

*International Civil Aviation Organization*



ICAO

**Twenty Sixth Meeting of the Communications/  
Navigation and Surveillance Sub-group (CNS SG/26) of  
APANPIRG**

Video Tele-Conference, 5 – 9 September 2022

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**Agenda Item 2:** Review outcomes of APANPIRG/RASG Chairpersons review, APANPIRG/32 meeting, DGCA/57 meeting, ATM Sub-group and other major meetings relevant to CNS Sub-group

**UPDATES ON CNS SG/25 AND APANPIRG/32 CONCLUSIONS/DECISIONS AND  
ACTION ITEMS**

(Presented by the Secretariat)

**SUMMARY**

The paper presents the latest status and actions taken for various Conclusion/Decision adopted and recommended in the Twenty Fifth Meeting of the Communications, Navigation and Surveillance Sub-group (**CNS SG/25**) of APANPIRG, Conclusion/Decision adopted by the Thirty Second Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/32) related to CNS along with latest status and action taken on various ACTION ITEMS formulated by the CNS SG/25 meeting for information and necessary follow-ups actions.

**1. INTRODUCTION**

1.1 The Thirty-second Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/32) was held from *01 to 03 December 2021* via video teleconference. The Meeting was attended by 278 participants from 28 Member States, 2 Special Administrative Regions of China, and 8 International Organizations (AAPA, ACI, CANSO, IATA, ICAO, IFALPA, IFATCA and PASO). APANPIRG/32 meeting report, working papers, information papers, and other resources can be accessed at <https://www.icao.int/APAC/Meetings/Pages/2021-APANPIRG32.aspx>.

1.2 The Twenty Fifth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/25) of APANPIRG was held from *18 to 22 October 2021* via video teleconference. The meeting was attended by 215 participants from 23 States/Administrations, and 4 International Organizations namely CANSO, IATA, IFALPA and IFATSEA, plus 28 participants from industry partners. CNS SG/25 meeting report, working papers, information papers, and other resources can be accessed at <https://www.icao.int/APAC/Meetings/Pages/2021-CNS-SG-25.aspx>.

**Agenda Item 2**

05-09/09/22

**2. DISCUSSION**

2.1 The CNS SG/25 meeting adopted **Eight (8)** Conclusions and **Five (5)** Decisions. In addition, based on the outcome of discussions on various agenda items, the CNS SG/25 meeting developed **four (4)** Draft Conclusions, which were adopted by APANPIRG/32. The latest status and action taken for these outcomes are provided in **Appendix A** to this paper.

2.2 The latest status and action taken on various ACTION ITEMS formulated by the CNS SG/25 meeting is provided in **Appendix B** to this paper.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to

- a. note the latest status and action taken for various CNS SG/25 and APANPIRG/32 **Conclusions/Decisions** provided in **Appendix A** and take any necessary follow-up actions;
- b. note the latest status and action taken for CNS SG/25 action items provided in **Appendix B** and take any necessary follow-up actions; and
- c. discuss any relevant matters as appropriate.

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CNS SG/25 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Deci sion	Text of Conclusion/Decision	Responsi bility	Deliverable	Target Date	Actual Date	Status
1.	<b>Conclusion CNS SG/25/01</b> <i>(ACSICG/08/01(CRV/08/01))</i>	CRV Implementation Plan amendment (Version 2.1)	That, the CRV Implementation Plan be amended to include the following new text in paragraph 2.4.2 – IP Addressing  iii. In the development of the IPv4 plan, a flexible margin has been designated to allow future growth or change. Through draft Conclusion CRV OG/8/01, using 10.46.0.1 to 10.46.255.254, each third party Service Provider (e.g. AIREON LLC providing Automatic Dependent Surveillance - Broadcast data over CRV) is assigned 254, 510, 764 or 1022 usable Network addresses (depending on Service Providers’ technical requirements);	ICAO APAC RO	ICAO State Letter Ref: T 8/9.1 – AP006/22 (CNS) dated 10 Jan 2022	31 Jan 2022	10 Jan 2022	Completed
2.	<b>Conclusion APANPIRG/32/7</b> <i>(Draft Conclusion CNS SG/25/02 (ACSICG/08/02 (CRV/08/02)))</i>	Implementation of CRV for small Pacific Island and small ANSP in the region using CRV Solution, PCCWG SLA Package D.	That, the CRV OG should consider the following to assist small Pacific Islands & small ANSP in APAC in the implementation of CRV: a) Small Pacific Island and small ANSP in the region to consider using CRV SLA package D as the CRV solutions to implement CRV for the exchange of voice & AMHS services  With target date to implement CRV by the end of 2021 by APANPIRG Conclusion	ICAO APAC RO  APAC States and Administ rations	ICAO State Letter Ref.: T 8/2.10-AP007/22(CNS), dated 12 January 2022, Subject: - To remind the target year of CRV Implementation by 31 December, 2022 in APAC Region and CRV Implementation for small Pacific Island and small ANSP in	31 Jan 2022	12 Jan 2022	Completed

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CNS SG/25 Conclusions/Decisions – Action Plan

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			C 31/12, it is recommended that the CRV OG to work closely with the small Pacific Islands, small ANSP in the region and PCCWG on a cost effective CRV solution to implement CRV.		the region using CRV Solution, PCCWG SLA Package D			
3.	<b>Conclusion CNS SG/25/03 (SWIM TF/5/01)</b>	Asia/Pacific SWIM Implementation Plan and Status Survey	To conduct a survey on SWIM implementation plan and status of Asia/Pacific Member States.	ICAO APAC RO  APAC States and Administ rations	Survey and their response  SL Ref.: T 8/13.1: AP042/22 (CNS) 01 March 2022 Subject: ICAO Asia/Pacific SWIM Implementation Plan and Status Survey sent. Reply by 1 April 2022  Outcomes of the survey was presented as WP/17 in SWIM TF/6	31 May 2022	01 March 2022	Completed

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CNS SG/25 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Deci sion	Text of Conclusion/Decision	Responsi bility	Deliverable	Target Date	Actual Date	Status
4.	<b>Decision CNS SG/25/04</b> (SWIMTF/05/02)	Revised SWIM TF Terms of Reference	That, the revised SWIM TF Terms of Reference (ToR) as shown in <b>Appendix F</b> be adopted.	ICAO APAC RO	NA	NA	NA	Completed
5.	<b>Conclusion CNS SG/25/05</b>	The Catalogue of Asia and Pacific Flight Inspection and Flight Validation Service Providers	That, <i>The Catalogue of Asia and Pacific Flight Inspection and Flight Validation Service Providers</i> (Eleventh Edition) in the <b>Appendix G</b> to the report is adopted and be published on the ICAO Regional Office website.	ICAO APAC RO	ICAO State Letter Ref: T 8/9.1 – AP006/22 (CNS) dated 10 Jan 2022	31 Jan 2022	10 Jan 2022	Completed
6.	<b>Conclusion CNS/SG/25/06</b>	Update of Flight Inspection Guidance Material (FIGM) for APAC Region	That, the Edition 2.0 of the Flight Inspection Guidance Material (FIGM) provided in <b>Appendix H</b> to the Report be adopted.	ICAO APAC RO	ICAO State Letter Ref: T 8/9.1 – AP006/22 (CNS) dated 10 Jan 2022	31 Jan 2022	10 Jan 2022	Completed
7.	<b>Conclusion APANPIRG/32/8</b> (Draft Conclusion CNS SG/25/07 (SURICG/6/1) (Draft Conclusion DAPs WG/4/1, Draft Conclusion DAPs WG/4/2, Draft Conclusion DAPs WG/4/3))	Interrogator Code (IC) Planning and Coordination	That,  With the need to extend the Use of Surveillance Identifier (SI) in Interrogator Code (IC) on top of Interrogator Identifier (II), the relevant APANPIRG Conclusions are updated as follows:  <i>Coordination Process for SSR Mode S Interrogator Code (IC)</i> (formerly <b>Conclusion 19/40</b> )	ICAO RO  APAC States and Administ rations	State Letter  Action in accordance with the Conclusion.  State Letter  Ref.: T 8/5.11-AP200/21 (CNS) dated on 22 December 2021	January 2022  As soon as practicable	December 2021	Completed

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SN	Conclusion/ Decision No	Title of Conclusion/Deci sion	Text of Conclusion/Decision	Responsi bility	Deliverable	Target Date	Actual Date	Status
			<p>a) in view of the increasing density of SSR interrogator installations in the region, and that States have varying readiness to extend from Interrogator Identifier (II) to both Interrogator Identifier and Surveillance Identifiers (SI) codes, there will be a period whereby both II and SI will be used.</p> <p>b) while implementing SSR Mode S, States should take into account following issues while assigning IC for these installations:</p> <ul style="list-style-type: none"> <li>• for planning the implementation of SSR Mode S interrogators, administrations should ensure that the interrogators with overlapping coverage are not operating with the same IC.</li> <li>• where, the coverage of the interrogator extends beyond the boundaries of the State, The IC should be worked out in coordination with the ICAO Asia and Pacific Office and the neighboring States concerned, and</li> </ul>					

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CNS SG/25 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Deci sion	Text of Conclusion/Decision	Responsi bility	Deliverable	Target Date	Actual Date	Status
			<ul style="list-style-type: none"> <li>• administrations should inform the ICAO Asia and Pacific Office about the assigned IC for these installations.</li> </ul> <p><i>Coordination Requirements for SSR Mode S Interrogator Codes (IC) (formerly <b>Conclusion 20/56</b>)</i></p> <p>States be advised to provide the following information on SSR Mode S Interrogator Code to the ICAO Asia/Pacific Office for coordination and registration.</p> <ol style="list-style-type: none"> <li>a) Name of country/territory and location of facility;</li> <li>b) Antenna Coordinates (Latitude and Longitude);</li> <li>c) Elevation of antenna above the Mean Sea Level (MSL) in meters;</li> <li>d) Maximum Coverage of SSR Mode S Interrogator in nautical mile;</li> <li>e) II Code (1 to 15) or SI Code (1 to 63); and</li> <li>f) Remarks (special configuration such as radar clustering, lockout override, II/SI mode capability)</li> </ol>					

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CNS SG/25 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Deci sion	Text of Conclusion/Decision	Responsi bility	Deliverable	Target Date	Actual Date	Status
			<p><i>Planning Criteria for SSR Mode S Interrogator Code (IC) Assignment (formerly Conclusion 20/57)</i></p> <p>The planning criteria for SSR Mode S IC coordination and assignment as provided in Appendix J of Doc 9924 (Third Edition, 2020) be adopted for use in the Asia/Pacific Region.</p>					
8.	<p><b>Conclusion</b> <b>APANPIRG/32/9</b> <i>(Draft Conclusion</i> <i>CNS SG/25/08</i> <i>(SURICG/6/2)</i> <i>(DAPs WG/4/4))</i></p>	Transition from II code to II and SI mixed code	States with Mode S radar capable of performing II/SI mode operations are encouraged to transit from II code to II and SI mixed code, so as to ease the shortage of II codes. States planning to perform the transition shall coordinate with ICAO APAC Regional Office to obtain the SI codes.	<p>ICAO RO</p> <p>APAC States and Administrations</p>	<p>Action in accordance with the Conclusion.</p> <p>State Letter Ref.: T 8/5.11-AP200/21 (CNS) dated on 22 December 2021</p>	<p>January 2022</p> <p>As soon as practicable</p>	December 2021	Completed
9.	<p><b>Conclusion</b> <b>APANPIRG/32/10</b> <i>(Draft Conclusion</i> <i>CNS</i> <i>SG/25/09(SURICG</i> <i>/6/3) (DAPs</i> <i>WG/4/5))</i></p>	The APAC Regional Roadmap for Mode S Implementation	That, the APAC Regional Roadmap for Mode S Implementation provided in <b>Appendix I</b> to this report be adopted.	<p>ICAO RO</p> <p>APAC States and</p>	<p>State Letter</p> <p>Action in accordance with the Conclusion.</p> <p>State Letter</p>	January 2022	December 2021	Completed

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CNS SG/25 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Deci sion	Text of Conclusion/Decision	Responsi bility	Deliverable	Target Date	Actual Date	Status
				Administ rations	Ref.: T 8/5.11- AP200/21 (CNS) dated on 22 December 2021			
10.	<b>Conclusion CNS SG/25/10</b> (SURICG/6/4) (DAPs WG/4/6)	Mode S DAPs IGD 3.0	That, the <i>Mode S DAPs Implementation and Operation Guidance Document</i> Edition 3.0 provided in <b>Appendix J</b> to this report be adopted.	ICAO APAC RO  APAC States and Administ rations	ICAO State Letter Ref: T 8/9.1 – AP006/22 (CNS) dated 10 Jan 2022	31 Jan 2022	10 Jan 2022	Completed
11.	<b>Conclusion CNS SG/25/11</b> (SURICG/6/5) (Draft Conclusion DAPs WG/4/7 and Draft Decision DAPs WG/4/8)	Revision of the Regional Supplement to ASTERIX Interface Control Document (ICD)	ICAO APAC Regional Office to: a) update EUROCONTROL with the latest SAC allocation within Asia Pacific; and  b) coordinate the allocation of SAC within Asia Pacific and not the SIC.	ICAO APAC RO	ICAO State Letter Ref: T 8/9.1 – AP006/22 (CNS) dated 10 Jan 2022	31 Jan 2022	10 Jan 2022	Completed
12.	<b>Decision CNS SG/25/12</b> (SURICG/6/6)	Revised ToR of Surveillance Study Group (SURSG)	That, the Revised Terms of Reference of the Surveillance Study Group (SURSG) provided in <b>Appendix L</b> to this report be adopted.	ICAO APAC RO	NA	NA	NA	Completed

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CNS SG/25 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Deci sion	Text of Conclusion/Decision	Responsi bility	Deliverable	Target Date	Actual Date	Status
13.	<b>Conclusion CNS SG/25/13</b> <i>(SURICG/6/7)</i>	Integrity of ICAO Aircraft Address and Target Identification in ADS-B / MLAT / Mode S Data and Flight Plan	To urge States/Administrations to proactively follow up with air operators to address discrepancies of ICAO Aircraft Address and Target Identification between ADS-B / MLAT / Mode S data and flight plan.	ICAO APAC RO  APAC States and Administ rations	SURICG/7 proposed Action Item SURICG/7-4 on hosting a Workshop on consistency of ICAO Aircraft Address and Target Identification between surveillance data and flight plan with support from Hong Kong China, IATA and ICAO	2023	-	<b>On-going</b>
14.	<b>Decision CNS SG/25/14</b> <i>(SURICG/6/8)</i>	Revised ToR of Surveillance Implementation Coordination Group (SURICG)	That, the Revised Terms of Reference of the Surveillance Implementation Coordination Group (SURICG) provided in <b>Appendix N</b> to this report be adopted.	ICAO APAC RO	NA	NA	NA	Completed
15.	<b>Conclusion CNS SG/25/15</b> <i>(SURICG/6/9)</i>	Revised ADS-B Implementation and Operations Guidance Document (AIGD)	That, the revised ADS-B Implementation and Operations Guidance Document (AIGD) provided in <b>Appendix O</b> to this report, which consolidated all change proposals during SURICG/6, is adopted as Version 14.	ICAO APAC RO	ICAO State Letter Ref: T 8/9.1 – AP006/22 (CNS) dated 10 Jan 2022	31 Jan 2022	10 Jan 2022	Completed
16.	<b>Decision CNS SG/25/16</b> <i>(ATMAS)</i>	Dissolution of APA TF	Noting that most of the tasks outlined in the ToR have been achieved and the completion of residual part of action items will be undertaken by ATMAS TF.	ICAO APAC RO	NA	NA	NA	Completed

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CNS SG/25 Conclusions/Decisions – Action Plan

SN	Conclusion/ Decision No	Title of Conclusion/Deci sion	Text of Conclusion/Decision	Responsi bility	Deliverable	Target Date	Actual Date	Status
	<i>TF/2/1 (APA TF/7/1))</i>		That, the APA TF be dissolved.					
<b>17.</b>	<b>Decision CNS SG/25/17 (ATMAS TF/2/2)</b>	Revised ATMAS TF Terms of Reference	That, the revised ATMAS TF Terms of Reference (ToR) as shown in Appendix P of the Report be adopted.	ICAO APAC RO	NA	NA	NA	Completed

— END —

<b>ACTION ITMES OF CNS SG/25</b>					
<b>Action Item</b>	<b>Subject</b>	<b>Status / Target Date</b>	<b>Action Party</b>	<b>Status</b>	<b>Remarks / follow-up</b>
25-1	SWIM TF to consider modifications proposed by Australia in Flimsy/02 in coming task lead meetings and SWIM TF/6 and to present revised ToR, if any as the outcomes of discussion, in CNS SG/26	CNS SG26	SWIM TF, ICAO Secretariat	Open	<b>Completed, Proposed to Close</b>
25-2	The ICAO Secretariat will prepare a working paper to present in RASG-APAC/11 as an outcome of CNS SG/25 discussion for considering 5G potential interference with radio altimeter as a potential hazard.	RASG-APAC/11	ICAO Secretariat	Open	<p>The ICAO Secretariat prepared WP/17 <i>Potential Impacts From 5G Implementation on Aircraft Radio Altimeters – Outcomes from CNS SG/25 Meeting</i> to RASG-APAC/11, and two RASG-APAC/11 outcomes were adopted accordingly, namely <b>Conclusion RASG-APAC 11/3</b> and <b>Decision RASG-APAC 11/6</b> on actions for dealing with Potential Interference to Aircraft Radio Altimeter by 5G Telecommunications System from WP/17 and other two WPs in RASG-APAC/11.</p> <p style="text-align: center;"><b>Completed, Proposed to Close</b></p>
25-3	The Member States/Administrations were requested to review and submit the updates to ICAO APAC Regional Office for the updates on various facilities listed in e-ANP Vol II Part III Table CNS II-APAC 2 for new international aerodromes added in 2021 by filling the PfA template specified in section 2.4 and send it to ICAO APAC Regional Office	CNS SG/26	Member States, ICAO Secretariat	On-going	<p>The ICAO APAC Regional Office reminds States/Administrations to update relevant e-ANP Volumes and Parts due to update in international aerodromes.</p> <p style="text-align: center;"><b>No updates received from any States.</b></p>

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25-4	The Chair of CNS SG invited the ICAO Secretariat to carry out the same review on e-ANP volumes in ATM aspects.	CNS SG/26	ICAO Secretariat	Open	SOP for updating e-ANP Volumes has been implemented in ICAO APAC Regional Office
25-5	The Chair of CNS SG invited ICAO APAC Regional Office to follow up with ICAO Headquarter on regional network cybersecurity issue	CNS SG/26	ICAO Secretariat	Open	The GRAIN working group Proof-of-Concept (PoC) does not have any bearing on the regional network.
25-6	The meeting requested ICAO to consider organizing another webinar on this subject on how Information Security Requirements for Exchange of Information over IP can be implemented by Member States in a pragmatic manner	CNS SG/26	ICAO Secretariat	Open	The GRAIN working group is currently planning for a proof-of-concept (PoC) to prove that IPv6 with certificate authentication and DNS register is able to provide end-to-end secure communications between ground-ground and air-ground applications. We hope the PoC results and report to ANC would then provide guidance on regional network cybersecurity issue.