ICAO EUR/MID Radio Navigation Symposium

Educating ourselves on flight validation

Antalya, Turkiye
(6-8 February 2024)

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Elements of the discussion

01 DOC 10068
The State regulatory framework

02 DOC 9906 volume 5
Second edition

03 DOC 9906 volume 6
Improved as well

04 Common issues
There is room for improvements
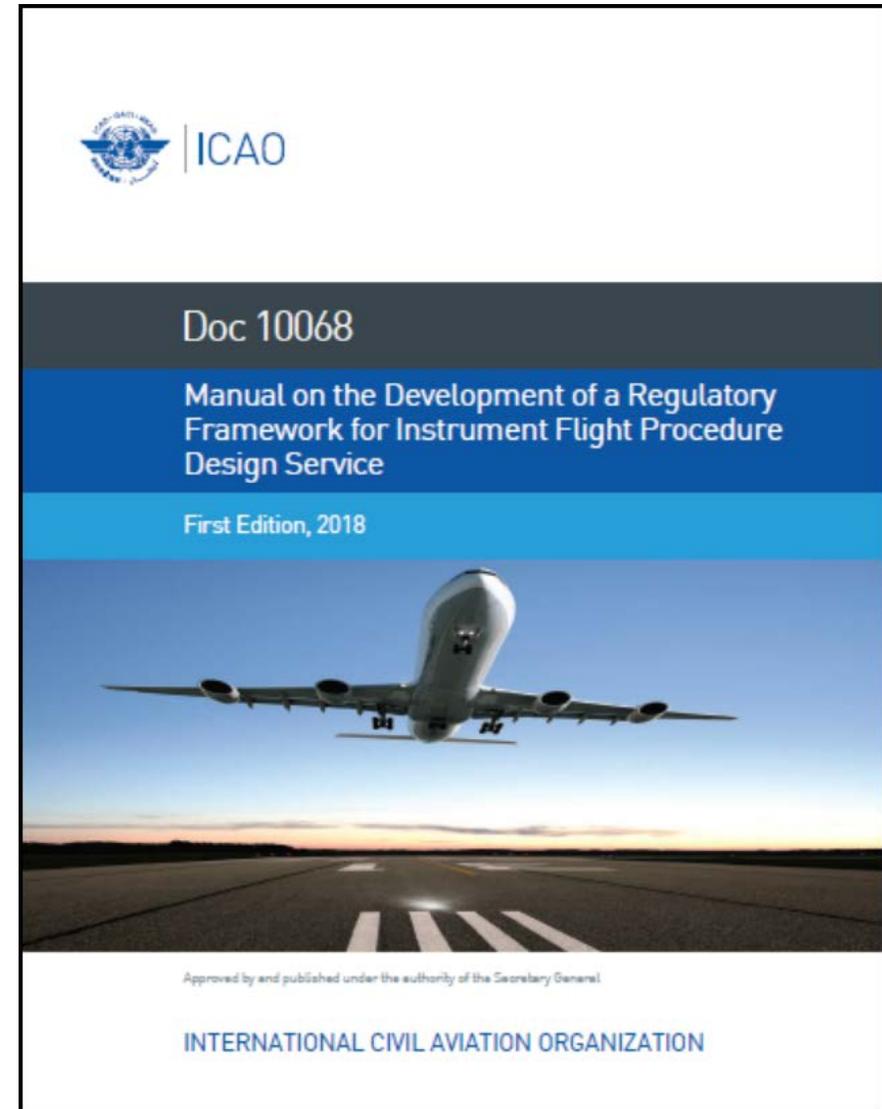
05 Trending topics
Helicopters on the raise

06 The way forward
Future developments

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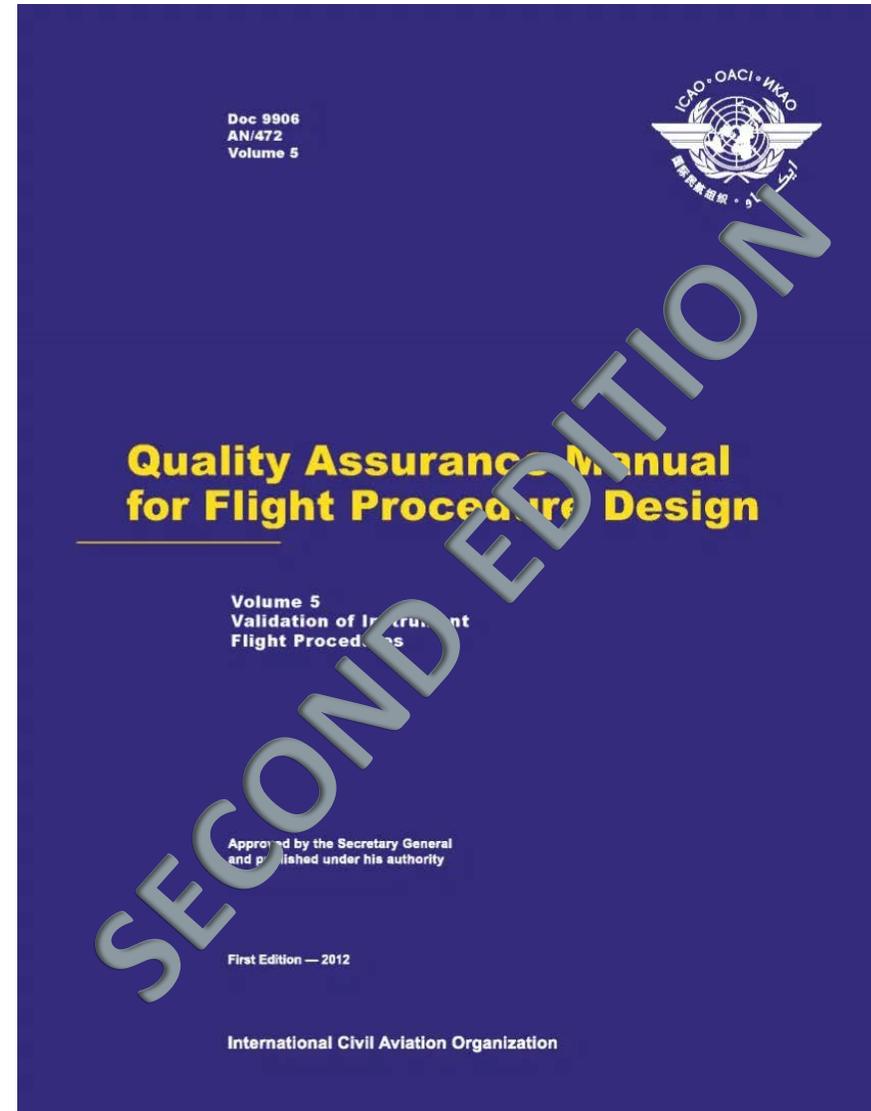
01

The State regulatory framework

1. Not always implemented

2. Leaves the interpretation of certain provisions to the service provider

3. May result in unnecessary efforts when validating certain instrument flight procedures

4. On the other end may results in not enough effort put in other occasions

5. Needs specific competences to be properly developed and implemented

6. Has impact on the design, the validation and the promulgation of the instrument flight procedure and, as the end result, it improves the safety of instrument flight operations

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Doc 10068

Manual on the Development of a Regulatory Framework for Instrument Flight Procedure Design Service

First Edition, 2018

Approved by and published under the authority of the Secretary General.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

02

DOC 9906 v. 5 Second Edition

1. Improved, based on real world experience

2. More logical flow

3. Needs really to be integrated in the State regulatory framework to work as intended, especially in the conceptual phase of each design, where having the proper stakeholders involved may greatly improve the overall result and the efficiency of the process

4. Clarifications on many aspects of the process, with new definitions and explanatory text

Doc 9906
AN/472
Volume 5

Quality Assurance Manual for Flight Procedure Design

Volume 5
Validation of Instrument
Flight Procedures

Approved by the Secretary General
and published under his authority

First Edition — 2012

International Civil Aviation Organization

SECOND EDITION

| ICAO

03

DOC 9906 v. 6

1. Improved, based on updated ICAO provisions on competency based training

2. Added few new features

04

Common issues

Experience shows 6 areas where attention is needed:

1. Deviation from standard criteria not reported in the IFP Package

2. Conceptual mistakes due to lack of validation process adherence (nobody asked the FVP or other stakeholders about certain features that might have been outside the expertise of the Designer)

3. Lack of ATM considerations (this is sometimes part of the point 2 above)

4. Coding inconsistencies

5. Missing links: Warning and Remarks marked on the chart that have no correspondent textual note

6. Typos/editorials

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04

Common issues

1. Actual flight evaluation (simulator of aircraft/rotorcraft) only rarely result in a FAIL rating if the preceding activities are executed properly

2. Methodically applying the validation process can safeguard against nasty and costly surprises when flight evaluation is conducted

3. Coding checks before setting up a flight evaluation mission is of paramount importance

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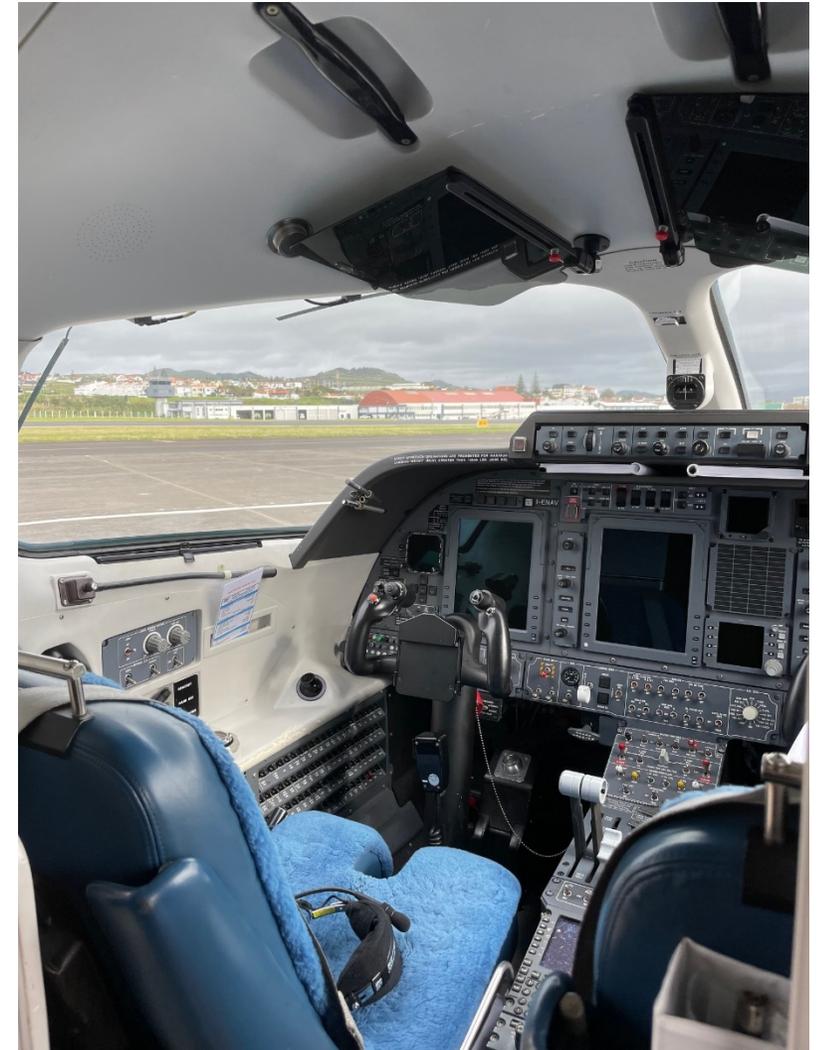
05

Trending topics

1. Helicopter's PinS procedures (APCH and DEP) and LLHR (low level helicopter's routes), offshore and onshore

2. Tilt-rotors (a new level of performance needs a new level of criteria)

3. RNP-AR and RNP (VPT) are facing renewed interest

4. Urban air mobility (this industry is evolving and when the pioneering phase will be over there might be the need to create a new whole word of IFR procedures tailored for such type of transportation)

5. Unmanned controlled by AI…

06

The way forward

1. In general, aviation rulemaking should improve, going from "reactive" to the industry innovations, to "proactive", providing a framework to lead the development of new technologies in an orderly fashion

2. More specifically about validation: a key element is the support to the development of more efficient way of validating procedures, integrating flights and simulations as appropriate and as established by the FVP (and other stakeholders) during the various steps of the validation process

3. We are already thinking about the Third Edition of 9906 volumes 5 and 6 but let's wait first for the publication of the second Edition…

…third edition, why not!
Let's think about it…
…maybe 2030+…

Thank You!