International Civil Aviation Organization

Twenty Ninth Meeting of the Communications/ Navigation and Surveillance Sub-group (CNS SG/29) of APANPIRG

Bangkok, Thailand, 16-20 June 2025

Agenda Item 2: Review outcomes of APANPIRG, APAC ANSP Committee, ATM Sub-group, MET Sub-group and other meetings relevant to CNS Sub-group

REVIEW OF RELEVANT MEETINGS

(Presented by the Secretariat)

SUMMARY

The paper presents the relevant outcomes of the meetings held in 2024 including the Thirty-Fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/35), the Twenty Eighth Meeting of Communication, Navigation, and Surveillance (CNS SG/28), for information and action by this meeting.

1. INTRODUCTION

1.1 The Thirty-Fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/35) was held at the Kotaite Wing of the ICAO Asia and Pacific Regional Office Bangkok, Thailand from 25 to 27 November 2024. The Meeting was attended by 163 participants from 24 Member States, 2 Special Administrative Regions of China, and 6 International Organizations (ACI, CANSO, EASA, IATA, ICAO and IFALPA). The APANPIRG/35 meeting report, working papers, information papers, and other resources can be accessed by following link:

https://www.icao.int/APAC/Meetings/Pages/2024-APANPIRG-35.aspx

1.2 The Twenty Eighth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/28) of Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) was held at the ICAO APAC Regional Office, Bangkok, Thailand, from *1-5 July 2024.* The Meeting was attended by 120 participants from 25 States/Administrations, 3 International Organizations, and 5 industry partners. The Meeting report and other documents of the meeting can be accessed at ICAO APAC Meeting webpage at:

https://www.icao.int/APAC/Meetings/Pages/2024-CNS-SG-28.aspx

1.3 The APANPIRG/35 Meeting reviewed the outcomes of CNS SG/28, noted with appreciation the following work done and achievements by the CNS SG and the contributory bodies reporting to APANPIRG through the CNS SG. APANPIRG/35 also discussed CNS related matters and acted on the Report of the CNS SG/28 meeting and other papers presented under Agenda Item 3.4.

1.4 This paper summarized relevant information and updates with the highlight of the reviewed outcomes of relevant discussions of CNS SG/28 during APANPIRG/35.

2. DISCUSSION

The actions taken by APANPIRG/35 meeting on CNS related matters are as follows:

2.1 The meeting noted that the CNS SG/28 meeting adopted the following **4** Conclusions and **2** Decisions:

Reference	Subject
Conclusion CNS SG/28/01 *(ACSICG/11/02)*	- Review of APAC Region IWXXM Implementation Status/ Readiness
Decision CNS SG/28/03 *(Decision SWIM TF/08/02)*	- Candidate Baseline SWIM Discovery Service Standard for APAC
Decision CNS SG/28/04 *(Decision SWIM TF/09/01)*	- APAC SWIM Technical Infrastructure Profiles v1.0
Conclusion CNS SG/28/08 *(GBAS-SBAS ITF 06/01)*	- Guidance Document for Implementation of GBAS in the APAC Region
Conclusion CNS SG/28/09	- Update of Flight Inspection Guidance Material (FIGM)
Conclusion CNS/SG/28/11 *(SURICG/9/2)*	- Guideline on addressing inconsistencies of Aircraft Address (AD) and Target Identification (ID) between Surveillance Data and Flight Plan

2.2 The contents of above Conclusions/Decisions adopted by the CNS SG/28 are provided in **Attachment A** to this paper.

2.3 Based on the outcome of discussions on various agenda items, the CNS SG/28 meeting developed **4** Draft Conclusions and **1** Draft Decision for consideration by APANPIRG/35 Meeting, which were further adopted by APANPIRG/35. The Conclusions/Decisions adopted by APANPIRG/35 are as follows:

Reference	Subject
Decision APANPIRG/35/6 *(CNS SG/28/02 (Decision SWIM TF/08/01))*	- Information Management Panel consider the adoption of SWIM Discovery Service as a Global Standard for Globally Interoperable Service Discovery
Conclusion APANPIRG/35/7 *(CNS SG/28/05 (SRWG/8/1))*	- Preparation for World Radiocommunication Conference - 2027 (WRC-27)
Conclusion APANPIRG/35/8 *(CNS SG/28/06 (SRWG/8/2))*	- VHF COM Frequency Allotment Plan for APAC Region

Conclusion APANPIRG/35/9 *(CNS SG/28/07 (SRWG/8/4))*	-	Transition from the regular publication of Frequency List 2 to the global database of frequencies included in the Frequency Finder
Conclusion APANPIRG/35/10 *(Conclusion CNS/SG/28/10 (SURICG/9/1))*	-	Update of the General Strategy on Assignment of and Migration to SI Code in the APAC Region

2.4 All APANPIRG/35 Conclusions related to CNS are provided in **Attachment B** to this paper.

2.5 APANPIRG/35 further noted that the CNS SG had identified **20** action items related to CNS. Member States were encouraged to follow up on CNS-related action items resulting from the relevant meetings.

2.6 The following paragraphs capture the highlights of discussions in APANPIRG/35 relevant to this meeting.

Aeronautical Fixed Service (AFS)

Outcome of ACSICG/11

2.7 APANPIRG/35 noted that CNS SG/28 reviewed various topics discussed in the Eleventh Meeting of Aeronautical Communication Services Implementation Coordination Group (ACSICG/11), updated the AMHS/ATN implementation status in States/Administrations and reviewed the outcomes of the Common aeRonautical Virtual Private Network (CRV) Seminar for the Pacific States and the Twelfth Meeting of the CRV Operations Group of APANPIRG (CRV OG/12) held in Denarau Island, Fiji.

2.8 APANPIRG/35 noted that in the CRV Seminar PCCWG shared a new offer and technical equipment details to encourage Pacific States to join CRV. Cook Island, Samoa, and Tonga shared their firm intention to join CRV and that they should be able to sign service orders with PCCWG before 30 April 2024**.** The offer had been extended to 31 December 2024. In addition, APANPIRG/35 noted CRV OG/12 **Decision CRV OG/12/01** - *Publish the updated APAC CRV Operations Manual*, **Conclusion CNS SG/28/01** (ACSICG/11/02) - *Review of APAC Region IWXXM Implementation Status/ Readiness*, and formation of AMHS to SWIM transition CG (ATSCG).

2.9 APANPIRG/35 noted the strategy formulated by CRV OG/12 for the new CRV contract management process and the possibility of two options. It was noted that simultaneous work for both options was being done, and based on the outcomes of a contract management process, a chosen option would be presented to APANPIRG/36 for approval. The Meeting requested that the Secretariat to report the chosen option at the next Meeting.

Information Management (IM)

Outcomes of SWIM TF/8 and SWIM TF/9

2.10 The APANPIRG/35 reviewed the report of the Eighth Meeting of the System Wide Information Management Task Force (SWIM TF/8) held from 8 to 10 November 2023 and the Ninth Meeting of the System Wide Information Management Task Force (SWIM TF/9) held from 14 to 17 May 2024 in ICAO Asia and Pacific Regional Office, Bangkok, Thailand.

2.11 Due to the need for global standards on SDS, the following **Decision** endorsed by CNS SG/28 Meeting was adopted by APANPIRG/35.

<table>
<tr><td colspan="3">Decision APANPIRG/35/6 (Decision CNS SG/28/02 (Decision SWIM TF/08/01)) Information Management Panel considers the adoption of SWIM Discovery Service as a Global Standard for Globally Interoperable Service Discovery</td></tr>
<tr><td colspan="2">What: To propose to the Information Management Panel (IMP) to consider adopting the SWIM Discovery Service (SDS) as a global standard for globally interoperable service discovery.</td><td>Expected impact:
☒ Political / Global
☐ Inter-regional
☐ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why: Considering that APAC regional SWIM will also be part of global SWIM and that SDS was studied and tested by the SWIM TF, the consideration of IMP on the possible adoption of SDS as a global standard is required to ensure cross-regional interoperability of SWIM service discovery,</td><td colspan="2">Follow-up: ☐Required from States</td></tr>
<tr><td>When: 27-Nov-24</td><td colspan="2">Status: Adopted by PIRG</td></tr>
<tr><td colspan="3">Who: ☒Sub groups ☐APAC States ☒ICAO APAC RO ☒ICAO HQ ☒Other: SWIM TF</td></tr>
</table>

2.12 APANPIRG/35 noted the re-election of Dr Amornrat Jirattigalachote, Strategic Planning Manager (Engineering), Policy and Strategy Management Bureau of AEROTHAI, as Co-Chair of the SWIM TF. It was also noted that for the need to have a candidate baseline standard for SDS to support APAC SWIM implementation within the 2024-2030 target implementation timeframe, the CNS SG/28 adopted the **Decision CNS SG/28/03** (Decision SWIM TF/08/02)- *Candidate Baseline SWIM Discovery Service Standard for APAC* and considering the benefits of making the draft version of APAC SWIM Technical Infrastructure Profiles available for States/Administrations to refer to as guidance to assist in their SWIM development and implementation, CNS SG/28 adopted **Decision CNS SG/28/04** (Decision SWIM TF/09/01) *–APAC SWIM Technical Infrastructure Profiles v1.0*.

2.13 APANPIRG/35 noted that the CNS SG/28 deliberated the requirements to establish a dedicated group to support the implementation of the ICAO information security provisions in the APAC region and advised that the discussion on forming a dedicated group be deferred to the CNS SG/29 Meeting in 2025.

Aeronautical Mobile Communications Service and Aeronautical electromagnetic spectrum utilization

Outcomes of SRWG/8 and Frequency Spectrum-related Issues

2.14 APANPIRG/35 approved the Conclusion endorsed by CNS SG/28 to initiate actions for timely and effective preparation for WRC-27 in the APAC Region.

Conclusion APANPIRG/35/7 *(Conclusion CNS SG/28/05 (SRWG/8/1) –* **Preparation for World Radiocommunication Conference - 2027 (WRC-27)**

<table>
<tr><td colspan="2">That, States,
a) assign high priority to aeronautical spectrum management;
b) participate in the development of the ICAO Position for WRC-27;
c) participate in the development of States' positions for WRCs at the national level to ensure support for the ICAO Position;
d) ensure, to the extent possible, that, aviation representatives are included in States delegations to the APAC Telecommunity (APT) Conference Preparatory Group Meetings and at WRCs;
e) to nominate an ICAO designated focal point or contact person for aviation issues related to the WRC-27; and
f) ensure participation of the designated focal point or contact person at the ICAO Regional Preparatory Group Meetings for WRC-27, APT Conference Preparatory Group Meetings for WRC-27, and at WRC-27.</td><td>Expected impact:
☐ Political / Global
☒ Inter-regional
☐ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td colspan="2">Why:
a) implement Assembly Resolution A41-7;
b) support the early development and dissemination of the draft ICAO Position;
c) actively participate in the preparatory work of the ITU and the Meetings of APT to ensure the development of proposals by the regional telecommunication organizations to the conference are in line with the ICAO Position;</td><td>Follow-up: ☐Required from States</td></tr>
<tr><td colspan="2">When: 27-Nov-24</td><td>Status: Adopted by PIRG</td></tr>
<tr><td colspan="3">Who: ☒Sub groups ☐APAC States ☐ICAO APAC RO ☐ICAO HQ ☒Other: SRWG</td></tr>
</table>

2.15 APANPIRG/35 noted that States/Administrations intended to use or using VHF frequencies for Satellite-based VHF experimental systems during the time the relevant SARPs and planning criteria were being developed should inform ICAO of their use and frequency spectrum. Point of Contact (PoC) should ensure that corresponding State/Administration be aware of and to monitor any possible interference it might cause to VHF terrestrial systems. States/Administrations should also inform ICAO of any interference from VHF Satellite-based experimental systems. In the event of interference, the correction action should be taken as soon as practicable.

2.16 APANPIRG/35 adopted the Conclusion to simplify the VHF COM Frequency Allotment Plan and to clarify the function of these twelve frequencies for ACC service in the APAC Region, which was endorsed by CNS SG/28.

Conclusion APANPIRG/35/8 *(Conclusion CNS SG/28/06 (SRWG/8/2)* **VHF COM Frequency Allotment Plan for APAC Region**	
What: The VHF COM Frequency Allotment Plan for the APAC Region is adopted.	Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: Per discussion from SRWG, the Region should simplify the VHF COM Frequency Allotment Plan and clarify the function of the twelve frequencies for inclusion in the next edition of the Frequency Guidance Material (Management Manual).	Follow-up: ☐Required from States
When: 27-Nov- 24	Status: Adopted by PIRG
Who: ☒Sub groups ☐APAC States ☐ICAO APAC RO ☐ICAO HQ ☒Other: SRWG	

2.17 APANPIRG/35 noted the **Decision SRWG/8/3** –*Survey on the Utilization of HF Spectrum Frequency bands* and that the Secretariat of CNS SG disseminated the revised Survey through a State Letter.

2.18 APANPIRG/35 noted the importance of the Frequency Finder (FF) tool and highly recommended that Member States/Administrations to coordinate frequency through the FF tool and to ensure the FF database remained up-to-date. Based on recommendations from Workshop on Frequency Finder (FF) held at the ICAO Asia and Pacific (APAC) Regional Office (Bangkok, Thailand, 9-13 October 2023), the CNS SG/28 endorsed the following Conclusion which was adopted by APANPIRG/35:

Conclusion APANPIRG/35/9 *(Conclusion CNS SG/28/07 (SRWG/8/4)* – **Transition from the regular publication of Frequency List 2 to the global database of frequencies included in the Frequency Finder**	
What: Transition from the regular publication of Frequency List 2 to the global database of frequencies included in the FF is adopted	Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: The regular publication (currently once a year at the end or beginning of the year) of the Frequency List 2 i.e. List of facilities in the band 108 - 117.975 MHz and 960 - 1215 MHz will no longer be required as the global database of frequencies included in the FF would provide an up-to-date status of frequencies assigned or used by States/Administrations.	Follow-up: ☐Required from States
When: 27-Nov-24	Status: Adopted by PIRG

Who: ☒Sub groups ☐APAC States ☐ICAO APAC RO ☐ICAO HQ ☒Other: SRWG

2.19 APANPIRG/35 noted that the SRWG/8 adopted the example forms for GNSS RFI reporting to States/Administrations through the Decision **SRWG/8/5** – *GNSS Interference Reporting Form for APAC.* Information about the **Conclusion SRWG/8/6** - *APAC Regional Aeronautical Radio Frequency Management Guidance Material Edition 1.1* and the **Circular 360** *Guidance on Safeguarding Measures to Protect Radio Altimeters from Potential Harmful Interference* published under the authority of the Secretary-General was noted. The official publication was available at the ICAO store in digital or printed format for USD 33.

Navigation

Outcomes of PBNICG/11 Meeting

2.20 APANPIRG/35 noted that by WP/07 in the PBNICG/11, Australia presented an overview of issues encountered when implementing RNP separation standards across FIR boundaries within the framework of APAC plans. The PBNICG/11 requested CNS SG to share the paper with ATM SG to deliberate on the issues raised in the paper and to provide guidance to review the application of RNP separation within Doc 4444 PANS-ATM to include transition from RNP routes or airspace to other route or airspace to improve the seamless nature of boundaries. It was noted that IATA proposed simplified and standardized authorizations, FPL notations for PBN capabilities and their related interpretations in the PBNICG/11, for which the CNS SG/28 suggested sharing the information and concerns communicated by IATA, supported by PBNICG, with relevant HQ panels for further discussion.

2.21 APANPIRG/35 noted that after the completion of the tenure of the PBN officer seconded by India in May 2024, no secondee was available to continue the PBN Officer position in ICAO APAC RSO, Beijing, China. Therefore, until the secondment position is filled, the next PBNICG meeting would not be conducted due to the unavailability of Secretariat support. APANPIRG/35 encouraged States/Administrations to provide secondment support for this position.

Outcomes of GBAS/SBAS ITF/6 Meeting

2.22 APANPIRG/35 noted **Conclusion CNS SG/28/08** (GBAS-SBAS ITF 06/01) - *Guidance Document for Implementation of GBAS in the APAC Region* and **Conclusion CNS/SG/28/09 -** *Update of Flight Inspection Guidance Material (FIGM)* adopted by CNS SG/28.

ICAO Recommendations and Guidance on GNSS Vulnerability

2.23 APANPIRG/35 noted various ICAO's Recommendations and Guidance on Global Navigation Satellite System (GNSS) vulnerability, including the Resolution COM5/5 (WRC-23) and ongoing work in NSP and regional efforts in APAC.

GNSS RFI- IATA

2.24 APANPIRG/35 noted IATA's message that mitigating against GNSS RFI had become a critical risk management activity for airlines with few pragmatic options currently available to guarantee operational integrity. Considering increased levels of deliberate RFI, jamming and spoofing, IATA requested to ensure necessary actions were taken to reduce the extent of possible interference with essential GNSS-based navigation and timing services in the interests of the safety of civil aviation.

Surveillance

Outcomes of SURICG/9 Meeting

2.25 APANPIRG/35 reviewed the outcomes of SURICG/8, including the Sixth Meeting of the Mode S Downlinked Aircraft Parameters Working Group (Mode S and DAPs WG/6) and the Third Meeting of the Surveillance Study Group (SURSG/3). It adopted the following Conclusion to amend the General Strategy on Assignment of and Migration to SI Code in the APAC Region.

<table>
<tr><td colspan="3">Conclusion APANPIRG/35/10 (Conclusion CNS/SG/28/10 (SURICG/9/1) Update of the General Strategy on Assignment of and Migration to SI Code in the APAC Region</td></tr>
<tr><td colspan="2">That:
1. The ICAO APAC Regional Office will manage the assignment of II codes 14 and 15 and their matching SI codes, like the rest of the II and SI codes.
2. Revised General Strategy on Assignment of and Migration to SI Code is adopted.</td><td>Expected impact:
☐ Political / Global
☒ Inter-regional
☐ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why: A study by SURICG concluded that reservation of II codes 14 and 15 and their matching SI codes for research/test radars and military radars on a region-wide basis is not practicable in APAC.</td><td colspan="2">Follow-up: ☐Required from States</td></tr>
<tr><td>When: 27-Nov-24</td><td colspan="2">Status: Adopted by PIRG</td></tr>
<tr><td colspan="3">Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other: XXX</td></tr>
</table>

2.26 APANPIRG/35 noted that the FF program had been enhanced to address the issue of overlapping coverage of Mode S radars in adjacent ICAO regions, with a new function to hide radar coordinates and allow the owner (the State) to unhide, modify, or add new coordinates. It was also noted that the CNS SG/28 adopted a Guideline on addressing inconsistencies of Aircraft Address (AD) and Target Identification (ID) between Surveillance Data and Flight Plan by **Conclusion CNS/SG/28/11** (SURICG/9/2) - Guideline on addressing inconsistencies of Aircraft Address (AD) and Target Identification (ID) between Surveillance Data and Flight Plan.

Automation

Outcome of ATMAS TF/5 Meeting and ATM Automation System related Issues

2.27 APANPIRG/35 noted the Seminar on Air Traffic Management Automation Systems and the Fifth Meeting of the APAC Air Traffic Management Automation System Task Force (APAC ATMAS TF/5) held in Chengdu, China. ATMAS TF/5 updated the table of the ATMAS Status in the APAC region, adopted the Conclusion ATMAS TF/05/01 - ATMAS IGD Edition 1.4 and formed an expert group within ATMAS TF to review the core AIDC messages in the IGD.

Regional implementation review and updates

Workshop on Seamless ANS Reporting Tool

2.28 APANPIRG/35 noted the outcomes of the ICAO Workshop on APAC Seamless ANS Reporting Tool held from 17 to 19 April 2024. The Meeting noted that the tool was new and under upgradation. It lacked several essential notification features. The corresponding team in ICAO APAC Regional Office was working with the ICAO HQ IT team to improve the tool's functionality. States/Administrations were encouraged to provide suggestion for improvement.

Guidance Document for achieving high resilience in Sustaining operations of Critical Aeronautical Infrastructure

2.29 APANPIRG/35 noted that Hong Kong China shared their offer to host the Workshop on *High Resilience in Sustaining Operations of Critical Aeronautical Infrastructure*.

Status of CNS Deficiencies

2.30 The CNS SG/28 reviewed the only outstanding issue on the list of Air Navigation Deficiencies in the CNS field, which was related to the unreliability of AFS communication between Afghanistan and Pakistan. APANPIRG/35 noted Pakistan had joined CRV and was actively coordinating with Afghanistan to restore the communication link. Pakistan shared the expectation of restoring the connection by the end of 2024.

Capacity Building, including Human Factors and Air Traffic Safety Electronics Personnel (ATSEPs) related Training

Supervisory and managerial Roles of ATSEP- IFATSEA

2.31 APANPIRG/35 noted that IFATSEA presented the human factors issues and their countermeasures regarding ATSEP while playing supervisory and managerial roles. CNS SG/28 requested Member States/Administrations to review the content of the new proposed chapter and provide their comments to the Secretariat of CNS SG for review. The Ad-hoc work group would present a revised chapter consolidating all comments for CNS SG/29 review and adoption.

Cybersecurity of CNS/ATM systems

2.32 APANPIRG/35 noted that the ICAO HQ team would provide a brief about the Manual on Information Security, Doc 10204, in the Air Navigation Cyber Resilience Workshop and Tabletop Exercise (TTX) to be held in Bangkok, Thailand, from 02 – 04 December 2024. Furthermore, the TFP would plan other activities to support States in understanding and implementing the recommendations defined in Doc 10204.

Other Business

CNS Points of Contact

2.33 CNS SG/28 reviewed the CNS Points of Contact of Member States and requested States/Administrations to update points of contact of CNS contingency planning and administrative support for effective and efficient coordination in the CNS aspect.

CNS Meeting Planning for 2025

2.34 APANPIRG/35 noted the tentative schedule for the CNS contributory bodies' meetings to be held in 2025 for meeting information and action. The CNS SG Secretariat would inform Member States/Administrations about the exact dates, mode and venue of the meetings while issuing invitation letters in due course.

Additional CNS events in 2024

2.35 APANPIRG/35 noted information about four additional events organized by the ICAO APAC Office besides regular CNS meetings in 2024. APANPIRG/35 noted key outcomes and significance of the ICAO APAC Flight Inspection and Procedure Validation (FIPV) Seminar held from 30 July to 1 August 2024, the ADS-B Implementation Workshop held from 14 to 16 August 2024, the Seminar on Frequency Use from 16 to 18 September 2024 and System-Wide Information Management (SWIM) Working Session from 6 to 8 November 2024 in Jakarta, Indonesia. It was noted that Cybersecurity TTX would be organized from 2 to 4 December 2024 at the ICAO APAC Office, Bangkok, Thailand.

2.36 The APANPIRG/35 also discussed and noted the following papers under AI 3.4:

Feasibility Study and Trial of Using Drone to Enhance Efficiency in Flight Inspections at the Hong Kong International Airport (WP/21)

2.37 Hong Kong China shared information about their initiative supported by the Flight Inspection Center of Civil Aviation Administration of China (CAAC FIC) in exploring use of drone technology to carry out part of flight inspections at the Hong Kong International Airport (HKIA). Hong Kong China informed about two trials conducted at the HKIA in August 2023 and May 2024 with support of CAAC FIC. It was added that the trials showcased the utilisation of drones for part of flight inspection on navigational aids be more efficient in deployment with increased flexibility in flight maneuvers, and reduced carbon emissions. In addition, during unpredictable weather conditions, drones demonstrated their versatility by quickly adapting to the limited time window and effectively executing the mission.

2.38 Hong Kong China informed that based on the successful experience of the two trials, HKCAD would continue to collaborate with the CAAC FIC and relevant stakeholders to conduct further studies on drone utilisation to carry out part of the flight inspection, complying with the relevant standards and requirements. HKCAD would also closely monitor the development of relevant ICAO standards and guidelines to leverage the benefits of drones in conducting flight inspections with greater efficiency and flexibility.

The ICAO Provisions in Various Annexes and the Procedures for Air Navigation Services (PANS) Concerning FF-ICE Services and SWIM- Applicable From 28 November 2024 (WP/22)

2.39 The Secretariat shared information about the amendments of the ICAO provisions in various Annexes and the Procedures for Air Navigation Services (PANS) concerning the initial implementation of the flight and flow information for a collaborative environment (FF-ICE) services and SWIM, applicable from 28 November 2024 and relevant recommendations from AN-Conf/14. The Meeting recommended that States/Administrations implement the minimum set of FF-ICE services as soon as possible following the ICAO provisions.

2.40 In response to questions about the interrelationship of FF-ICE/R1 services applicability date, Conclusion APANPIRG/33/09 to set the Asia/Pacific SWIM implementation timeframe between 2024 and 2030, and Conclusion APANPIRG/35/4 (ATM/SG/12-3): *Agree on the adoption of FIXM Ver. 4.3.0 in the Asia Pacific Region as the standard format*, the SWIM TF Co-Chair explained detailed information about the context of the selection of respective timelines and other relevant information. In particular, it was clarified that (*i*) as SWIM is an enabler for FF-ICE, the target Asia/Pacific SWIM implementation timeframe was set to 2030 to provide an ample time for operational test of FF-ICE/R1 services before the cessation of ICAO 2012 flight plan by 2034 as per AN-Conf/14 Recommendation 3.2/2, and (*ii*) the timeline specified in Conclusion APANPIRG/35/4 (ATM/SG/12-3) was to support State/Organization, who was in a position to do so, in implementing cross-border ATFM information

exchange and FF-ICE/R1 services implementation as soon as practicable.

2.41 CNS SG identified the following challenges in the CNS field, which would be the primary area of focus for CNS SG in 2025:

1. Support PSIDS for CRV Implementation
2. New CRV Contract management process
3. Supporting APAC States/Administrations for FF-ICE R1 and SWIM Implementation
4. Supporting APAC States/Administrations in mitigating challenges associated with GNSS RFI/spoofing incidents.

2.42 ICAO APAC Office would plan and execute various activities/events/initiatives related to these key focus areas to assist States/Administrations in effectively implementing ICAO SARPs and enhancing capacity and efficiency across the region.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the outcome of the APANPIRG/35, CNS SG/28, and relevant contributory bodies, and take any necessary follow-up actions; and

b) discuss any relevant matters as appropriate.

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List of Conclusions/Decisions adopted by CNS SG/28 on behalf of APANPIRG on Technical Matters

Conclusion CNS SG/28/01 (ACSICG/11/02) - Review of APAC Region IWXXM Implementation Status/ Readiness	
What: States / Administrations provide ICAO an update on the status and readiness dates for the following: (a) AMHS with FTBP/IHE and configuration for single body part; (b) AMHS connection(s) will have sufficient capacity to support IWXXM exchange;	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: As per Amendment 79 to Annex 3 (applicable November 2020), States/ Administrations are required to exchange meteorological information in IWXXM form.	Follow-up: ☒Required from States
When: 05-Jul-2024	Status: Adopted by Subgroup.
Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other: XX	

Decision CNS SG/28/03 (Decision SWIM TF/08/02) Candidate Baseline SWIM Discovery Service Standard for APAC	
What: To position the SWIM Discovery Service (SDS) specification as a candidate baseline standard for APAC SWIM implementation.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: A candidate baseline standard for SDS is needed to support APAC SWIM implementation within the regionally-agreed target implementation timeframe of 2024-2030.	Follow-up: ☐Required from States
When: 5-Jul-24	Status: Adopted by Subgroup
Who: ☒Sub groups ☐APAC States ☐ICAO APAC RO ☐ICAO HQ ☐Other: SWIM TF	

Decision CNS SG/28/04 (Decision SWIM TF/09/01) –APAC SWIM Technical Infrastructure Profiles v1.0	
What: The APAC SWIM Technical Infrastructure Profiles v1.0 is adopted as a living document for immediate use by APAC States/Administrations.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To assist APAC States/Administrations in their SWIM development and implementation,	Follow-up: ☐Required from States

guidance specific to the operational environment within APAC is required. The draft APAC SWIM Technical Infrastructure Profiles v1.0 is matured enough to be immediately used by APAC States/Administration.	
When: 5-Jul-24	Status: Adopted by Subgroup
Who: ☒Sub groups ☐APAC States ☐ICAO APAC RO ☐ICAO HQ ☒Other: SWIM TF	

Conclusion CNS SG/28/08 (GBAS-SBAS ITF 06/01) - Guidance Document for Implementation of GBAS in the APAC Region	
What: The Guidance document for the implementation of GBAS in the APAC Region developed by the APAC GBAS/SBAS ITF is adopted.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: To provide guidance to States for the implementation of GBAS	Follow-up: ☐Required from States
When: 5 Jul 2024	Status: Adopted by CNS SG
Who: ☒CNS Sub group ☐APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other:	

Conclusion CNS/SG/28/09 - Update of Flight Inspection Guidance Material (FIGM)	
What: That, the Edition 4.0 of the Flight Inspection Guidance Material (FIGM) is adopted.	Expected impact: ☐ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: The FIGM is subject to regular review and update in the light of on-going development of flight inspection standards and recommended practices.	Follow-up: ☒ Required from States
When: 5-Jul-24	Status: Adopted by Subgroup
Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other:	

Conclusion CNS/SG/28/11 (SURICG/9/2) - Guideline on addressing inconsistencies of Aircraft Address (AD) and Target Identification (ID) between Surveillance Data and Flight Plan

List of Conclusions/Decisions adopted by CNS SG/28 on behalf of APANPIRG on Technical Matters

<table>
<tr><td colspan="2">What: APAC guideline on addressing inconsistencies of ICAO Aircraft Address (AD) and Target Identification (ID) between Surveillance Data and Flight Plan is adopted.</td><td>Expected impact:
☐ Political / Global
☐ Inter-regional
☐ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td colspan="2">Why: The guideline consolidated the outcomes of the Workshop on ICAO Aircraft Address and Target Identification between Surveillance Data and Flight Plan held in June 2023.</td><td>Follow-up: ☐Required from States</td></tr>
<tr><td>When: 05-July-24</td><td colspan="2">Status: Adopted by Subgroup</td></tr>
<tr><td colspan="3">Who: ☒Sub groups ☐APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other: XXXX</td></tr>
</table>

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A List of Conclusions/Decisions adopted by APANPIRG/35 Meeting related to CNS

<table>
<tr><td colspan="3">Decision APANPIRG/35/6 (Decision CNS SG/28/02 (Decision SWIM TF/08/01)) Information Management Panel considers the adoption of SWIM Discovery Service as a Global Standard for Globally Interoperable Service Discovery</td></tr>
<tr><td colspan="2">What: To propose to the Information Management Panel (IMP) to consider adopting the SWIM Discovery Service (SDS) as a global standard for globally interoperable service discovery.</td><td>Expected impact:
☒ Political / Global
☐ Inter-regional
☐ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why: Considering that APAC regional SWIM will also be part of global SWIM and that SDS was studied and tested by the SWIM TF, the consideration of IMP on the possible adoption of SDS as a global standard is required to ensure cross-regional interoperability of SWIM service discovery,</td><td colspan="2">Follow-up: ☐Required from States</td></tr>
<tr><td>When: 27-Nov-24</td><td colspan="2">Status: Adopted by PIRG</td></tr>
<tr><td colspan="3">Who: ☒Sub groups ☐APAC States ☒ICAO APAC RO ☒ICAO HQ ☒Other: SWIM TF</td></tr>
</table>

<table>
<tr><td colspan="3">Conclusion APANPIRG/35/7 (Conclusion CNS SG/28/05 (SRWG/8/1) –
Preparation for World Radiocommunication Conference - 2027 (WRC-27)</td></tr>
<tr><td colspan="2">That, States,
a) assign high priority to aeronautical spectrum management;
b) participate in the development of the ICAO Position for WRC-27;
c) participate in the development of States' positions for WRCs at the national level to ensure support for the ICAO Position;
d) ensure, to the extent possible, that, aviation representatives are included in States delegations to the APAC Telecommunity (APT) Conference Preparatory Group Meetings and at WRCs;
e) to nominate an ICAO designated focal point or contact person for aviation issues related to the WRC-27; and
f) ensure participation of the designated focal point or contact person at the ICAO Regional Preparatory Group Meetings for WRC-27, APT Conference Preparatory Group Meetings for WRC-27, and at WRC-27.</td><td>Expected impact:
☐ Political / Global
☒ Inter-regional
☐ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why:
a) implement Assembly Resolution A41-7;
b) support the early development and dissemination of the draft ICAO Position;</td><td colspan="2">Follow-up: ☐Required from States</td></tr>
</table>

c) actively participate in the preparatory work of the ITU and the Meetings of APT to ensure the development of proposals by the regional telecommunication organizations to the conference are in line with the ICAO Position;	
When: 27-Nov-24	Status: Adopted by PIRG
Who: ☒Sub groups ☐APAC States ☐ICAO APAC RO ☐ICAO HQ ☒Other: SRWG	

Conclusion APANPIRG/35/8 *(Conclusion CNS SG/28/06 (SRWG/8/2)* **VHF COM Frequency Allotment Plan for APAC Region**	
What: The VHF COM Frequency Allotment Plan for the APAC Region provided in **Appendix A** is adopted.	Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: Per discussion from SRWG, the Region should simplify the VHF COM Frequency Allotment Plan and clarify the function of the twelve frequencies for inclusion in the next edition of the Frequency Guidance Material (Management Manual).	Follow-up: ☐Required from States
When: 27-Nov- 24	Status: Adopted by PIRG
Who: ☒Sub groups ☐APAC States ☐ICAO APAC RO ☐ICAO HQ ☒Other: SRWG	

Conclusion APANPIRG/35/9 *(Conclusion CNS SG/28/07 (SRWG/8/4)* – **Transition from the regular publication of Frequency List 2 to the global database of frequencies included in the Frequency Finder**	
What: Transition from the regular publication of Frequency List 2 to the global database of frequencies included in the FF is adopted	Expected impact: ☒ Political / Global ☐ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical

Why: The regular publication (currently once a year at the end or beginning of the year) of the Frequency List 2 i.e. List of facilities in the band 108 - 117.975 MHz and 960 - 1215 MHz will no longer be required as the global database of frequencies included in the FF would provide an up-to-date status of frequencies assigned or used by States/Administrations.	Follow-up: ☐Required from States
When: 27-Nov-24	Status: Adopted by PIRG
Who: ☒Sub groups ☐APAC States ☐ICAO APAC RO ☐ICAO HQ ☒Other: SRWG	

Conclusion APANPIRG/35/10 *(Conclusion CNS/SG/28/10 (SURICG/9/1)* **Update of the General Strategy on Assignment of and Migration to SI Code in the APAC Region**	
That: 1. The ICAO APAC Regional Office will manage the assignment of II codes 14 and 15 and their matching SI codes, like the rest of the II and SI codes. 2. Revised General Strategy on Assignment of and Migration to SI Code is adopted.	Expected impact: ☐ Political / Global ☒ Inter-regional ☐ Economic ☐ Environmental ☒ Ops/Technical
Why: A study by SURICG concluded that reservation of II codes 14 and 15 and their matching SI codes for research/test radars and military radars on a region-wide basis is not practicable in APAC.	Follow-up: ☐Required from States
When: 27-Nov-24	Status: Adopted by PIRG
Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☐Other: XXX	

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VHF COM Frequency Allotment Plan for APAC Region (March 2024)

Function (revised)	**Function**	**Frequencies (MHz)**
TWR 118.000-118.875MHz 124.300-124.375MHz	TWR	118.000 118.025 118.050 118.075 118.100 118.125 118.150 118.175 118.200 118.225 118.250 118.275 118.300 118.325 118.350 118.375 118.400 118.425 118.450 118.475 118.500 118.525 118.550 118.575 118.600 118.625 118.650 118.675 118.700 118.725 118.750 118.775 118.800 118.825 118.850 118.875 124.300 124.325 124.350 124.375
AS 121.550-121.975MHz	AS	**121.550 121.575** 121.600 121.625 121.650 121.675 121.700 121.725 121.750 121.775 121.800 121.825 121.850 121.875 121.900 121.925 121.950 121.975
APP 119.000-119.275MHz 119.400-120.075MHz 120.200-120.475MHz 120.600-120.675MHz 120.800-120.875MHz 121.000-121.450MHz 123.800-123.875MHz 124.000-124.075MHz 124.200-124.275MHz 124.400-124.475MHz 124.600-124.875MHz 125.000-125.275MHz 125.400-125.675MHz 125.800-125.875MHz 126.000-126.075MHz 126.300-126.375MHz 126.500-126.575MHz 127.700-127.775MHz 127.900-127.975MHz	APP	119.500 119.525 119.550 119.575 119.600 119.625 119.650 119.675 119.800 119.825 119.850 119.875 119.900 119.925 119.950 119.975
	APP-L, APP-I, Also used for APP Direction finding or APP Surveillance radar	119.100 119.125 119.150 119.175 119.200 119.225 119.250 119.275 119.400 119.425 119.450 119.475 119.700 119.725 119.750 119.775 120.000 120.025 120.050 120.075 120.200 120.225 120.250 120.275 120.400 120.425 120.450 120.475 120.600 120.625 120.650 120.675 120.800 120.825 120.850 120.875 121.000 121.025 121.050 121.075 121.100 121.125 121.150 121.175 121.200 121.225 121.250 121.275 121.400 **121.425 121.450** 123.800 123.825 123.850 123.875 124.000 124.025 124.050 124.075 124.700 124.725 124.750 124.775 125.100 125.125 125.150 125.175 125.500 125.525 125.550 125.575 126.500 126.525 126.550 126.575 127.700 127.725 127.750 127.775 127.900 127.925 127.950 127.975
	APP-U	120.300 120.325 120.350 120.375 121.300 121.325 121.350 121.375 124.200 124.225 124.250 124.275 124.400 124.425 124.450 124.475 124.600 124.625 124.650 124.675 124.800 124.825 124.850 124.875 125.000 125.025 125.050 125.075 125.200 125.225 125.250 125.275 125.400 125.425 125.450 125.475 125.600 125.625 125.650 125.675

		125.800 125.825 125.850 125.875 126.000 126.025 126.050 126.075 126.300 126.325 126.350 126.375
ACC 118.900-118.975MHz 119.300-119.375MHz 120.500-120.575MHz 120.700-120.775MHz 120.900-120.975MHz 123.700-123.775MHz 124.500-124.575MHz 125.300-125.375MHz 125.700-125.775MHz 125.900-125.975MHz 126.100-126.175MHz 127.500-127.575MHz 128.100-128.175MHz 128.300-128.375MHz 128.700-128.775MHz 132.050-134.575MHz 135.825-135.975MHz	ACC-L Also used for ACC-L Surveillance Radar	126.100 126.125 126.150 126.175 127.500 127.525 127.550 127.575 128.300 128.325 128.350 128.375 128.700 128.725 128.750 128.775
	ACC-U ACC-L	118.900 118.925 118.950 118.975 119.300 119.325 119.350 119.375 120.500 120.525 120.550 120.575 120.700 120.725 120.750 120.775 120.900 120.925 120.950 120.975 123.700 123.725 123.750 123.775 124.500 124.525 124.550 124.575 125.300 125.325 125.350 125.375 125.700 125.725 125.750 125.775 125.900 125.925 125.950 125.975 128.100 128.125 128.150 128.175 132.050 132.075 132.100 132.125 132.150 132.175 132.200 132.225 132.250 132.275 132.300 132.325 132.350 132.375 132.400 132.425 132.450 132.475 132.500 132.525 132.550 132.575 132.600 132.625 132.650 132.675 132.700 132.725 132.750 132.775 132.800 132.825 132.850 132.875 132.900 132.925 132.950 132.975 133.000 133.025 133.050 133.075 133.100 133.125 133.150 133.175 133.200 133.225 133.250 133.275 133.300 133.325 133.350 133.375 133.400 133.425 133.450 133.475 133.500 133.525 133.550 133.575 133.600 133.625 133.650 133.675 133.700 133.725 133.750 133.775 133.800 133.825 133.850 133.875 133.900 133.925 133.950 133.975 134.000 134.025 134.050 134.075 134.100 134.125 134.150 134.175 134.200 134.225 134.250 134.275 134.300 134.325 134.350 134.375 134.400 134.425 134.450 134.475 134.500 134.525 134.550 134.575 135.825 135.850 135.875 135.900 135.925 135.950 135.975
FIS 120.100-120.175MHz 123.900-123.975MHz 124.100-124.175MHz 124.900-124.975MHz 126.700-126.775MHz 126.900-126.975MHz	FIS-L FIS-U	120.100 120.125 120.150 120.175 123.900 123.925 123.950 123.975 124.100 124.125 124.150 124.175 124.900 124.925 124.950 124.975 126.700 126.725 126.750 126.775 126.900 126.925 126.950 126.975 127.100 127.125 127.150 127.175

127.100-127.175MHz 127.300-127.375MHz 128.500-128.575MHz 134.600-135.800MHz		127.300 127.325 127.350 127.375 128.500 128.525 128.550 128.575
	FIS-U Also used for General purpose communications	134.600 134.625 134.650 134.675 134.700 134.725 134.750 134.775 134.800 134.825 134.850 134.875 134.900 134.925 134.950 134.975 135.000 135.025 135.050 135.075 135.100 135.125 135.150 135.175 135.200 135.225 135.250 135.275 135.300 135.325 135.350 135.375 135.400 135.425 135.450 135.475 135.500 135.525 135.550 135.575 135.600 135.625 135.650 135.675 135.700 135.725 135.750 135.775 135.800
VOLMET/ATIS 126.200-126.275MHz 126.400-126.475MHz 126.600-126.675MHz 126.800-126.875MHz 127.000-127.075MHz 127.200-127.275MHz 127.400-127.475MHz 127.600-127.675MHz 127.800-127.875MHz 128.000-128.075MHz 128.200-128.275MHz 128.400-128.475MHz 128.600-128.675MHz 128.800-128.875MHz	VOLMET/ATIS	126.200 126.225 126.250 126.275 126.400 126.425 126.450 126.475 126.600 126.625 126.650 126.675 126.800 126.825 126.850 126.875 127.000 127.025 127.050 127.075 127.200 127.225 127.250 127.275 127.400 127.425 127.450 127.475 127.600 127.625 127.650 127.675 127.800 127.825 127.850 127.875 128.000 128.025 128.050 128.075 128.200 128.225 128.250 128.275 128.400 128.425 128.450 128.475 128.600 128.625 128.650 128.675 128.800 128.825 128.850 128.875
AOC	AOC	128.900-132.025(Except 128.950MHz)
DATA LINK	DATA LINK	136.000-136.975
AIR-TO-AIR	AIR-TO-AIR	123.450 128.950 (TIBA)
NOT ALLOTED	NOT ALLOTED	122.000-123.675(Except 123.100MHz, 123.450MHz)

Note: The allotment of 12 yellow highlighted frequencies for ACC services has not been included in the Asia-Pacific conference outcomes.

VHF COM Frequency Allotment Plan for APAC Region (March 2024)