



ICAO

*International Civil Aviation Organization***Ninth Meeting of the Surveillance Implementation
Coordination Group (SURICG/9)***Bangkok, Thailand, 7 – 10 May 2024***Agenda Item 7**

Update on surveillance activities and explore potential cooperation opportunity
b) Updates from ICAO Surveillance Panel, Standards Making Organization

ICAO SURVEILLANCE PANEL ACTIVITIES

(Presented by ICAO Surveillance Panel ASWG Rapporteur)

SUMMARY

This paper describes recent and planned activities of the ICAO Surveillance Panel.

1. INTRODUCTION

1.1 The work programme and activities of the ICAO Surveillance Panel (SP) are relevant to the SURICG. Per its charter from the Air Navigation Commission (ANC), the SP consists of two Working Groups: the Aeronautical Surveillance Working Group (SP-ASWG) and the Airborne Surveillance Working Group (SP-AIRBWG).

1.2 Information and discussions from the most recent SP Working Group meetings and outcomes from SP/5 may be useful for consideration by the SURICG.

2. DISCUSSION

2.1 In response to ICAO job card SP.008.03 “Ensure performance of surveillance systems”, task 5 “Develop measurable technical performance specifications for surveillance systems and update information on ADS-B versions 1 and 2 as well as WAM definitions included in Cir 326”, the SP created a Performance-Based Surveillance Sub-Group (PBSSG). The PBSSG is charged to develop new guidance material containing performance-based surveillance requirements, including updated materials which would replace ICAO Cir 326, which is now outdated. In November 2021, the PBSSG provided an initial draft RSUR Manual to the membership of the SP for comments and feedback. In September 2023, at the Fifth Meeting of the SP, a major revision of this draft Manual was provided to SP membership for review and comment.

2.2 The PBSSG continues to work to finalize the draft Manual in response to comments received, and plans to submit a final draft to the ASWG in the next meeting taking place in September 2024. PBSSG will then submit the Manual for final approval at the Sixth Meeting of the SP in the third quarter of 2025.

2.3 Since the last SURICG meeting, each of the Surveillance Panel’s Working Groups have held two meetings.

2.4 The Sixteenth Meeting of the Airborne Surveillance Working Group (AIRBWG) and the Eighteenth Meeting of the Aeronautical Surveillance Working Group (ASWG) were held as consecutive hybrid meetings in Montreal at ICAO Headquarters. AIRBWG/16 was held from 20 to 22 September 2023; ASWG/18 was held from 20 to 29 September 2023. The meetings were attended by 37 participants (14 members, 21, and 2 participants from the ICAO Secretariat) from 13 ICAO States (5 from the APAC region) and four International Organizations (including ICAO).

2.5 The Seventeenth Meeting of the Airborne Surveillance Working Group (AIRBWG) and the Nineteenth Meeting of the Aeronautical Surveillance Working Group (ASWG) were held as consecutive meetings in Montreal at ICAO Headquarters. AIRBWG/17 was held from 06 to 08 March 2024; ASWG/19 was held from 11 to 15 March 2024. The meetings were attended by 37 participants (13 members, 18 advisors, and 2 participants from the ICAO Secretariat) from 12 ICAO States (5 from the APAC region) and four International Organizations (including ICAO). Additionally, five representatives from the Communications Panel participated in a joint session to discuss the L-band Digital Aeronautical Communication System (LDACS) compatibility testing.

2.5.1 AIRBWG/16 considered Change Proposal (CP) to the Manual on Airborne Surveillance Applications (Doc 9994). The CP suggested revisions to the essential requirements of the PANS-ATM/PANS-OPS for Interval management procedures. The revision was focused on the IM phraseology currently being used in IM Operations. The group determined that additional work was required to either integrate the new elements or modify the existing proposed phraseology from previous working papers.

2.5.2 AIRBWG/16 was informed by the ICAO Secretary of proposed formatting changes required to the Proposal for Amendment (PfA) to Annex 10 Volume IV as approved by the fifth meeting of the Surveillance Panel (SP/5). The Secretary and ACSG were assigned to review and refine the PfA for presentation to the ANC focused on the reformatting of the content for conciseness.

2.5.3 AIRBWG/16 considered changes proposed to the existing Global Air Navigation Plan (GANP) Aviation System Block Upgrade (ASBU) threads and elements relevant to the AIRBWG. The group identified corrections and additions to the proposed changes, and submitted by the ASBU thread leader to the GANP for consideration and approval.

2.5.4 ASWG/19 discussed and approved updates to the amendments to ICAO Annex 10 Volume IV approved under SP/5 as agreed to by a small working group comprised of TSG representatives and the ICAO Secretary. The proposed changes were focused on reformatting of the content for conciseness.

2.5.5 ASWG/19 was informed on the status of proposed revisions to:

[a] Doc 9924 Appendix M Interference considerations as a means to restructure the information, modify the existing text to ensure cohesion throughout the Appendix, and update the material as required.

[b] Doc 9924 and Annex 10 Vol IV to include new guidance material recommending Mode-S ground stations stop transmitting when they are no longer turning at their nominal rate. This recommendation is intended to avoid saturating transponders with undesired interrogations. Additional discussion will be taking place at the June TSG, and a final review of the proposed revisions to Doc 9924 and an A10V4 PfA will be conducted at the upcoming ASWG in September 2024

[c] changes to Doc 9871 due to the inter-panel request for the CP's consideration for deletion of Chapter 5 of Annex 10 Volume III.

[d] status on incorporating the contents of Appendix P (Flight Testing for ADS-B), Q (Flight Testing for Multilateration), and local monitor (guidance for testing Mode S Ground systems) material

in Appendix D from Doc 9924 into ICAO Doc 8071 (“Manual on Testing of Radio Navigation Aids” Volume III). The TSG will continue to develop the material, and submit a formal change proposal to the ASWG at a future date.

2.5.6 ASWG/19 was informed by the Panel Secretary on the status of the PfA to Annex 10 Volume III relating to changes to allocations of 24-bit aircraft addresses, which was agreed by SP/4, noting that State Letter AN7/1.3.95-22/106 was published on 22 December 2022 and circulated to States and international organizations for their comments. The PfA was processed to the Council and submitted for adoption during the second half of the Council’s 231 session which was held in March 2024. The expected applicability date for this PfA is 28 November 2024.

2.5.7 ASWG/19 considered and discussed several papers on compatibility testing with LDACS (L-band Digital Aeronautical Communications System). A joint working group between the SP (ASWG and AIRBWG) and the CP PT-T was held with the intent of presenting the SP with the results of compatibility testing between LDACS and surveillance system receivers. A working paper outlining the results of testing with three Mode S transponder models was presented. In addition, it was noted that ACAS testing was conducted on one unit with an additional unit expected to be done in the near term. A post SP discussion on the results presented was held, and the ASWG determined that additional investigation and detail would be required in order to achieve compatibility between LDACS and surveillance receivers. Similarly, the AIRBWG concluded that additional detail on existing SARPS requirements proposed by the CP PT-T and compatibility tests with additional ACAS units would be required to determine what degradation of ACAS surveillance due to LDACS could be considered acceptable. The ASWG tasked the TSG to document initial proposed provisions at the June 2024 meeting based on the presented results for the CP’s consideration for inclusion in the LDACS SARPS.

2.6 As reported in SURICG/8-IP/07, SP/5 was presented with a consolidated proposal for amendment to Annex 10 — Aeronautical Telecommunications, Volume IV — *Surveillance and Collision Avoidance Systems*. The proposal updated technical provisions related to Secondary surveillance radar (SSR) Mode S transponder and 1090 MHz extended squitter (Initial Proposal 1), airborne collision avoidance systems (ACAS) III (Initial Proposal 2), airborne surveillance applications (Initial Proposal 3), as well as additional changes which were described in section 2.4 of SURICG/8-IP/07. Acceptance of this proposal will result in changes to every chapter of Annex 10, Volume IV, except for Chapter 6. SP/5 approved the consolidated proposal in September 2023. As discussed in Section 2.4.4 of this information paper, minor modifications were performed and accepted by the ASWG with the intention of presenting the SARPs to the ANC for approval with an effective of November 2026.

2.7 Modifications to Doc 9871 accompanied the SARPs as part of the submission for consideration by SP/5. Some consequential changes to other ICAO documents under the purview of the SP, such as Doc 9924 and Doc 9863, are expected to be presented for consideration at SP/6.

2.8 The SP Working Groups discussed and agreed with the future meeting schedule listed in the table below, which includes the timeline for the next Panel meeting, SP/6, to be held in March 2025.

MEETING	DATE	VENUE	REMARKS
3RD QTR 2024 (Working Group Meetings)			
AIRB WG/18	18-20 September 2024	ICAO Montreal Canada AIRB WG, hosted by IATA. ASWG @ CR6, ICAO HQ	
ASWG/20	23-27 September 2024		

1st QTR 2025 (The Sixth meeting of the Surveillance Panel (SP/6))			
SP/6	10-21 March 2025 (9am-5pm Montreal time)	ICAO Montreal Canada Conference Room CR5/CR7A	
Members only Meeting	10th March 2025		
First Plenary	10 March 2025 Opening Session with ANC		
AIRBWG/19	10-14 March 2025		
ASWG/21	17-21 March 2025		
3rd QTR 2025 (Working Group Meetings)			
ASWG/22	10-14 November 2025	ICAO Montreal Canada CR5 (ASWG) CR7B (AIRB WG)	Note: No meeting rooms will be available on 11 November 2025 due to a holiday in Canada. We will require members to consider hosting ASWG/22 and AIRB WG/20 meetings.
AIRB WG/20	17-21 November 2025 (exact days to be determined)		
1 ST QTR 2026 (Working Group Meetings)			
AIRB WG/21	4-6 March 2026	ICAO Montreal Canada CR6 (ASWG) CR5 (AIRB WG)	
ASWG/23	09-13 March 2026		
3RD QTR 2026 (Working Group Meetings)			
AIRB WG/22	16-18 September 2026	ICAO Montreal Canada CR5(ASWG) CR6 (AIRB WG)	
ASWG/24	21-25 September 2026		
1st QTR 2027 (Working Group Meetings)			
AIRB WG/23	13-16 April 2027	ICAO Montreal Canada CR 5 (ASWG) CR 6 (AIRB WG)	
ASWG/25	19-23 April 2027		

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- note the information contained in this paper; and
 - discuss any relevant matter as appropriate.
