



EUROPEAN AVIATION SAFETY AGENCY
AGENCE EUROPÉENNE DE LA SÉCURITÉ AÉRIENNE
EUROPÄISCHE AGENTUR FÜR FLUGSICHERHEIT

Certification rules relevant to cabin crew and cabin safety, and associated rulemaking activities

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Overview

- Principles of airworthiness certification
- On-going and planned rulemaking tasks



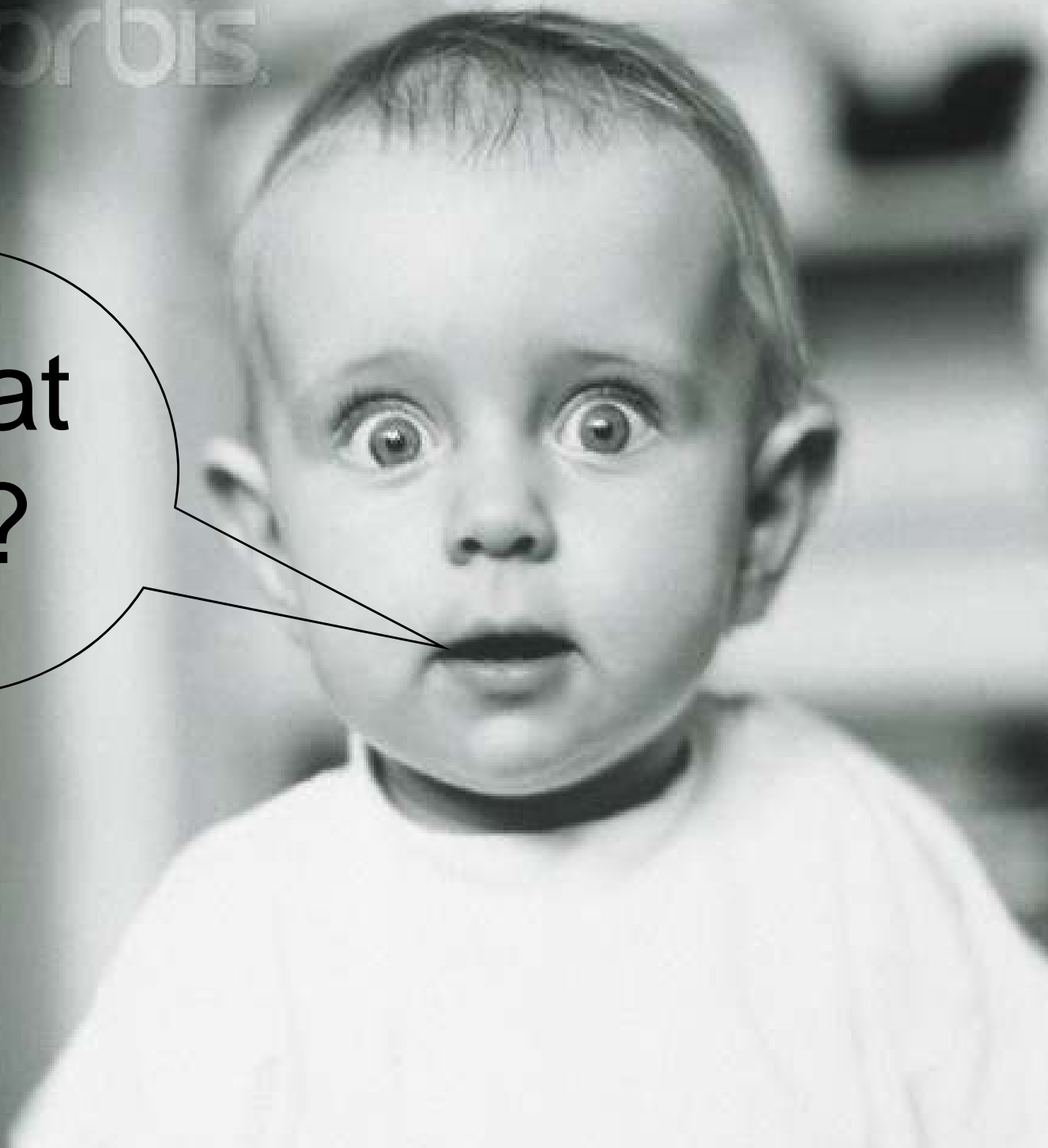
Article 5(2)(a) Basic Regulation

products shall have a type-certificate. The type-certificate, and certification of changes to that type-certificate, including supplemental type-certificates, shall be issued when the applicant has shown that the product complies with a type-certification basis as specified in Article 20, established to ensure compliance with the essential requirements referred to in paragraph 1, and when it has no feature or characteristic making it unsafe for operation



corbis

What
???





Article 5(2)(a) Basic Regulation

What does this mean:

- Initial aircraft design must be approved
- All design changes must be approved
- Design of any configuration always approved

How:

- Part-21 (Regulation 748/2012)



Type Certificate (TC)

Consists of:

- Type certification basis
- Type Design
 - Drawings, specifications
 - Materials, manufacturing processes
 - Airworthiness limitations
- Operating limitations
- Other conditions, limitations
- Type certificate Data Sheet (TCDS)



Type Certification Basis

- Applicable CS:
 - For large aeroplanes: CS-25
 - ~450 requirements
- Special conditions (for items not addressed by CS)
- Equivalent Safety Findings



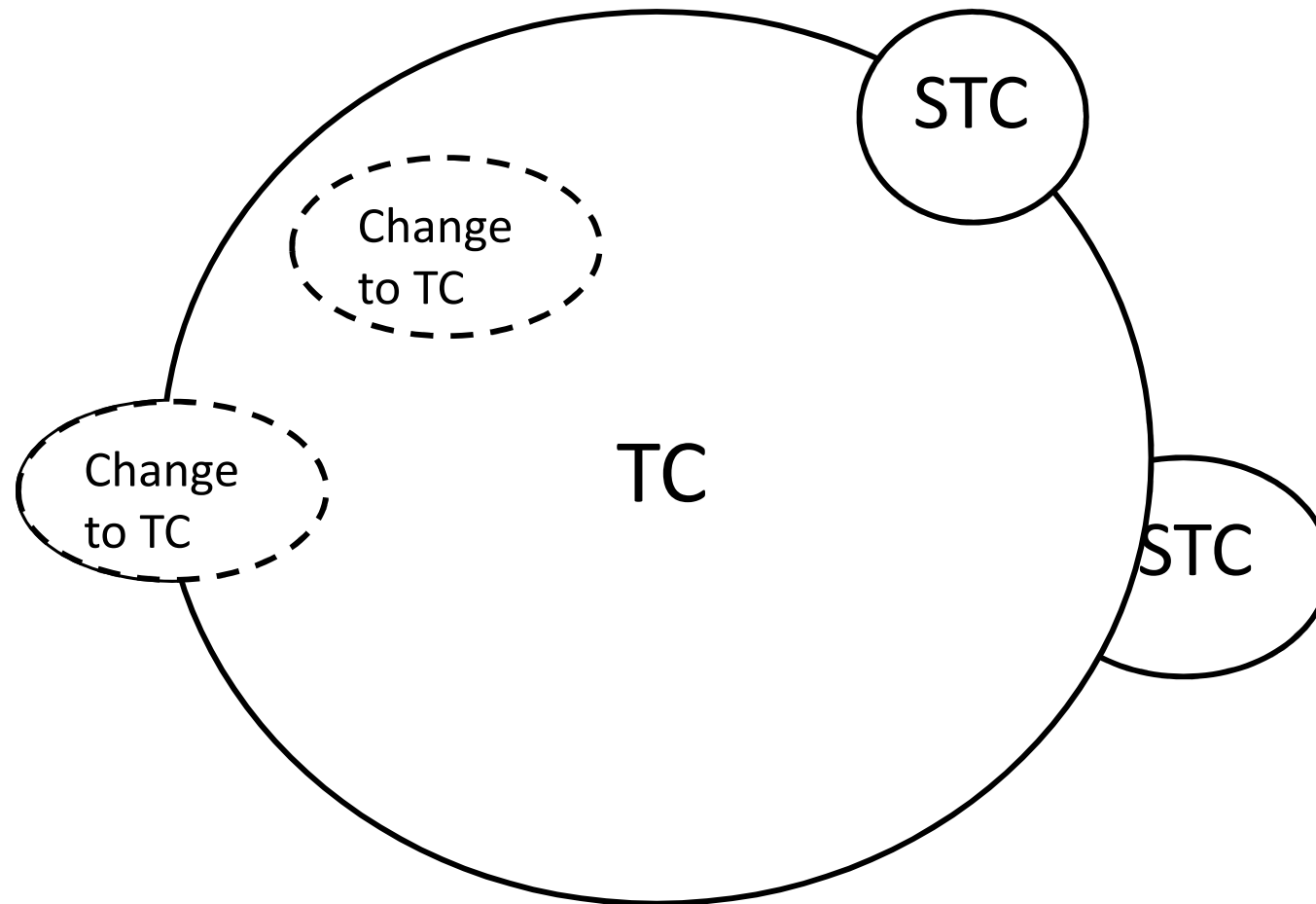
Approval of changes

- Show compliance with relevant provisions of TC basis or latest requirements (Part 21.A.101)
- Changes by TC holder: included in TC
- Changes by third parties: in Supplemental Type Certificate (STC)



Different design approvals

Individual a/c configuration





CS 25.803 Emergency evacuation

- maximum seating capacity can be evacuated within 90 seconds
 - actual demonstration: test criteria Appendix J; or
 - combination of analysis and testing
- Number of cabin crew used for demonstration becomes minimum
 - Included in TCDS and/or in data to be obtained from TC holder
 - Future: in TCDS and AFM



Other cabin configurations

- More pax: mandatory to show compliance with 25.803
- Less pax:
 - Minimum CC can be reduced only by showing compliance with 25.803
 - Lower number of minimum CC should be in STC or to be obtained from STC holder
 - Future: AFM supplement
 - If no showing of compliance with 25.803: assumptions of initial TC still valid



Conclusion

- Minimum number of CC for airworthiness is established in initial TC unless otherwise is determined under a change to TC or STC
- Number in TCDS, STC or to be obtained from TC or STC holder
 - Future: in AFM or AFM supplement



Rulemaking in cabin safety area (1)

- 21.039(k): Additional Airworthiness requirements for Operations (Transposition of JAR-26): Opinion 08/2013 issued 25-09-2013
- RMT.0069: Seat crashworthiness improvement on Large Aeroplanes - Dynamic testing 16g: NPA 2013-19 issued 10-10-2013
- RMT.0070: Fire hazard in Class D Cargo Compartments: NPA Q4 2013



Rulemaking in cabin safety area (2)

- RMT.0264: Executive Interior Accommodation: NPA Q1 2014
- RMT.0458: Oxygen Fire Hazard in Gaseous Oxygen Systems: NPA Q4 2013
- RMT.0071: Thermal/Acoustic Insulation Material: TOR Q3 2014
- RMT.0366: CS-25 cabin safety specifications : TOR 2016



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Thank you for your attention

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