sampling frequency. I was noted that the curves do not have to be shifted by the full shift allowance (window). However, they can’t be shifted more than the shift allowance (derived from the sampling frequency).

In general, the expert group conceptually agreed with the concept of the Chinese proposal.

SAE/OICA was tasked to develop proposed specification language based on the agreed elements in the Chinese proposal.

Next meeting will be scheduled once SAE/OICA draft specification language is circulated to the experts group for review.

1. **List of action items and schedule of future conference call meetings**

SAE/OICA was tasked to develop proposed specification language based on the agreed elements in the Chinese proposal.

Next meeting will be scheduled once SAE/OICA draft specification language is circulated to the experts group for review.

1. **Adjourn**

**Subsequent to this meeting, China further clarified the following aspects of their proposal:**

About the "alignment" and "shift" thing, the basic logic and procedure are exactly what we proposed in our presentation. But still we have some further technical details that are expected to be discussed in our further meetings.

So basically, in our opinion, maybe it is a more fair way to conduct type approval test to different products:

1. The "Window" : it is a constant range -2ms~+2ms, as in R160 and other regulations, the minimum requirement of  sampling rate is 500Hz. (That means you do not get a smaller window when you have a higher sampling rate, which may discourage manufactures to use higher precision sensors).

2. The "Step": within the "Window", the curve could be shifted by "Steps". The step is decided by the real sampling rate of the acceleration sensor. (For example, a sensor with sampling rate of 2000Hz, then the curve could be moved by 0ms/0.5ms/1ms/1.5ms/2ms).

So our recommended principle is that when a manufacture selects a high sampling rate sensor (which always means high quality data and high expense), it has more freedom to move its curve to pass the test. And all the sensors should have the same size of "Window", pursuant to the minimum requirement of R160.