UNECE GRSP IWG Equitable Occupant Protection (EqOP)
Task Force 3 – Virtual Crash Testing

Draft minutes of the 3rd meeting.
On-line meeting, 12th April, 2024.
36 participants.

Adoption of the agenda & minutes of last meeting
Agenda was approved by the participants.
Comments from OICA received on the minutes of the last meeting to the topic of requirements for virtual crash testing:

OICA highlights that currently VT is always an alternative to physical testing. If this is not the case, the question arises on the consequences if they are not able to provide VT results (good enough for regulations).
OICA comments that a requirement for the team performing the simulations could be legally challenging (as the question arises who can do the accreditation of each simulation team at each OEM and if this is even possible within the UN framework).

➔ The draft minutes have been modified accordingly (see EqOP-TF3-02-01e_Minutes_final)

Building Blocks
The time schedule for the EqOP Task Force on Virtual Crash Testing was shown by the chair to remind everybody on the scope of the group and which steps should be taken towards 2027 (see EqOP-TF3-03-02e -2024-02-07-TF-VCT-WS3, slide 2).

UTAC presented on Credibility Assessment (see EqOP-TF3-03-03e - VT_credibility_assesment_UTAC):

Possibilities to replace physical testing with virtual methods were shown as well different approaches to use virtual testing in the context of certification (worst-case definition, replacement of physical results). UTAC also presented their procedure for validation of virtual testing methodology and the application on ADAS&ADS towards a credibility assessment.
The group shortly discussed the modeling of the load cases: in principle the modeling is done by the OEM, but in principle a third party could do that instead. UTAC would then check the dossier sent in by the OEM. For ADAS this method seems to be sensible as the large numbers of scenarios makes it very hard to do it all only in hardware.
OICA questioned if there is an alternative for the simulations for type approval.

The chair presented 4 different approaches, where two (1& 2) are using vehicle models of the OEM and two (3 & 4) are based on generic models calibrated on data of an OEM vehicle. The groups discussed pro&cons of the different approaches. All the comments are added online to the chart (see EqOP-TF3-03-02e -2024-02-07-TF-VCT-WS3, slide 4). In summary, the group agreed that generic model-based approaches should be seen only as a back up if OEM models are not available (either processed at OEMs or at authority/technical service). Everybody agrees that it will be difficult to replicate the necessary behavior of the vehicle relevant for type approval with the generic model, which is why the usage of the detailed

vehicle models developed by the OEM is preferred. The focus of further discussions will be therefore the approaches 1&2.

Next steps:
The group agreed to discuss as next step load-case independent requirements for model management. After that the proof of concept should be further investigated on a specific load case to be agreed upon in September 2024.

Next meeting.
Online meeting on 17th May 2024 12:00 – 14:00 CET.