|  |  |
| --- | --- |
| Transmitted by the expert from EC and CLEPA for VMAD SG2 |  |

**Meeting of the VMAD SG2 on Virtual/Simulation Testing**

Date/Time: 25 November 2020. 13:00-14:00 (CEST)

Attendance: SG2 chairs (EC, CLEPA), SG2 Members (~45 attendees)

Documents shared during the meeting. *2020\_11\_25\_VMAD-SG2.pptx*

**Summary**

* The EC gave a summary of the Subgroup's strategy.
* CLEPA gave an overview of the work completed by the group so far and requested for comments from the group.
* Subgroup members provided feedback on the first draft.
* Next round of comments is due before 30th December COB.

**Minutes**

EC/CLEPA thanked the participants for all the support of drafting the document.

Prior to the meeting NL provided comments to the co-chairs.

NL comments:

* The document should be applicable to both regimes.
* The current version still have some texts or pictures (6 and 7) that seems to me more focused on type approval process. I think we should try to be as much neutral as possible.
* It is important to clarify the difference between the concept of validation for both regimes.
* As per the picture 6, the validation of the simulation need to achieve an agreement from the authority before using for virtual testing. Should we consider the agreement on validation as prerequisite *for both regimes* before using the simulation for virtual testing purpose?
* I think that can be useful to clarify that the final goal is not to achieve the virtual homologation(picture 7). VH is accomplished by only virtual testing, while the NATM is a combination of virtual and real tests and audits.
* We should add some considerations for *“subsystem models”* (i.e. the environmental model) that can be developed by other parties. How should work the validation process?  It will be also useful to discuss scenario validation aspects together with SG1.
* We should clarify whether or not the domain of validation is the same of domain of Application(for virtual testing). This point can raise several questions such as “How substantiate any extrapolation beyond domain of validation”.
* As general consideration for the final version, I suggest to delete definitions that are not used in the document (i.e. Stochastic) and add additional definitions such as calibration or accuracy that are used in the text.

CLEPA noted the document is currently biased to type approval processes, but the group will aim to amend the document so that it is neutral to both self certification and type approval regimes.

References to an approval authority will be removed.

AAPC: The current document contains a lot of detail and this may be too much for VMAD to agree on before a working document may be submitted to GRVA. There may need to be 2 documents, one being the complete document, the other is a shortened version highlighting the key points.

AAPC: It is not clear what the justification is for including simulation in the ADS validation strategy.

SAE agreed with AAPC. A more detailed introduction which highlights the importance of simulation would be useful.

CLEPA: The document could benefit from having a more detailed introduction about why virtual testing is used.

AAPC will support in providing this text.

Japan: Could environment models be hosted by 3rd parties? what are the KPIs the model validation?

CLEPA: 3rd parties may provide any model but the model must be validated in the same way. Manufacturers can use the data provided by the 3rd party support their complete toolchain validation. The precise KPIs will be reviewed as a second step. e.g. after March 2021.

CLEPA/EC: Comments from SG members would be appreciated on how simulation is used in ADS validation + documentation package provided by manufacturer.

Japan: Monday was National holiday in Japan and would like more time to review.

EC asked if SG would support sending the doc to the wider VMAD Audience - to get response from other VMAD stakeholders.

No opposition from members.

Next round of comments from SG members is due before 30th December COB.

**Action points**

* (All) Provide high level feedback on the document e.g. what is missing, what is redundant, what needs more clarification.
* (John/AAPC) Provide a more detailed introduction in why simulation in the ADS validation strategy.

**Next meeting**

* Time: 2nd December 2020, 13:00 - 14:00 CET
* Venue: Webex (https://ecwacs.webex.com/meet/bciuffo)