



ICAO

International Civil Aviation Organization

**ELEVENTH MEETING OF THE SURVEILLANCE
IMPLEMENTATION COORDINATION GROUP
(SURICG/11)**

Bangkok, Thailand, 25 – 27 March 2026

Agenda Item 12: Review of the Terms of Reference (ToR) and the Action Items

REVIEW TERMS OF REFERENCE OF SURICG AND ACTION ITEMS

(Presented by the Secretariat)

SUMMARY

This paper presents the Terms of Reference of the SURICG and its action items for review and update.

1. INTRODUCTION

1.1 APANPIRG/26 meeting held from 7-10 September 2015 in Bangkok reviewed and agreed to the draft Terms of Reference for a broader “Surveillance Implementation Coordination Group (SURICG)” and adopted the following Decision:

Decision APANPIRG/26/45 – Surveillance Implementation Coordination Group

*That, the Surveillance Implementation Coordination Group (SURICG) be established with Terms of Reference provided in **Appendix K** to WP/9.*

1.2 It was also suggested that SEA/BOB ADS-B WG which reported to ADS-B SITF would report to APANPIRG through SURICG from 2017 onwards.

1.3 Mode S DAPs WG was established by SURICG/2 in 2017, and the ToR of Mode S DAPs WG was revised in 2022 by SURICG/7, renamed the WG as Mode S and DAPs Working Group. This group was further dissolved in 2023, and outstanding work was transferred to SURICG.

1.4 The SURICG/10 meeting held from 21 - 23 April 2025 reviewed and updated the action items from the SURICG/9 meeting.

2. DISCUSSION

2.1 In August 2021, SURICG ToR was reviewed by SURICG/6 in view of the integration of SEA/BOB ADS-B WG ToR, and CNS SG/25 adopted the revision through **Decision CNS SG/25/14 (SURICG/6/8): Revised ToR of Surveillance Implementation Coordination Group (SURICG)**.

2.2 In June 2023, SURICG/8 reviewed the achievements of Mode S and DAPs WG, considered that most of the tasks outlined in ToR had been completed or already in the process of

completion, and the remaining tasks of the WG could be transferred under SURICG and thus of the view that the Mode S and DAPs WG was able to dissolve. Hong Kong China and Singapore analyzed the ToR of Mode S and DAPs WG, and suggested a revised version of ToR of SURICG which was endorsed by SURICG/8 and further adopted in CNS SG/27 **through Decision CNS SG/27/12 - Revised ToR of Surveillance Implementation Coordination Group** to reflect the change due to the dissolution of Mode S and DAPs WG.

2.3 SURICG/9 and SURICG/10 Meeting further reviewed the revised ToR; however, no changes were made. The revised Terms of Reference of SURICG are provided in **Attachment A** to this paper.

2.4 Each year, the SURICG Meeting compiles action items resulting from the meeting along with a review of past action items. The latest action items list reviewed by the SURICG/10 meeting is provided in **Attachment B** of this paper for review and further updates by the Meeting.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) review the ToR of SURICG provided in **Attachment A**;
- c) review and update the action items provided in **Attachment B**; and
- d) discuss any related issues as appropriate.

**TERMS OF REFERENCE OF
SURVEILLANCE IMPLEMENTATION COORDINATION GROUP (SURICG)**

Consists of objectives and deliverables as follows:

The Objectives of the SURICG are to:

- 1) *Ensure continuous and coherent development of the Surveillance parts of the Asia/Pacific Regional Air Navigation Plan (APAC e-ANP) in a manner that is harmonized with adjacent regions, consistent with ICAO SARPs, the Global Air Navigation Plan and the Global Aviation Safety Plan;*
- 2) *Facilitate the implementation of Surveillance systems and services identified in the Aviation System Block Upgrades (ASBU) modules, APAC ANP, and Asia/Pacific Seamless ATM Plan elements using the project management principles where appropriate; and*
- 3) *Review, identify and address major issues in technical, operational, safety and regulatory aspects to facilitate the implementation or provision of efficient Surveillance services in the Asia and Pacific Regions.*

Deliverables to meet the Objectives:

- 1) *Progress report to be submitted to CNS SG addressing the SURICG deliverables (listed in 2 to 13 below);*
- 2) *Surveillance parts of the APAC ANP to be reviewed and aligned with work programme of States and, as necessary, amendment proposals prepared to update the APAC ANP to reflect changes in the operational and global requirements;*
- 3) *To review the outcome of the Surveillance Panel, SAS Panel, AN-Conf, APANPIRG and CNS SG related to surveillance, revise and update a tasks list and action items for the SURICG and formulate relevant Working Groups to work on those tasks / action items;*
- 4) *To develop regional targets/metrics for planning, implementation, measurement and monitoring of Surveillance systems and services;*
- 5) *To review and update the Surveillance Strategy by considering currently available and emerging technologies with respect to concept of operations, relative costing, technical and operational performance and maturity of alternative technology/solutions such as primary radar, secondary radar including Mode-S, ADS-B, Multilateration, ADS-C, multi-static primary radar (MPSR) and existing and emerging technology for detection of UAS including RPAS;*
- 6) *To study and identify applicable multilateration applications in the Asia and Pacific Regions considering:*
 - *Concept of use/operation*
 - *Required site and network architecture*
 - *Expected surveillance coverage*
 - *Cost Benefits Analysis*
 - *Recommended separation minimums*

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- 7) To study and identify applicable Mode S ~~radar~~ and DAPs applications in the Asia and Pacific Regions considering:
- Concept of use/operation;
 - Assignment of and migration to SI code in APAC;
 - Required site and network architecture;
 - Expected surveillance coverage;
 - Cost of system;
 - Requirement of surveillance systems (focusing on radar)
 - Matching functionality required in ATC ATM automation system;
 - ~~the use of Enhanced MODE S data (DAPS)~~
 - Other currently available or emerging technologies;
 - ~~ICAO GANP and ASBU; and~~
 - Evaluation method for Mode S and DAPs performance.
- 8) To develop an implementation plan for ADS-B applications in the Asia and Pacific Regions including implementation target dates taking into account:
- available equipment standards;
 - readiness of airspace users and ATS providers;
 - identifying sub-regional areas (FIRs) where there is a positive cost/benefit for implementation of ADS-B and associated VHF voice communications;
 - developing a standardised and systematic task-list approach to ADS-B implementation; and
 - major traffic flows.
- 9) To coordinate ADS-B implementation plan and concept of operations with other ICAO regions where ADS-B implementation is going on and with relevant external bodies such as EUROCONTROL, EUROCAE, RTCA and Industry;
- 10) To encourage research and development, trials and demonstrations in the field of Surveillance and other relevant areas; ;
- 11) Facilitate implementation of surveillance data sharing (including DCPC) and sharing surveillance information and expertise between States through organizing educational seminars and providing guidance materials to educate States and airspace users
- 12) To support the ICAO in making specific recommendations, developing guidance materials, aimed at improving the Surveillance services by the use of existing and/or new procedures, facilities and technologies; and
- 13) Draft Conclusions and Decisions to be formulated relating to matters in the field of Surveillance that come within the scope of the APANPIRG or CNS Sub-group work plan.

[Note: The Implementation Coordination Group, while undertaking the tasks, should take into account of the work being undertaken by SAS, Surveillance Panels with a view to avoid any duplication.

The Implementation Coordination Group will report to CNS Sub-group and CNS Sub-group will coordinate with ATM Sub-group.]

Membership:

All APAC member States/Administrations providing air navigation services in the Asia and Pacific Regions.

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The Surveillance Implementation Coordination Group shall normally invite representatives of International Organizations recognized by the ICAO Council and Industry partners as required by the group which represent important civil aviation interests to participate in its work in a consultative capacity.

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SN	Reference	Who	What	Due date	Status	Completed on
1	1-1	IATA and Hong Kong China	In MEL not included the effect of GNSS failure on ADS-B output which should be included. (SEA/BOB WG/9)		close	SURICG/3
2	1-2	All States/ Administrations	States to advise when their ground stations can be upgraded to receive ADS-B DO260B compliant ADS-B data. A survey was conducted during ADS-B SITF/13 (Appendix E). (SEA/BOB WG/9)	1-Dec-19	close	SURICG/5
3	1-3	Hong Kong China and RO/RSO Australia, Singapore	General ADS-B Avionics Problem Reporting Database (APRD) –Initial functions of the Database being implemented.)	21-Jul-17	close	SURICG/2
4	1-4	South Pacific States On-going Transferred to SURICG	Develop and implement regional collaboration project for ADS-B out operational use including data sharing in South Pacific and report on implementation progress.(Previous meeting of ADS-B SITF and ADS-B SITF/13)		close	SURICG/6
5	1-5	All Members On-going Transferred to SURICG	Perform data collection and data analysis of ADS-B messages to examine GPS performance in different geographic areas.(Previous meetings of ADS-B SITF and ADS-B WGs)		close	SURICG/4
6	1-6	Secretariat prepare initial paper	ICAO Aircraft address management (Emerging issue)		close	SURICG/2
7	1-7	Secretariat prepare initial paper with support from sub-set of members of the group (New Zealand, China, Indonesia, Japan, Mongolia, Singapore)	Working arrangement (sub-working group) for SURICG relevant to Mode S Implementation (in SURICG/1)		close	SURICG/3
8	1-8	IATA & all member States/Administrations	a) Inform member airlines/operators about the B787 ADS-B Deficiency and the service Bulletin (SB) B787-81205-SB340005-00 and accomplish the upgrade as soon as possible; b) Member States/Administrations of the SURICG to update the status whether their State registered B787s has already applied the service bulletin. (in ADS-B)		close	SURICG/2
9	2-1	Co-chairs, Japan	Develop guidance material on ICAO aircraft address monitoring for inclusion in AIGD (in SURICG/2)		close	SURICG/5
10	2-2	Secretariat in consultation with States. Tasked to ICAO sec. & DAPS WG	Examine the density of Mode S radar installations in the Region to determine the need for development of a SI code allocation/implementation plan and related issues (in SURICG/2)	22-Dec-21	close	SURICG/6

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SN	Reference	Who	What	Due date	Status	Completed on
11	2-3	Secretariat and States	New definition of ADS-B implementation in the Seamless reporting in i-Star and focal point nominated by States/Administration be notified for follow-up actions (in SURICG/2)		close	SURICG/4
12	4-1	DAPs WG and secretariat	Review outcome of DAPs WG (in SURICG/4)		close	SURICG/5
13	4-2	Co-Chairs and secretariat	Review APAC regional Surveillance Strategy and revise when necessary (in SURICG/4)		close	SURICG/6
14	5-1	Led by Singapore, supported by HK	A Study Group to Explore Solutions on Surveillance Data Sharing in coordination with SWIM/ATFM experts (prepare a working paper to seek endorsement from CNS SG/24) (in SURICG/5)		close	SURICG/6
15	5-2	Co-chairs, concerned States	Regional planning criteria for additional SAC assignment (in SURICG/5)		close	SURICG/6
16	5-3	DAPs WG	Study Mode S roadmap, including SI/II operation experience, 1030/1090MHz congestion and retrofit Mode S avionics (in SURICG/5)		close	SURICG/6
17	5-4	Co-chairs, ICAO APAC, concerned parties	Follow up the action items from SEA/BOB ADS-B WG/15 (in SURICG/5)		close	SURICG/6
18	5-5	Co-chairs	Review SURICG TOR to incorporate SEA/BOB ADS-B WG TOR		close	SURICG/6
19	6-1	DAPs WG in consultation with Surveillance Panel	Mode S and DAPs WG to reflect the required updates for II and SI mixed code allocation in Mode S DAPs IGD.		close	SURICG/8
20	6-2	DAPs WG	DAPs Working Group to consider rename to better reflect the focus of work scope not only on DAPs but also on Mode S Radars		close	DAPs WG/5
21	6-3	Hong Kong China and Thailand with Secretariat Support	Regional coverage map of surveillance and DCPC included in the Seamless ANS Plan (3.0) to update the coverage map during next Seamless ANS Plan review		close	Next Seamless ANS Planning and Implementation WG Meeting or suitable forum
22	6-4	Secretariat and States (including China, India, Indonesia, ROK, Singapore)	A new Ad-hoc Working Group to discuss performance specifications and benchmarking of radar for APAC Region		close	SURICG/8
23	6-5	Secretariat with DAPs WG	Development of a SI code allocation/implementation plan and related issues		close	SURICG/8
24	7-1	Secretariat with Mode S and DAPs WG	Set up a List of Points of Contact for Mode S II/SI Coordination Matters		close	Mode S WG/6
25	7-2	ROK, with Secretariat support	ROK to provide their point of contact on sharing their software Astecat for measuring performance of radar		close	SURICG/8
26	7-3	Hong Kong China	Working Paper on reporting the inconsistent ICAO Aircraft Address and Target Identification between surveillance data and flight plan be submitted to RASG-APAC		close	RASG-APAC/12

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SN	Reference	Who	What	Due date	Status	Completed on
27	7-4	Hong Kong China, Secretariat	Workshop on consistency of ICAO Aircraft Address and Target Identification between surveillance data and flight plan		close	SURICG/8
28	7-5	Hong Kong China, Secretariat	Guidance Material on consistency of ICAO Aircraft Address and Target Identification between surveillance data and flight plan		close	SURICG/8
29	7-6	Hong Kong China, Chair of SUR SG	Alignment of SUR SG Report with AIGD regarding definitions of Tiers 1 and 2		close	CNS SG/26
30	8-1	Ad-hoc group led by Hong Kong China, supported by China, New Zealand, Singapore, USA and IATA.	Regional guidance material to mitigate the discrepancies observed in ICAO Aircraft Address and Target Identification between surveillance data and flight plan by consolidating the outcomes of the workshop.		close	SURICG/9
31	8-2	ICAO Secretariat	The Action Items List of Mode S and DAPs WG will be incorporated into the Action Items of SURICG.		close	SURICG/9
32	8-3	concerned Member States, ICAO Secretariat	Formally update the e-ANP Volume II Table CNS II-APAC-3 SURVEILLANCE in due course at earliest convenience.		close	
33	D-1	China, Malaysia and Singapore	II code coordination for ADS-B and MLAT (in DAPs WG/2)		close	
34	D-2	Member States	Update DAPs Implementation Status table for APAC region (in DAPs WG/2)		close	
35	D-3	Co-chairs and hosting States	Harmonization with air space users (in SURICG2)		close	Propose to close
36	D-10	Co-chairs, ICAO	Reservation of II codes 14 and 15 for Research, Test and Military Purposes (DAPs WG/5)		close	Propose to close
37	D-11	China	Update IGD with the discussion outcome on IC planning and coordination (DAPs WG/6)	Target in 2025	close	Expected paper/IGD from China
38	D-12	ICAO	Workshop on the use of Mode S and DAPs and Assignment of /migration to II/SI codes (DAPs WG/6)	Target in 2025	Open	
39	9-1	Member States, ICAO Secretariat	Continue monitoring GNSS vulnerability issue and consider revising the regional surveillance strategy when necessary		Open	
40	9-2	ICAO Secretariat	Incorporate updates from States during SURICG/9 into e-ANP Volume II Table CNS II-APAC-3 SURVEILLANCE through the PFA process.		close	
41	9-3	Member States	Incorporate individual statistics and trend analysis on equipage similar to IP/20 of SURICG/9 for future meetings to see any need for another initiative on new equipage mandate in future.		on going	

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SN	Reference	Who	What	Due date	Status	Completed on
42	10-1	SURSG	SURSG will review final list of APAC Common SWIM Surveillance Information Services was prepared by the SURICG/10 meeting and provide further updates, if any, to publish in the next version of APAC Common SWIM Surveillance Information Services.		Open	
42	10-2	ICAO Secretariat	During the discussion of the next meeting date of SURSG, it was stated that the next Meeting will be planned before the SURICG/11 Meeting in 2026		Open	
43	10-3	USA	8.17 The Meeting noted that a Performance-Based Surveillance Sub-Group (PBSSG) is discussing using a cooperating surveillance system for separation, not for non-cooperative systems. However, the proposal to add non-cooperative sensors can be shared with the group by Alex from the USA during next week's Meeting from 28 – 30 April 2025		on going	