## VDR or engineering report information

CS-SIMD and CS-FSTD (A/H) present requirements for the VDR. Refer to those requirements for the inspection of those documents. See EASA Type Certificate Data Sheet to see if OSD for simulator data concerns this type. If OSD concerns this type, then EASA will be the authority to assess the VDR and data. If OSD does not concern this type, then the Authority will assess the VDR and data (see Appendix 2 to AMC1 FSTD(A/H).300 saying '*The respective Member State's civil aviation authority is the final authority to approve the data to be used as validation material for the QTG.*').

The basic idea of VDR is to easily see a summary of the validation data source for each QTG test. The Authority will use good judgement to analyze if the data sources are acceptable. For example, if too many tests (or too many tests in a certain section only) are based on engineering data, the VDR may not be acceptable.

**FFS and FTD**:
Appendix 2 to AMC1 FSTD(A/H).300 presents information on approval of VDR. Quote from there: '*A VDR should be submitted to the competent authority as early as possible in the planning stages for any FSTD planned for qualification to the standards contained herein. The respective Member State's civil aviation authority is the final authority to approve the data to be used as validation material for the QTG.*' So the competent authority must be satisfied with the VDR. It is being approved as part of the MQTG.

Check that:

- VDR has clear revision information.

- VDR clearly states which organization is responsible for it.

- VDR includes information on all applicable tests.

- VDR states all the required information, explanations and rationales. See Appendix 2 to AMC1 FSTD(A/H).300 and especially its paragraph:

  "The document should include rationale or explanation in cases where data or parameters are missing, engineering simulation data are to be used, flight test methods require explanation, etc., together with a brief narrative describing the cause/effect of any deviation from data requirements. Additionally, the document should make reference to other appropriate sources of validation data (e.g. sound and vibration data documents)."

- Requirements of Appendix 7 to AMC1 FSTD(A/H).300 are fulfilled. Very important is the following text in this requirement:

  "*Where these flight test data are genuinely not available, alternative sources of data may be acceptable using the following hierarchy of preferences:*

  *First: as defined in flight testing at an alternate but near equivalent*

  *condition/configuration.*

  *Second: data from an audited engineering simulation.*

  *Third: aircraft performance data.*

  *Fourth: Where no other data are available, in exceptional circumstances only, the following sources may be acceptable subject to a case-by-case review with the competent authorities concerned taking into consideration the level of qualification sought for the FSTD:*

  *i.      unpublished but acceptable sources e.g., calculations, simulations, video or other simple means of flight test analysis or recording; or*

   ii.  *footprint test data from the actual training FSTD requiring qualification validated by subjective assessment by a pilot appointed by the competent authority."*

   *These rationales should be clearly recorded within the validation data roadmap (VDR).*

  → This requirement explains these principles and refers to other requirements, so be sure to study the whole Appendix 7 to AMC1 FSTD(A/H).300.

- If engineering validation data is to be used, it has to fulfill requirements of AMC7 FSTD(A).300 and AMC8 FSTD(A).300 for aeroplanes and AMC6 FSTD(H).300 and AMC7 FSTD(H).300 for helicopters. Note especially the following principles:

   o Confined to changes that are incremental in nature and that are both easily understood and well defined.

   o Representative set of integrated proof-of-match cases.


**FNPT only:**
- CS-FSTD(A/H) presents that the validation data of FNPT must be <u>approved</u> as a separate process. The data should be presented in an engineering report. The report should justify how each 'footprint' is representative. See:

   o AMC1 FSTD(A).300 paragraph (a)(5)(iv) for aeroplanes

   o AMC5 FSTD(H).300 paragraphs (e)(4) for helicopters


- More details on this approval and on the process is presented in:

   o AMC3 FSTD(A).300 paragraph (b)(4) for aeroplanes

   o AMC5 FSTD(H).300 paragraphs (b)(4) for helicopters


Satisfactory: [ ] Yes  [ ] No


Signature of the competent person:…………………………………………