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EFB ETSOA Process
/
AvioBook-Thales Pilot Project for EFB Software App ETSOA

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Agenda

- Objective of the pilot case/Pilot case selection criteria
- Performed activities
- ETSO certification baseline
- Main discussions
  - APDOA
  - POA
  - CS ETSO
- Summary

Objective of the pilot case/Pilot case selection criteria

Objective

- To work on an assessment of the feasibility and of the effort to get an EFB ETSOA

Selection criteria

- AvioBook belongs to the Thales group
- Thales AVS has a long avionics ETSOA experience with EASA
- Thales AVS is in close contacts with AvioBook through certification support
- Request from EASA to support a pilot case on the current AvioBook EFB perimeter

Covered perimeter so far

- Assessment from a part-21 perspective

Performed activities

- Collection and review of the regulatory material by AvioBook-Thales
- Draft APDOA manual written by AvioBook-Thales
- 2 AvioBook-Thales/EASA pre-application meetings performed (as per the ETSOA process with EASA)

ETSO Certification Baseline: general baseline *

- Part-21 (EU) No 748/2012, including amdt (EU) 2022/1645
  - Subpart A « General Provisions »
  - Subpart F or Subppart G « Production with or without POA »
  - Subpart K « Parts and Appliances »
  - Subpart O « ETSO » + AMC1 21.A.14(b) from subpart B
  - Subpart Q with 21.A.807 "Identification of ETSO articles" only
- Part-IS (EU) 2022/1645 in connection with Part-21 subpart G (due in 2025)
- Occurrence reporting (EU) No 376/2014
- AMC 20-8
- CS ETSO amdt 17

* Use of the EASA Easy Access Rules whenever possible

ETSO Certification Baseline: EFB baseline *

ETSO General Certification Baseline with

- ETSO 2C521

Supporting certification material for context purpose

- Air Ops (EU) 965/2012 with
  - SPA.EFB.100(b) *only* with AMC2 SPA.EFB.100(b) (changes to EFB), AMC4 SPA.EFB.100(b) (EFB ETSO), AMC1 SPA.EFB.100(b)(1), AMC1 SPA.EFB.100(b)(2), AMC3 SPA.EFB.100(b)(3) (partially), AMC5 SPA.EFB.100(b)(3) (partially), AMC6 SPA.EFB.100(b)(3), AMC7 SPA.EFB.100(b)(3) (partially), AMC8 SPA.EFB.100(b)(3), AMC9 SPA.EFB.100(b)(3) (partially), AMC10 SPA.EFB.100(b)(3) (partially)
  - CAT.GEN.MPA.141(b) *only* with AMC1 CAT.GEN.MPA.141(b), AMC2 CAT.GEN.MPA.141(b), AMC2 CAT.GEN.MPA.141(b)

* Use of the EASA Easy Access Rules whenever possible

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ETSO Certification Baseline: additional supporting material

On the EASA website

Alternative Procedures to Design Organisation Approval (ADOA)

- Template Manual ETSOA
- Template for Certification Programme ETSO
- Template for Declaration of Design and Performance

Other EASA material

- APDOA Compliance Check-list

Main discussions: APDOA (1/2)

Electronic marking

- What are the mandatory characteristics of an acceptable electronic marking?
- What are the acceptable means to retrieve the ETSO information?
- When can the ETSO marking be implemented in the EFB?

EFB P/N structure

- Use of open brackets to not issue a new ETSO certificate with a complete new reinvestigation of the dossier when implementing changes on the EFB

Anticipated classification of ETSO design changes (evolutions, anomalies)

- "Major"/"minor" criteria under discussion with EASA (ETSOA -holder specific)
- How to assess the impact on the compliance: qualitative criteria? quantitative criteria?
- Impact on operational reactivity

Use of web-based data for the compliance demonstration

- How to manage the data package for delivery to EASA?

Compliance demonstration in an agile development context

- How to manage the EASA involvement? Impact on ops reactivity?

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Main discussions: APDOA (2/2)

Need for Information and Instructions to Operators ("service bulletins")

- Proposal to be validated by EASA

Occurrence reporting duty

- Criteria under discussion with EASA (ETSOA-holder specific)
- Use of the word "airworthiness" in an operational context
- Airworthiness Directives not linked to a specific aircraft

Use of EFB in-service history (evolution in the process along the developped versions)

- Yes, in-service history is possible if properly documented

2 levels for the APDOA manual/procedures updates (e.g. issue+amendment)

- To avoid a complete new reinvestigation of the dossier when implementing changes on the ways of working

Strong link with the ETSO MOPS

- For instance, list of compliance documents

Main discussions: POA

Applicability of POA to pure software equipment

- Perimeter of the EFB production activities?
- Benefit of EASA Form 1 for the end user in addition to the DDP?
- To be further discussed between NAA and ETSOA applicants with the EASA support

Choice between subpart F and subpart G?

Part-IS considerations for subpart G not addressed (due in 2025)

Main discussions: CS ETSO

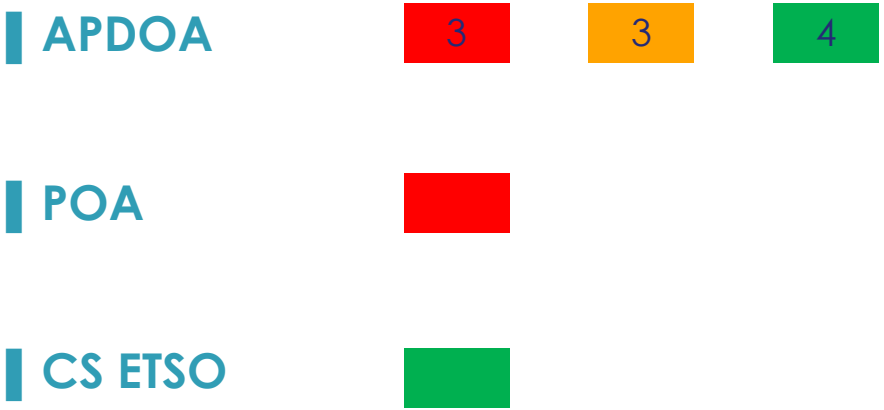
CS ETSO subpart A

- One general deviation on the use of AMC20-115/DO-178 to be created by the first ETSOA applicant then to be reused by the following ETSOA applicants
- No deviation Vs §2.4 Failure conditions classification and development assurance
- No deviation Vs §2.7 Open problem reports (OPRs)

CS ETSO subpart B

- Nothing to report

Summary



End of presentation

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