



WORKING PAPER

ASSEMBLY — 42ND SESSION

TECHNICAL COMMISSION

Agenda Item 24: Aviation Safety and Air Navigation Priority Initiatives

ENHANCING STANDARDIZATION IN THE PUBLICATION OF ILS CAT II/III APPROACH CHARTS: NAMING AND MINIMA

(Presented by Saudi Arabia)

EXECUTIVE SUMMARY

This working paper highlights the harmonization across ICAO documentation concerning the naming conventions and minima labelling for Instrument Landing System (ILS) Category II and III (CAT II/III) approach charts. Inconsistencies among ICAO Annex 4 — *Aeronautical Charts*, PANS-OPS (Doc 8168 Volumes I & II), and the *Aeronautical Chart Manual* (Doc 8697) have led to varying implementation practices across States, potentially impacting operational clarity, chart usability, and safety.

As the global aviation community increasingly adopts low visibility operations, the absence of unified guidance on chart titling and minima formatting for CAT II/III approaches presents an obstacle to standardization and interoperability.

Action: The Assembly is invited to:

- a) note the inconsistencies across ICAO documentation regarding CAT II/III procedure naming and minima formatting;
- b) invite ICAO to initiate a comprehensive review of Annex 4, Doc 8168, and Doc 8697 to align guidance for chart titling and minima labelling; and
- c) support the development of globally harmonized charting standards to ensure consistent, safe, and interoperable presentation of precision approach information

<i>Strategic Goals:</i>	This working paper relates to <i>Every Flight is safe and Secure</i> .
<i>Financial implications:</i>	Activities to be undertaken within existing ICAO work programme and budget.
<i>References:</i>	Annex 4 — <i>Aeronautical Charts</i> Doc 8168, <i>Procedures for Air Navigation Services</i> , Volume I — <i>Flight Procedures</i> and Volume II — <i>Construction of Visual and Instrument Flight Procedures</i> Doc 8697, <i>Aeronautical Chart Manual</i>

1. INTRODUCTION

1.1 The accurate and standardized publication of instrument landing system (ILS) approach procedures, particularly for category (CAT) II and CAT III operations, is critical for flight safety, operational predictability, and international harmonization.

1.2 ICAO provisions currently require procedures to be identified according to the *Procedures for Air Navigation Services — Aircraft Operations* (Doc 8168), yet inconsistencies persist. For example, while Doc 8168, Volume II — *Construction of Visual and Instrument Flight Procedures*, Chapter 9, advises on chart titling where CAT II/III minima are included, specimen charts in the *Aeronautical Chart Manual* (Doc 8697) do not follow these recommendations. Furthermore, conflicting information exists between Volumes I and II regarding how minima boxes should display CAT III information.

1.3 These inconsistencies may contribute to varied national implementations, raising concerns for operators, air navigation services providers (ANSPs), and charting providers. The need for harmonized, authoritative guidance has become pressing, especially as advanced precision approaches increase worldwide.

2. DISCUSSION

2.1 Inconsistent chart naming practices

2.1.1 Doc 8168, Volume II, Chapter 9 suggests that if CAT II and/or III minima are included, chart titles should read “ILS Rwy XX CAT II” or “ILS Rwy XX CAT II/III”. However, this is inconsistently applied in ICAO materials. Notably, Doc 8697 specimen chart No. 9 includes CAT II minima but bears the title “ILS RWY 24R” without indication of CAT II.

2.1.2 This divergence can lead to confusion for pilots, air traffic controllers, and data integrators, particularly when interpreting minima applicability under low-visibility conditions.

2.2 Ambiguities in CAT III minima representation

2.2.1 Doc 8168, Volume II, Part II, Section 1, Chapter 1, 1.1.4.4 states that “an OCA/H is not associated with CAT III operations”. Yet Table II-5-2-1 in Volume I includes CAT III A/B/C designations alongside associated minima values.

2.2.2 This lack of alignment raises practical questions:

- a) Should CAT III procedures be displayed without numerical minima?
- b) Are CAT III titles intended for procedural reference only?
- c) How should these procedures be reflected in global datasets and aeronautical information publications?

2.3 **Operational impacts and safety considerations**

2.3.1 Non-harmonized charting conventions may hinder pilot situational awareness and increase workload, particularly during critical phases of flight in low-visibility conditions.

2.3.2 Variations in naming and minima presentation can also complicate training, simulator fidelity, flight management system (FMS) database coding, and cross-border operations, ultimately affecting global interoperability and flight safety.

2.4 **The case for harmonized Standards**

2.4.1 ICAO has made notable progress in the standardization of aeronautical information, including through the provisions of Annex 4 — *Aeronautical Charts* and Doc 8697. However, greater coherence is needed specifically for CAT II/III charts.

2.4.2 The development of harmonized standards would:

- a) enhance clarity and reduce misinterpretation;
- b) foster global alignment in charting practices;
- c) support data integrity across aeronautical information service (AIS) and FMS systems; and
- d) improve operational safety during precision approaches.

3. **CONCLUSION**

3.1 This paper has identified critical gaps and inconsistencies within ICAO documentation regarding the naming and labelling of CAT II/III precision approach charts.

3.2 The aviation community would benefit from a unified and comprehensive ICAO-led effort to revise and harmonize related SARPs and guidance materials. Such an initiative would support the safe, consistent, and efficient publication and use of CAT II/III procedures globally.

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