



ICAO

*International Civil Aviation Organization***Tenth Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/10)***Bangkok, Thailand, 24 - 26 May 2023*

Agenda Item 2: Review of outcomes of relevant meetings

REVIEW OF RELEVANT MEETINGS

(Presented by the Secretariat)

SUMMARY

This paper presents the relevant outcomes of the Twenty Sixth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/26), Thirty Third Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/33) and relevant discussions in other meetings.

1. INTRODUCTION

1.1 The Thirty-third Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/33) was hosted by Indonesia at the Trans Resort Bali in Bali, Indonesia from 22 to 24 November 2022 as a hybrid event (in-person and virtual participation). The Meeting was attended by **326** participants from **30** Member States, **2** Special Administrative Regions of China, and **7** International Organizations (ACI, CANSO, IATA, ICAO, IFALPA, IFATSEA and PASO). The APANPIRG/33 meeting report, working papers, information papers, and other resources can be accessed by the following link:

<https://www.icao.int/APAC/Meetings/Pages/2022-APANPIRG33.aspx>

1.2 The Twenty Sixth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/26) of APANPIRG was held from 5 to 9 September 2022 via Video Tele-Conference (VTC) using Microsoft Teams. The meeting was attended by **247** participants from **26** States/Administrations, and **4** International Organizations, including 21 participants from industry partners. The CNS SG/26 meeting report, working papers, information papers, and other resources can be accessed by the following link:

<https://www.icao.int/APAC/Meetings/Pages/2022-CNS-SG-26.aspx>

1.3 The APANPIRG/33 meeting reviewed the outcomes of the CNS SG/26 and noted with appreciation the work done and achievements by the CNS SG and the contributory bodies reporting to APANPIRG through the CNS SG. The meeting discussed CNS-related matters and took actions discussed in the next section on the report of CNS SG/26 meeting and other papers presented under Agenda Item 3.4 of APANPIRG/33.

1.4 This paper summarized relevant information and updates with the highlight of the reviewed outcomes of relevant discussions of other meetings of CNS SG/26 and APANPIRG/33.

2. DISCUSSION

The actions taken by APANPIRG/33 meeting on Aeronautical Communications Services and Systems related matters are highlighted in blue below:

2.1 The CNS SG/26 meeting adopted the following **5** Conclusions and **2** Decisions:

Reference	Subject
Conclusion CNS SG/26/03 <i>(ACSICG/09/04)</i>	- Revised AFTN/ATSMHS Routing Directory
Decision CNS SG/26/04 <i>(SWIM TF/06/01))</i>	- The Use of the Internet for MET Information Services in Regional SWIM architecture
Decision CNS SG/26/07 <i>(SWIM TF/06/06)</i>	- Revised SWIM TF Terms of Reference
Conclusion CNS/SG/26/09	- Update of Flight Inspection Guidance Material (FIGM)
Conclusion CNS SG/26/10 <i>(SURICG/7/1 (DAPs WG/5/1))</i>	- Mode S DAPs IGD 4.0
Conclusion CNS SG/26/12 <i>(SURICG/7/4)</i>	- Revised ADS-B Implementation and Operations Guidance Document (AIGD)
Conclusion CNS SG/26/13 <i>(ATMAS TF/3/1)</i>	- ATMAS IGD Edition 1.0

2.2 The contents of the above Conclusions/Decisions adopted by the CNS SG/26 are provided in **Attachment A** to this paper.

2.3 Based on the outcome of discussions on various agenda items, the CNS SG/26 meeting developed **5** Draft Conclusions and **1** Draft Decision for consideration by APANPIRG/33 Meeting, which were further adopted by APANPIRG/33. The Conclusions/Decisions adopted by APANPIRG/33 are as follows:

Reference	Subject
Conclusion APANPIRG/33/6 <i>(CNS SG/26/01 (ACSICG/09/01 (CRV OG/09/01)))</i>	- Revised Amendment of the Management Service Agreement for CRV project (RAS14801)
Conclusion APANPIRG/33/7 <i>(CNS SG/26/02 (ACSICG/09/02 (CRV OG/10/01)))</i>	- Extension of CRV Contract for one year.
Decision APANPIRG/33/8 <i>(CNS SG/26/05 (SWIM TF/06/03))</i>	- Harmonization of Timelines for SWIM-related Initiatives

- Conclusion APANPIRG/33/9** (CNS SG/26/06 (SWIM TF/06/02, SWIM TF/06/04)) - The Asia-Pacific SWIM Implementation Timeframe and inclusion of the Asia/Pacific SWIM Implementation in the Asia/Pacific Seamless ANS Plan
- Conclusion APANPIRG/33/10** (CNS SG/26/08 (SRWG/6/2)) - Planning Principle for Aeronautical Frequency Bands of 108-117.975 MHz, 960-1215 MHz and 117.975-137 MHz
- Conclusion APANPIRG/33/11** (CNS SG/26/11 (SURICG/7/3)) - Revised Surveillance Strategy for the APAC Region

2.4 All APANPIRG/33 Conclusions related to CNS are provided in **Attachment B** to this paper.

2.5 The following captures the highlights of previous discussions relevant to this Meeting.

Aeronautical Fixed Service (AFS)

Outcome of ACSICG/9

2.6 The Meeting noted that CNS SG/26 reviewed the various topics discussed in ACSICG/9, updated the AMHS/ATN implementation status in States, reviewed the outcomes of CRV OG/9 and CRV OG/10 meetings which included discussions on the upgrade/downgrade CRV circuits subscribed and contract extension requirements, discussed and addressed the implementation issues, further explored Inter-regional AFS connection, and shared experience on AFS related cybersecurity issues.

Updates on CRV Pioneer State Contribution to the ICAO Managed Service Agreement

2.7 The ICAO Secretariat informed that in CRV OG/2 about the fund balance of USD 104,596 and proposed a draft of revision of Annex 1b to the Management Service Agreement (MSA), and adopted as Conclusion APANPIRG/28/19: *Amendment of the Management Service Agreement for CRV project (RAS14801)* which remains as one of outstanding Conclusions/Decisions up to APANPIRG/32 held in December 2021. With the efforts of the ICAO Secretariat, ICAO TCB, CRV OG co-chairs and ACSICG Chair, the Revised Annex 1 to MSA was prepared that the fund will be utilised in the span of 5 years starting from 31 March 2022 to 31 March 2027. The CRV OG/9 meeting requested Member States to provide examples of activities under different categories provided in scope of supporting CRV Network as described in section 10.5 as an action item of CRV OG/9. The following Conclusion was adopted for the next step for using the rest of CRV Pioneer State Contribution to the ICAO MSA, which superseded the Conclusion APANPIRG/28/19.

Conclusion APANPIRG/33/6 (CNS SG/26/01 (ACSICG/09/01 (CRV OG/09/01))): Revised Amendment of the Management Service Agreement for CRV project (RAS14801)	
<p>What: Recognizing that ICAO Technical Cooperation Bureau satisfactorily completed all the defined work items in the initial Management Service Agreement (MSA) and Project Document of RAS14801, that the required payments were settled, and that in end 2016, all the requirements of both parties have been fully completed and closed on record, That,</p> <p>i) all Pioneer States are encouraged to counter-sign the Revised amended Pro Document provided in Appendix A to Agenda Item 3.4;</p> <p>ii) any Pioneer State not countersigning is entitled to get its share of the</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>

remaining fund balance back. and		
iii) a Pioneer State for which a direct CRV connection is not considered feasible in 2017 by the selected vendor is entitled to get its initial contribution in full		
Why: The initial scope of MSA was completed by ICAO TCB which allowed for a successful evaluation process and selection of a best and final offer; a majority of Pioneer States is willing to use the rest of their initial contribution to continue to support CRV implementation.	Follow-up: <input checked="" type="checkbox"/> Required from States	
When: 24-Nov-22	Status: Adopted by PIRG	
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:		

Proposal to Extend CRV Contract

2.8 The first meeting of ICAO CRV Steering Group created by CRV OG/9 reviewed and discussed the requirement of additional efforts to support pacific Member States to join CRV, and advised to extend the contract duration for **one additional year**. Endorsed in CRV OG/10, ACSICG/9 and CNS SG/26, the Meeting adopted the following Conclusion:

Conclusion APANPIRG/33/7 (CNS SG/26/02 (ACSICG/09/02 (CRV OG/10/01))): Extension of CRV Contract for one year		
What: a) Recognizing that as per current contract, all authorities shall join the CRV project and sign the relevant Service Contract(s) with PCCWG with the billing start date on or before 31 December 2022 to not impose additional charges by the service provider and based on the survey responses of 2022, many Member States are in process to join CRV which may not be completed by December 2022, it is recommended to extend current CRV contract for one year . b) If agreed to extend, as per amended CRV contract, all authorities shall join the CRV program and sign the relevant Service Contract(s) with PCCWG with the billing start date on or before 31 December 2023 to not impose additional charges by the service provider. c) After the extension, the CRV contract expiry date will be 31 December 2028 .	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical	
Why: Several ICAO Member States have requested to extend CRV contract due to COVID-19 pandemic in CRV Implementation webinar held in 2021 and based on the response of the survey done in 2022, many Member States are in process to join CRV which may not be completed by December 2022.	Follow-up: <input checked="" type="checkbox"/> Required from States	
When: 24-Nov-22	Status: Adopted by PIRG	
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:		

Other AFS-related topics

2.9 The Meeting reviewed the proposal endorsed of the upgrade/downgrade/addition of

new services or sites in CRV contract and the further work for revision of relevant documentation of CRV common package. The Meeting also noted of the publication of the ICAO APAC CRV OG Operations Manual as Version 1.1 via *Decision ACSICG/09/03*, the publish of Revised AFTN/ATSMHS Routing Directory as 29th Edition via *Conclusion CNS SG/26/03 (ACSICG/09/04)*, the current discussion status of interconnection of CRV with REDDIG II and new PENS, the discussion on Aeronautical Fixed Service (AFS) Cybersecurity Considerations for Information over CRV, the review on AMHS readiness status for supporting IWXXM Traffic of the States/Administrations in support to the monitoring of *Beijing Declaration* with a summary provided at **Appendix B to Agenda 3.4**, and the request on ATS Messaging Management Centre to invite all COM Centres to update their FTBP capabilities information.

Information Management (IM)

Outcome of SWIM TF/6

Consideration of SWIM Architecture for Efficient Provision of MET Information Services

2.10 With the operational needs of efficient MET information service provision, the Use of the Internet for MET Information Services in Regional SWIM architecture was endorsed as *Decision CNS SG/26/04 (SWIM TF/06/01)* to include the use of Internet for meteorological information services in designing the regional SWIM architecture. The SWIM TF/6 meeting also discussed the need of participation of MET experts in SWIM TF and requested Member States to nominate MET experts to contribute and participate in various tasks of SWIM TF. The Meeting also noted that the revised SWIM TF ToR was adopted by CNS SG via *Decision CNS SG/26/07*.

Harmonization of the Asia-Pacific SWIM Implementation Initiatives and Timeline

2.11 Considering the need to align all the timelines across different ICAO Air Navigation Commission Technical Panels regarding components related to SWIM to assist States in planning their investment and transition, the Meeting adopted the following Decision:

Decision APANPIRG/33/8 (CNS SG/26/05 (SWIM TF/06/03)):	
Harmonization of Timelines for SWIM-related Initiatives	
What: To feedback to the ICAO Air Navigation Commission Technical Panels for a need to harmonize the implementation timelines of SWIM-related initiatives.	Expected impact: <input checked="" type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: There exists different timelines for the implementation of SWIM-related initiatives identified by various ICAO ANC Technical Panels. This creates confusion within States on their corresponding implementation sequences and as to how these different timelines are to be met.	Follow-up: <input type="checkbox"/> Required from States
When: 24-Nov-22	Status: Adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input checked="" type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SWIM TF	

SWIM Implementation and the Asia-Pacific Seamless ANS Plan

2.12 To align the relationship between SWIM implementation in Asia/Pacific and the

Asia/Pacific Seamless ANS Plan, it was proposed that CNS SG and SWIM TF consider including SWIM implementation as part of Performance Improvement Plan in the next edition the Asia/Pacific Seamless ANS Plan aligned with SWIM implementation timeframe. Considering that APAC SWIM Timeline is proposed to be started from 2024 and to incorporate into the Seamless ANS Plan v5.0, which will be published in 2025, the SWIM TF/6 meeting agreed to add SWIM-B2/1- Information Service Provision and SWIM-B2/2- Information Service Consumption under Priority Two in the Seamless ANS Plan v4.0 to be published in 2022. The content to be added to the plan was proposed in **Appendix C to Agenda 3.4**. Accordingly, the Meeting adopted the following Conclusion:

Conclusion APANPIRG/33/9 (CNS SG/26/06 (SWIM TF/06/02, SWIM TF/06/04)):	
The Asia-Pacific SWIM Implementation Timeframe and inclusion of the Asia/Pacific SWIM Implementation in the Asia/Pacific Seamless ANS Plan	
<p>What: To set the timeframe for the implementation of SWIM in the Asia-Pacific region to be between 2024 and 2030, with 2030 being the target timeline for implementation completion.</p> <p>To include SWIM implementation in the next edition of the Asia/Pacific Seamless ANS Plan.</p>	<p>Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: This is to set the concrete target implementation of the Asia-Pacific regional SWIM to assist States in harmonizing their implementation plans in order to achieve the seamless information exchange across the region in time for future operations, e.g. FF-ICE. Additionally, to ensure that SWIM, a key building block to achieve the vision outlined in ICAO Doc 9854 Global ATM Operational Concept (GATMOC), is captured in the Asia/Pacific Seamless ANS Plan, providing an overall framework for Asia/Pacific States to plan their implementations to meet the future performance requirements.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 24-Nov-22</p>	<p>Status: Adopted by PIRG</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SWIM TF</p>	

Other IM-related Topics

2.13 The Meeting noted the result of Asia/Pacific SWIM Implementation Plan and Status Survey and its subsequent recommendations, and the discussion on a proposal to establish a Joint Work Group between the ATM SG and CNS SG to Create the FF-ICE Implementation Strategy, which the CNS SG/26 meeting deliberated at length on the rationale and appropriate timing for the proposal that the CNS SG/26 deemed important to consider how best we could make use of the existing contributory bodies under the CNS SG, as well as the implementation of FF-ICE by its nature requires a strong and close coordination and cooperation between operational and technical experts. Noting that ATM Automation System Task Force will host a half-day seminar in conjunction with its 4th meeting in 2023 to discuss topics of interest including FF-ICE, SWIM, system interoperability, etc., the CNS SG/26 requested the ICAO Secretariat to ensure that SWIM TF and ACSICG experts are involved in the FF-ICE workshop/webinar/seminar to be held by ATMAS TF.

Aeronautical Mobile Communications Service and Aeronautical electromagnetic spectrum utilization

Outcome of SRWG/6 and Frequency Spectrum related Issues

Aeronautical Frequency Spectrum Coordination and Planning Criteria in APAC

2.14 The meeting reviewed the current practices and coordination procedures for aeronautical facilities and services operating in the aeronautical frequency bands and the evolution of planning criteria employed. States should coordinate in principle with the Regional Office for all frequency assignments that may affect the use of frequency assignments coordinated through the ICAO mechanism. Not doing so will ultimately result in unforeseen interference, less efficient and less flexible assignment coordination and planning in a congested environment, as there will not be any possibility of optimizing assignments to solve congestion, as well as for a chance to conduct a meaningful simulation at the regional level. The Secretariat raised that use of frequencies belongs to States themselves and thus needs to encourage States to coordinate with ICAO office to avoid possible interference. With consideration that frequencies should be coordinated before deployment by default to avoid undesirable interference, the Chair suggested the Secretariat to issue a State Letter for promulgating the *Draft Conclusion SRWG/6/1 - Frequency coordination for aeronautical frequency bands of 190-526.5 kHz, 108-117.975 MHz, 960- 1215 MHz and 117.975-137 MHz.*

2.15 The meeting discussed the frequency planning principles adopted by the ASIA/PAC/3 RAN Meeting in 1993 which covered NDB (List 1), VOR, DME and ILS (List 2), VHF COM (List 3). The latest revisions of the Handbook on Radio Frequency Spectrum Requirement for Civil Aviation (Doc 9718) Volumes I and II have been approved by the Secretary-General and published in early 2022. Subsequently, the revised planning criteria contained in the revision for compatibility assessment of frequency assignments to VHF COM systems and NAV systems (ILS, VOR, DME and GBAS/VDB) have been incorporated in the new release of the Frequency Finder tool. With the Doc 9718 overrides previous RAN meeting outcome, the Meeting adopted following Conclusion:

Conclusion APANPIRG/33/10 (CNS SG/26/08 (SRWG/6/2)):	
Planning Principle for Aeronautical Frequency Bands of 108-117.975 MHz, 960-1215 MHz and 117.975-137 MHz	
What: That, Doc 9718, Handbook on Radio Frequency Spectrum Requirements for Civil Aviation, Volume II, Second Edition – 2022, is adopted as the planning principle for aeronautical facilities and services operating in the aeronautical frequency bands of 108-117.975 MHz, 960- 1215 MHz and 117.975- 137 MHz in APAC.	Expected impact: <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To implement the updated ICAO provisions	Follow-up: <input type="checkbox"/> Required from States
When: 24-Nov-22	Status: Adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: -	

2.16 The Meeting noted the other discussions in SRWG/6, including the analysis on survey outcomes of VHF COM Simulation for 2030 and a frequency simulation for India conducted by ICAO Headquarter to demonstrate the frequency planning techniques with actual situation to estimate the future traffic growth and subsequently the need for an increase in frequency channels. The Meeting also noted the preparation for implementation of VHF COM 8.33 kHz channel spacing requirements in APAC and relevant issues identified by Indonesia, and the outcome of ad-hoc group activities and initial survey result of the introduction of 50 kHz channel spacing for ILS and VOR Facilities in APAC. The Meeting also noted the updates to the Frequency Finder Tool provided by ICAO Headquarters, and the review on the draft of APAC Regional Aeronautical Radio Frequency Management Guidance Material which to be further reviewed by States. Outcomes of relevant meetings and regional updates, including the Outcomes of APT-ICAO Webinar on 5G Implementation and Radio Altimeter, Amendment 91 to Annex 10 Volume III on SELCAL, and the outcome of APG23-4 Meeting, were also provided to the Meeting.

2.17 China presented to CNS SG/26 that the CAAC continues to support the development of the new-generation AeroMACS, and has issued a roadmap for the application of the new-generation aeronautical broadband communications in April 2021 to promote the advanced technologies

implementation within the AeroMACS dedicated spectrum 5091-5150MHz. The CNS SG/26 was informed that with the support of the CAAC, the AeroMACS Forum has already commenced the initial analysis on the required revisions of AeroMACS SARPs and Technical Manual to make them less restrictive or technology specific, so as to give the ecosystem the flexibility to provide AeroMACS services using any additional technology (e.g., LTE, 5G) that meets the minimum performance characteristics and capabilities of AeroMACS.

Surveillance

Outcomes of SURICG/7 Meeting

2.18 The Meeting reviewed the outcomes of SURICG/7 including the achievements made by the Fifth Meeting of Mode S Downlinked Aircraft Parameters Working Group (DAPs WG/5) and the Second Meeting of the Surveillance Study Group (SURSG/2).

Review Report of SURSG/2

2.19 SURSG/2 provided a progress summary of SURSG tasks since SURSG/1, listed out major recommendations in the Study Report, and proposed way forwards for the recommendations for members' discussions and decisions. SURSG/2 reviewed and deliberated the recommendations and moving forward proposals provided in the Table. The details of revised high-level recommendation and moving forward agreed by SURSG/2 were provided in the paper.

2.20 SURSG/2 deliberated and approved the necessity for establishment of the Surveillance Sharing in SWIM Trial Implementation Group (S3TIG) to oversee a trial proposed by the recommendation. SURICG/7 suggested that it would be more effective to form S3TIG as an ad-hoc group within SURSG in lieu of a contributory body under SURSG.

2.21 SURSG/2 discussed the Surveillance Data Sharing Proof of Concept (POC) conducted by HKCAD, PCCWG and Frequentis ComSoft. PCCWG shared the outcomes of a POC conducted on 4 March 2022, which was the collaboration of HKCAD, PCCWG and partner Frequentis ComSoft to demonstrate sharing ADS-B data in a simulated SWIM over CRV environment and the benefits of a Surveillance Central Data Processor (SCDP). PCCWG prepared a video to introduce the POC exercise which was presented in SURICG/7.

2.22 ROK presented its efforts to Implement FF-ICE Interoperability using Globally Unique Flight Identifier (GUFID) in SWIM Environment. The SURSG/2 meeting noted that by introduction of GUFID to the surveillance data, it not only solved mismatch problems on co-relation between FPL and surveillance data by Call sign, DoF, departure/arrival aerodrome, but also made the co-relation become simple and reliable. Additionally, ROK shared the detailed method of introducing the GUFID in the surveillance information domain.

Automation

Outcome of ATMAS TF/3 Meeting and ATM Automation System related Issues

Webinar on Implementation of ATM Automation System

2.23 The Webinar on Implementation of ATM Automation System was organized in conjunction with the ATMAS TF/3 meeting on 7 June 2022. The Webinar was conducted to cover Experience Sharing of Practices, and System Integration and Interoperability respectively. It provided the APAC region an update on the latest developments and practices related to ATM automation systems at global and regional levels. Total eight comprehensive presentations from contributors were

presented during the webinar.

Repository of the ATMAS in APAC

2.24 The table of ATMAS status in APAC region, re-designed and re-formatted by the ad-hoc group led by Indonesia, has been reviewed and adopted by the ATMAS TF/3 meeting. State Letter Ref.: T 8/12.18: AP139/22 (CNS) has been issued on 21 October 2022 to invite States/Administrations to complete and return the table of ATMAS Status in APAC Region.

Air Traffic Management Automation System Implementation and Operations Guidance Document (ATMAS IGD)

2.25 The Meeting noted that the ATMAS IGD was adopted by ATMAS TF/3 and CNS SG/26 via *Conclusion CNS SG/26/13 (ATMAS TF/3/1) - Air Traffic Management Automation System Implementation and Operations Guidance Document (1.0)*.

Other ATM Automation System related topics

2.26 The Meeting noted the Repository of AIDC Implementation Status in APAC was formulated, and invited States to validate and supplement the information in the Repository via State Letter Ref.: T 8/3.5: AP135/22 (CNS) on 17 October 2022. The Meeting also noted the discussion of the consolidated implementation issues reported and resolved.

CNS Review and Updates

CNS Deficiencies

2.27 The only outstanding issue was related to unreliability of AFS communication between Afghanistan and Pakistan. Poor performance of AFS including data communication between Kabul and Karachi and ATS voice communication between Lahore and Kabul had become issues of regional concerns. In addition, the meeting noted WP/10 of ATM SG/9 regarding the IFALPA defined deficiencies, States/Administrations are encouraged to take note of CNS-related IFALPA deficiencies and take proper action to address these IFALPA deficiencies. Air Navigation Deficiencies were reviewed under Agenda Item 4 of the Meeting.

Other Global and Regional Issues

2.28 The CNS SG/26 meeting reviewed Regional CNS Requirements in ICAO APAC e-ANP, Seamless ANS Plan and National Air Navigation Plan (NANP), the regional commitment progress on Beijing Declaration Implementation Related to CNS, as well as updates on Seamless ANS Plan. The meeting also shared the Update on ICAO GANP Study Group related to CNS and the presentation from CNSS Section and Airport Operations and Infrastructure (AOI) Section, ANB, ICAO HQ, regarding global developments on CNS.

Human Factors and Air Traffic Safety Electronics Personnel (ATSEP)

Review Outcomes of Small Working Group Study on Human Factor Issues of ATSEP

2.29 IFATSEA-led Small Working Group on human factor issues of ATSEP presented the draft guidance material for review in the CNS SG/26 meeting. ICAO Secretariat suggested to share the guidance material with APAC Member States for their comments and observations via State Letter. The meeting encouraged Member States to review the guidance material and respond to the State Letter in a timely manner.

Standardizing the ATSEP Training for the Successful Implementation of the GANP

2.30 The Meeting noted in CNS SG/26 a request was made on specifying initial training for certain prioritized modules of ASBU as an integral part of GANP. ICAO Secretariat noted the deliberation and will work with IFATSEA to share with the relevant expert group of ICAO HQ and the deliberation be evaluated along with other topics identified as valuable to the ATSEP training objectives.

Cybersecurity and New Technologies

Updates on ICAO International Aviation Trust Framework

2.31 The Meeting noted the sharing of recent development ICAO's work on building an International Aviation Trust Framework since CNS SG/25, including developments of TFSG, information security framework (ISF), new proof of concept exercise, and digital identity. The meeting was informed that several papers on the trust framework and cybersecurity were received for A41, and ICAO is working on SkyTalk and sidebar meetings to promote cyber activities within ICAO.

Application of New Technologies

2.32 Apart from encouraging the Member States to share their experience on new technologies application, as the response to APANPIRG's call on enhancing engagement with the industry, CNS SG and its contributory bodies invited various industry partners to share and update the latest progress in relevant areas. The sharing and discussions covered Surface Security Enhancement Application Based on Voice and Photoelectric Intelligent Assistant; Enhancement of AeroMACS SARPs and Technical Manual; LEO Navigation Augmentation Concept, Constellation Construction and Civil Aviation Application Research; Digital Tower and Apron Management System to Support Safe and Efficient Operation, etc.

Industry Presentations

2.33 There were four industry presentations invited in CNS SG/26. *CETC Glarun Technology* presented Comprehensive Applications of the Radar-based Monitoring Systems in Airport; *Searidge* presented the Resilience, Recovery, Refocus as its 3Rs concept applied in the process to implement digital tower; *Huawei* presented Advanced Digitization Facilitating Air Traffic Development; and *Saab* shared its Experience on Digital Towers.

CNS Works and Other Business

Impact of COVID-19 to CNS Works in 2022

2.34 Due to the decline in implementation of CNS/ATM projects by the Member States, the planned programme has been postponed or has broken into phases and the harmonisation of implementing activities between neighbouring States and among stakeholders became more difficult.

Tracking CNS-Related APANPIRG Conclusions/Decisions

2.35 In view of the importance of the APANPIRG Conclusions/Decisions, the Secretariat has reviewed the reports of the former meetings from APANPIRG/1 to APANPIRG/32, extracted more than 600 CNS-related APANPIRG Conclusions/Decisions from the reports on various media, and consolidated in one Microsoft Excel table with marked status as *in force/applicable*, *closed*, *not applicable*, *group dissolved*, *superseded*, *task completed*, and *undertaken by ICAO HQ/Panels*, for easy reference and tracking by States/Administrations.

Other papers presented under Agenda Item 3.4 of APANPIRG/33

Development of Fully Integrated Safeguarding Surfaces to Uphold Flight Safety While

Facilitating Pressing Needs of Infrastructure / Building Developments in Hong Kong (WP/18)

2.36 This paper highlighted the potential impacts to airport and ATC operation induced by erection of new/modification of existing buildings at or in vicinity of airports. It presented the successful experience for Hong Kong, China to make use of an advanced computer modelling technology to develop fully integrated safeguarding surfaces with high accuracy and publish them under a legal framework to ensure airport and ATC operation are well protected to uphold flight safety while facilitating the pressing needs of infrastructure/building developments to cope with various economic and development needs of the community. The Meeting was invited to encourage States/Administrations to be fully aware of the potential risks induced by protrusion of safeguarding surfaces; and develop integrated safeguarding surfaces for CNS equipment, aerodrome and flight procedures with high accuracy, and publish them under a regulatory framework.

Managing Changes to Spectrum Use for Safe Coexistence (IP/06) - United States

2.37 The United States informed the Meeting about the 5G C-Band Implementation in the United States in details, with lessons learnt and future focus beyond. As the radio frequency spectrum is a natural resource with finite capacity and constantly increasing demands, internationally, the aviation industry relies on the use of spectrum for a variety of technologies that ensure safe, efficient and cost effective air travel. Similarly, innovation by the telecommunications industry is critical for economic and societal advances throughout the world, requiring States charged with making spectrum decisions to balance these needs. It was believed that increased and sustained cooperation, coordination, and communication among regulatory entities, consistent with their respective roles and authorities, will be conducive to promoting spectrum coexistence. The Meeting was invited to note the information provided in this paper and visit the FAA's 5G and Aviation Safety website (www.faa.gov/5g) for more detailed information.

CNS-ATM System Upgrade in Ulaanbaatar FIR (IP/10) – Mongolia

2.38 The Meeting noted the sharing from Mongolia on their strategic plan “Seamless aviation-2030” in accordance to global documents such as ICAO GANP, ASBU, Seamless ANS Plan and regional civil aviation development planning and long-term "Vision-2050" policy of Mongolia, advising their successfully-redesigned Mongolian airspace and their progressing of air navigation equipment upgrades and ANS infrastructure developments.

The Implementation of Surveillance Systems in Pyongyang FIR (IP/11) - Democratic People's Republic of Korea

2.39 The Meeting noted the information provided by DPRK on the implementation of surveillance systems to provide the safety, regularity and efficiency of the international flights within Pyongyang FIR. The information of DPRK AIP concerned with ADS-B implementation and the SIC assignment within Pyongyang FIR were provided in the paper. DPRK expressed the postponement of their plan to share their SSR surveillance data due to not joining the CRV.

CNS SG Action Items

2.40 The CNS SG identified a number of actions items, Member States were encouraged to take active follow-up actions on CNS related actions items resulted from the relevant meetings. The Action Items from CNS SG/26 is provided in **Attachment C** for information and necessary actions.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the outcome of relevant meetings and take any necessary follow-up actions;
and
- b) discuss any relevant matters as appropriate.

ACSICG/10
Attachment A to WP/02

List of Conclusions/Decisions adopted by CNS SG/26 on behalf of APANPIRG on Technical Matters

Conclusion CNS SG/26/03 (ACSICG/09/04) - Revised AFTN/ATSMHS Routing Directory	
What: That, the AFTN/ATSMHS Routing Directory for the APAC Region provided in Appendix B to the report be further updated and distributed to States/Administrations as 29 th Edition.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: A number of new ATSMHS connections have been established and became operational. Consequential amendments to the AFTN/ATSMHS Routing Directory are required.	Follow-up: <input type="checkbox"/> Required from States
When: 9-Sep-22	Status: Adopted by Subgroup
Who: <input checked="" type="checkbox"/> CNS SG <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	
Decision CNS SG/26/04 (SWIM TF/06/01) - The Use of the Internet for MET Information Services in Regional SWIM architecture	
What: That, the use of Internet for meteorological information services will be considered in designing the regional SWIM architecture.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To support cost-effective and efficient meteorological information services for exchange of less-sensitive meteorological information in SWIM.	Follow-up: <input type="checkbox"/> Required from States
When: 9-Sep-22	Status: Adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SWIM TF	
Decision CNS SG/26/07 (SWIM TF/06/05) – Revised SWIM TF Terms of Reference	
What: That, the revised SWIM TF Terms of Reference (ToR) as shown in Appendix E be adopted.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To align with the progress made since the SWIM TF/5 and outcomes of Action item 25-1 from CNS SG/25.	Follow-up: <input type="checkbox"/> Required from States
When: 09 September 2022	Status: Adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SWIM TF	

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Attachment A to WP/02

List of Conclusions/Decisions adopted by CNS SG/26 on behalf of APANPIRG on Technical Matters

Conclusion CNS SG/26/09 - Update of Flight Inspection Guidance Material (FIGM)	
What: That, the Edition 3.0 of the Flight Inspection Guidance Material (FIGM) provided in Appendix F to the Report be adopted.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> 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: <input type="checkbox"/> Required from States
When: 9-Sep-22	Status: Adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: -	

Conclusion CNS SG/26/10 (SURICG/7/1 (DAPs WG/5/1)): Mode S DAPs IGD 4.0	
What: The Mode S DAPs Implementation and Operation Guidance Document Edition 4.0 provided in Appendix G to the Report be adopted	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: The revised draft includes ADS-B DAPs and adds guidance on the measurement of 1030/1090 MHz usage.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 9-Sep-22	Status: Adopted by Sub-group
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: -	

Conclusion CNS SG/26/12 (SURICG/7/4) - Revised ADS-B Implementation and Operations Guidance Document (AIGD)	
What: That, the revised ADS-B Implementation and Operations Guidance Document (AIGD) provided in Appendix I to the Report, which consolidated all change proposals during SURICG/7, be adopted as Version 15.0.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: Updates from SURICG/7	Follow-up: <input type="checkbox"/> Required from States
When: 9-Sep-22	Status: Adopted by Subgroup
Who: <input checked="" type="checkbox"/> Subgroup <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SURICG	

Conclusion CNS SG/26/13 (ATMAS TF/3/1) - ATMAS IGD Edition 1.0	
What: The Air Traffic Management Automation System Implementation and Operations Guidance Document Edition 1.0 provided in Appendix J to this Report be adopted	Expected impact: <input type="checkbox"/> Political / Global

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List of Conclusions/Decisions adopted by CNS SG/26 on behalf of APANPIRG on Technical Matters

	<input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: The revised draft has been added the DMAN function and reviewed/updated with inputs from various States	Follow-up: <input type="checkbox"/> Required from States
When: 9-Sep-22	Status: Adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: ATMAS TF	

A List of Conclusions adopted by APANPIRG/33 Meeting related to CNS

Conclusion APANPIRG/33/6 (CNS SG/26/01 (ACSICG/09/01 (CRV OG/09/01))): Revised Amendment of the Management Service Agreement for CRV project (RAS14801)	
<p>What: Recognizing that ICAO Technical Cooperation Bureau satisfactorily completed all the defined work items in the initial Management Service Agreement (MSA) and Project Document of RAS14801, that the required payments were settled, and that in end 2016, all the requirements of both parties have been fully completed and closed on record, That,</p> <p>i) all Pioneer States are encouraged to counter-sign the Revised amended Pro Document provided in Appendix A to Agenda Item 3.4;</p> <p>ii) any Pioneer State not countersigning is entitled to get its share of the remaining fund balance back. and</p> <p>iii) a Pioneer State for which a direct CRV connection is not considered feasible in 2017 by the selected vendor is entitled to get its initial contribution in full</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: The initial scope of MSA was completed by ICAO TCB which allowed for a successful evaluation process and selection of a best and final offer; a majority of Pioneer States is willing to use the rest of their initial contribution to continue to support CRV implementation.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>
<p>When: 24-Nov-22</p>	<p>Status: Adopted by PIRG</p>
<p>Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:</p>	

Conclusion APANPIRG/33/7 (CNS SG/26/02 (ACSICG/09/02 (CRV OG/10/01))): Extension of CRV Contract for one year	
<p>What:</p> <p>a) Recognizing that as per current contract, all authorities shall join the CRV project and sign the relevant Service Contract(s) with PCCWG with the billing start date on or before 31 December 2022 to not impose additional charges by the service provider and based on the survey responses of 2022, many Member States are in process to join CRV which may not be completed by December 2022, it is recommended to extend current CRV contract for one year.</p> <p>b) If agreed to extend, as per amended CRV contract, all authorities shall join the CRV program and sign the relevant Service Contract(s) with PCCWG with the billing start date on or before 31 December 2023 to not impose additional charges by the service provider.</p> <p>c) After the extension, the CRV contract expiry date will be 31 December 2028.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input checked="" type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input checked="" type="checkbox"/> Ops/Technical</p>
<p>Why: Several ICAO Member States have requested to extend CRV contract due to COVID-19 pandemic in CRV</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>

A List of Conclusions adopted by APANPIRG/33 Meeting related to CNS

Implementation webinar held in 2021 and based on the response of the survey done in 2022, many Member States are in process to join CRV which may not be completed by December 2022.	
When: 24-Nov-22	Status: Adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other:	

Decision APANPIRG/33/8 (CNS SG/26/05 (SWIM TF/06/03)): Harmonization of Timelines for SWIM-related Initiatives	
What: To feedback to the ICAO Air Navigation Commission Technical Panels for a need to harmonize the implementation timelines of SWIM-related initiatives.	Expected impact: <input checked="" type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: There exists different timelines for the implementation of SWIM-related initiatives identified by various ICAO ANC Technical Panels. This creates confusion within States on their corresponding implementation sequences and as to how these different timelines are to be met.	Follow-up: <input type="checkbox"/> Required from States
When: 24-Nov-22	Status: Adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input checked="" type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SWIM TF	

Conclusion APANPIRG/33/9 (CNS SG/26/06 (SWIM TF/06/02, SWIM TF/06/04)): The Asia-Pacific SWIM Implementation Timeframe and inclusion of the Asia/Pacific SWIM Implementation in the Asia/Pacific Seamless ANS Plan	
What: 1. To set the timeframe for the implementation of SWIM in the Asia-Pacific region to be between 2024 and 2030, with 2030 being the target timeline for implementation completion. 2. To include SWIM implementation in the next edition of the Asia/Pacific Seamless ANS Plan.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: This is to set the concrete target implementation of the Asia-Pacific regional SWIM to assist States in harmonizing their implementation plans in order to achieve the seamless information exchange across the region in time for future operations, e.g. FF-ICE. Additionally, to ensure that SWIM, a key building block to achieve the vision outlined in ICAO Doc 9854 Global ATM Operational Concept (GATMOC), is captured in the Asia/Pacific Seamless ANS Plan,	Follow-up: <input checked="" type="checkbox"/> Required from States

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A List of Conclusions adopted by APANPIRG/33 Meeting related to CNS

providing an overall framework for Asia/Pacific States to plan their implementations to meet the future performance requirements.	
When: 24-Nov-22	Status: Adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SWIM TF	

Conclusion APANPIRG/33/10 (CNS SG/26/08 (SRWG/6/2)): Planning Principle for Aeronautical Frequency Bands of 108-117.975 MHz, 960-1215 MHz and 117.975-137 MHz	
What: That, Doc 9718, Handbook on Radio Frequency Spectrum Requirements for Civil Aviation, Volume II, Second Edition – 2022, is adopted as the planning principle for aeronautical facilities and services operating in the aeronautical frequency bands of 108-117.975 MHz, 960- 1215 MHz and 117.975- 137 MHz in APAC.	Expected impact: <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To implement the updated ICAO provisions	Follow-up: <input type="checkbox"/> Required from States
When: 24-Nov-22	Status: Adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: -	

Conclusion APANPIRG/33/11 (CNS SG/26/11 (SURICG/7/3)): Revised Surveillance Strategy for the APAC Region	
What: That, the Revised Surveillance Strategy for the APAC Region provided in Appendix D to Agenda Item 3.4 be adopted.	Expected impact: <input type="checkbox"/> Political / Global <input checked="" type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: To reflect the outcome of the latest development in surveillance technology.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 24-Nov-22	Status: Adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SURICG	

ACTION ITEMS OF CNS SG/26					
Action Item	Subject	Status / Target Date	Action Party	Status	Remarks / follow-up
26-1	Submit a joint CNS-ATM Working Paper to discuss and highlight the issue on alerts of AIDC messaging failure (details in WP/32 Air Traffic Management and Airspace Safety Monitoring Outcomes of CNS SG/26)	ATMAS TF/4	ICAO Secretariat		
26-2	Provide technical support to Sri Lanka for CRV Implementation	CNS SG/27	Sri Lanka, CRV OG Chairs, PCCWG, ICAO Secretariat		
26-3	Ensure SWIM TF and ACSICG experts are involved in the FF-ICE workshop/webinar/seminar to be held by ATMAS TF.	Next FF-ICE workshop/webinar/seminar	ICAO Secretariat		
26-4	State Letter for encouraging States to coordinate with ICAO APAC Regional Office before assigning frequencies for aeronautical services in frequency bands of 190-526.5 kHz, 108-117.975 MHz, 960 – 1215 MHz and 117.975 to 137 MHz that may affect the use of aeronautical frequencies in other States.	CNS SG/27	ICAO Secretariat		
26-5	Review and propose revise APAC Navigation Strategy, if required.	CNS SG/27	APAC Member States, ICAO Secretariat		
26-6	Organize a webinar/workshop on Inconsistent ICAO Aircraft Address and Target Identification between Surveillance Data and Flight Plan	CNS SG/27	Hong Kong China, IATA, ICAO Secretariat		
26-7	Prepare and share the State Letter to all APAC Member States to provide their comments on proposed ICAO ATSEP human factor guidance material.	CNS SG/27	ICAO Secretariat		
26-8	Share the proposition to identify and incorporate the relevant ASBU modules in Doc 10057 - Manual on Air Traffic Safety Electronics Personnel Competency-based Training and Assessment to the relevant HQ expert group	CNS SG/27	ICAO Secretariat		