EASA
European Union Aviation Safety Agency

Avionics Mandates, Exemptions and Deviations

Hette Hoekema

Senior Expert Navigation, Communication and Surveillance

STC WORKSHOP

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Overview

- Regulatory Structure
- Commission Regulations (Implementing Rules)
- EASA Certification Specifications (CS)
- EASA Acceptable Means of Compliance (AMC) and Guidance Material (GM)
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Regulatory Structure

- In Europe, we have a regulatory structure with different levels:
  - Commission Regulations (Implementing Rules)
  - EASA Certification Specifications (“Soft law”)
  - EASA Acceptable Means of Compliance/Guidance Material

Commission regulations (Implementing Rules)

- These regulations are ‘hard’ law.
- Contrary to what many believe, these are not “EASA mandates”.
  - Some have been drafted with support from EASA, but many have been drafted by other organisations (e.g. Eurocontrol, SJU).
- EASA cannot grant deviations from Commission Regulations.
- Only Member States may grant alleviations from the Commission Regulations through an ‘Article 71’ procedure of the (new) Basic Regulation 2018/1139.

EASA Certification Specifications

- Certification Specifications (CS) are published by EASA (Executive Director decision). These provide criteria that ensure compliance with the Commission Regulations.
- This is considered ‘soft law’; if direct compliance with the CS cannot be demonstrated, we can accommodate this, but…
  - Compliance with the requirements of Annex II of the Basic Regulation (2018/1139) needs to be assured: Proper justification required.
  - Must be subject to a public consultation.
  - Need to be published as a Deviation, Equivalent Level of Safety or a Special Condition.

EASA Acceptable Means of Compliance (AMC) and Guidance Material (GM)

- Acceptable Means of Compliance (AMC) and Guidance Material (GM) are published by EASA (Executive Director decision).
- Other, or Alternate Means of Compliance may be accepted, subject to EASA agreement:
  - Proper justification required.
  - Agreement on Alternate Means of Compliance is documented in a Certification Review Item (CRI).
  - No public consultation required.
- GM does not contain requirements.

The case of ADS-B / Regulation

- Commission regulation 1207/2011, amended by 2017/386: Aircraft operating as IFR/GAT will be required to comply with 1090 ES ADS-B by June 7, 2020 (US mandate: January 2020).
  - Since this a Commission Regulation, EASA cannot grant exemptions.
  - Note: EASA has advised the Commission on a new exemption policy. The decision is however with the Commission and is not expected before June 2019.

The case of ADS-B / CS

- CS ACNS.D.ELS.045 and CS ACNS.D.ADSB.105 require the functions to meet a continuity requirement of remote (1E-5/FH).
- Commission Implementing Regulation (EU) No 1207/2011, however only requires the continuity to be equal to or less than 2E-4/FH.
- Some applicants had difficulties demonstrating compliance.
- Since this was a CS:
  - Public consultation.
  - Followed by publication of a deviation allowing alleviation from the CS criteria.

The case of ADS-B / AMC

- AMC1 CS ACNS.D.ADSB.090(a) states that the data transmitted by the active ADS-B transmit unit should be consistent with the data displayed to the flight crew.
- In addition, AMC1 ACNS.D.ADSB.070(b) lays down additional performance requirements on the GNSS receiver.
  - Difficult to comply with for older equipment.
- Lastly, the US ADS-B mandate (January 2020) is interpreted as requiring an SBAS capable GNSS receiver.

The case of ADS-B / AMC (Continued)

- Applicants inquired whether the installation of a ‘remote GNSS sensor’ would be allowed.
- This case was about an interpretation of the intent of an AMC.
- EASA agreed to a CRI allowing the use of a ‘remote GNSS sensor’.
  - Certain conditions apply.
  - Meanwhile, the EASA position has been published on our website under the FAQ on ADS-B Certification.

Summary of Regulatory Activities

- CS-25: Annual update.
- CS-ACNS:
  - Issue 2 has just been published.
  - New requirements on GADSS soon to be added.
- CS-STAN: Issue 3 has just been published.
- NPA 2018-06 (CS-AWO): Comment adjudication still in process.
- NPA 2018-12: Runway Overrun Awareness and Alerting System.
- Certification Memoranda:
  - CM-AS-010 Issue 01 on FLARM has just been published.
  - New CM-AS-009 on databases is in internal review following external consultation.
  - New CM-AS-XXX on multi-frequency for datalink is in internal review.

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