



CIVIL AVIATION ADVISORY PUBLICATION

CAAP 68

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INSTRUMENT FLIGHT PROCEDURE DESIGN REQUIREMENTS

INFORMATION AND POLICY REGARDING INSTRUMENT FLIGHT PROCEDURE DESIGN REQUIREMENTS

1. PURPOSE

- 1.1 The purpose of this CAAP is to provide guidance to an Organization and/or person who are, or want to become an Instrument Procedure Design Service Provider (IPDSP).
- 1.2 This information and policy material applies to all Instrument Procedure Design Service Providers.
- 1.3 This CAAP has been developed to expand upon the direction given in UAE CAR PART 8 Sub part 6 – Instrument Flight Procedure Design Requirements.

2. STATUS OF THIS CAAP

- 2.1 This is the first issue of CAAP 68– Instrument Flight Procedure Design Requirements, and will remain current until withdrawn or superseded.

3. APPLICABILITY

- 3.1 This guidance material applies to all prospective/certified Instrument Procedure Design Service Providers.

4. REFERENCES

- 4.1 ICAO DOC 9906 Volume 1 – Quality assurance manual for flight procedure design.
- 4.2 ICAO DOC 8168 – PANS OPS Volume I and Volume II
- 4.3 ICAO DOC 9905 – Required Navigation Performance Authorization Required
- 4.4 CAR PART VIII Sub part 6.

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5. ABBREVIATIONS

- 5.1 Definitions existing in ICAO Documents shall form part of this CAAP, supplemented by the definitions contained in CAR Part VIII, Subpart 1. Where there are differences between the definitions in the two sources, Subpart 1 has precedence.

6. REQUIREMENTS FOR PROVIDING AN INSTRUMENT FLIGHT PROCEDURE DESIGN SERVICE

- 6.1 No person/organization shall provide an Instrument Flight Procedure Design Service for the UAE FIR except under the authority, and in accordance with the provisions, of a GCAA certificate for the design of instrument flight procedures (IFPs). An Approved Procedure Designer (APD) is an IPDSP who has met the GCAA competency requirements and holds a GCAA certificate for the design of instrument flight procedures for aerodromes, heliports and airspace within the UAE FIR.

7. CERTIFICATION REQUIREMENTS

- 7.1 The minimum personnel requirements shall include:
- 7.1.1 A person identified as the Chief Executive;
 - 7.1.2 A "Chief Designer"
 - 7.1.3 An accountable manager responsible for training;
 - 7.1.4 An accountable manager responsible for the provision of a safety management system;
 - 7.1.5 Sufficient personnel to manage, supervise, and support the APD.

NOTE: Some of the positions may be combined.

- 7.2 The minimum procedure requirements shall include a procedure to:
- 7.2.1 Ensure the competence of personnel;
 - 7.2.2 Ensure that the initial training of APDs is able to demonstrate an acceptable level of competency;
 - 7.2.3 Provide continuation training to personnel;
 - 7.2.4 Ensure the ongoing competence of personnel;
 - 7.2.5 Control all the documentation required by CAR 6.10 b);
 - 7.2.6 Ensure that data required for the design of an IFP meets the requirements of ICAO Document 9906, Volume I, Paragraph 7.2;
 - 7.2.7 Ensure that flight validation is carried out by an organization acceptable to the Regulator;
 - 7.2.8 Control, amend and distribute the exposition;
 - 7.2.9 Control, amend and distribute the SMS, QMS and Procedure Design Manual.

- 7.3 The reference documentation to be kept by an IPDSP will include but not be limited to:
- 7.3.1 Annex 2,
 - 7.3.2 Annex 4,
 - 7.3.3 Annex 5,
 - 7.3.4 Annex 6,
 - 7.3.5 Annex 10,
 - 7.3.6 Annex 14,
 - 7.3.7 Annex 15,
 - 7.3.8 ICAO DOC 4444,
 - 7.3.9 ICAO DOC 7030,
 - 7.3.10 ICAO Doc 8071,
 - 7.3.11 ICAO Doc 8126,
 - 7.3.12 ICAO Doc 8168 Volume I and Volume II,
 - 7.3.13 ICAO Doc 8697,
 - 7.3.14 ICAO Doc 9274,
 - 7.3.15 ICAO Doc 9365
 - 7.3.16 ICAO Doc 9368,
 - 7.3.17 ICAO Doc 9371,
 - 7.3.18 ICAO DOC 9501,
 - 7.3.19 ICAO DOC 9613,
 - 7.3.20 ICAO DOC 9643,
 - 7.3.21 ICAO DOC 9674,
 - 7.3.22 ICAO DOC 9708
 - 7.3.23 ICAO DOC 9849,
 - 7.3.24 ICAO DOC 9905,
 - 7.3.25 ICAO DOC 9906 Volume I and Volume II.
 - 7.3.26 ICAO DOC 9931
 - 7.3.27 UAE CAR PART VIII
 - 7.3.28 UAE CAR PART IX
 - 7.3.29 UAE CAR PART X
 - 7.3.30 IPDSP Exposition;
 - 7.3.31 IPDSP SMS Manual;
 - 7.3.32 IPDSP QMS Manual;
 - 7.3.33 IPDSP Procedure Design Manual.
- 7.4 The documentation to be submitted by an IPDSP for certification purposes will include but not be limited to:
- 7.4.1 An acceptable Quality management system;
 - 7.4.2 An acceptable Safety Management System;
 - 7.4.3 An acceptable Procedure Design Manual;
 - 7.4.4 A document matrix indicating compliance with CAR PART 8 Sub part 6;
 - 7.4.5 An acceptable Organizational Exposition;
 - 7.4.6 Curriculum Vitae of Chief Designer; Safety Manager and Quality Manager;
 - 7.4.7 Proof of:

- 7.4.7.1 Successful completion of a PANS-OPS training course for all designers;
- 7.4.7.2 Specialist procedure design training of all designers (as applicable);
- 7.4.8 Evidence of recent IFP design work which should include evidence of specific designs and design documentation/reports;

8. DESIGN STANDARDS

- 8.1 IFPs shall be designed in accordance with the guidance contained within ICAO PANS-OPS DOC 8168 Volume II and/or ICAO DOC 9905 as appropriate, as supplemented by Appendix 1 of CAR PART 8 Subpart 6, and any variations from these documents approved by the ANA department of the GCAA.
- 8.2 IFPs shall also be designed in compliance with the requirements of the UAE ATM Strategic Plan and the UAE PBN Plan.

9. IFP DESIGN APPROVAL REQUIREMENTS

- 9.1 **Conceptual design**, including planned implementation dates, and resources needed to achieve the task – where appropriate and required by the Authority;
- 9.2 The **FPD report/documentation**, including the procedure layout, the relevant calculation outputs, coordinates and a textual description of the intended procedure, draft IFP charts and ARINC 424 path terminators where applicable;
- 9.3 **Validation and verification reports** for the IFP;
- 9.4 Submission of the **Airspace Change Proposal document**;
- 9.5 Compliance with **CAAP 41**.

10. GCAA APPROVALS

- 10.1 **Technical Approval** will be provided upon acceptance by GCAA of the technical design documentation as indicated in paragraph 9.2 and 9.4 (where applicable) above;
- 10.2 **Publication Approval** will be provided upon acceptance by GCAA of the IFP charts and AIP documentation as specified in paragraph 9.2 above, and proof of compliance with CAAP 41 where applicable. Specific reference to stakeholder letters of no objection.
- 10.3 **Operational Approval** will be provided to the relevant ANSP upon acceptance by GCAA of:
 - 10.3.1 The operational safety case;
 - 10.3.2 Amended LOA and LATSI as applicable;
 - 10.3.3 ATC Instructions supporting operational implementation;
 - 10.3.4 a Statement that ATC training has been completed where applicable;
 - 10.3.5 ATC fast time/real time simulation results;
 - 10.3.6 Flight Simulation/Validation/Inspection reports as applicable.