

International Civil Aviation Organization

ICAO

**Twenty Fourth Meeting of the Communications/
Navigation and Surveillance Sub-group (CNS SG/24) of
APANPIRG**

Web-conference, 30 November – 4 December 2020

Agenda Item 2: Review outcomes of APANPIRG/RASG Chairpersons review, APANPIRG/30 meeting, 40th Session of ICAO Assembly, ATM Sub-group and other major meetings relevant to CNS Sub-group

OUTCOMES OF A40 AND APANPIRG/30 ON CNS

(Presented by the Secretariat)

SUMMARY

This paper presents the related outcomes of ICAO 40th Assembly, and APANPIRG/30 for review and action by the meeting.

1. INTRODUCTION

1.1 The 40th Assembly was held at ICAO Headquarters in Montréal, Canada, from September 24 to October 4, 2019, to establish the worldwide policy of the Organization for the upcoming triennium. During Assembly sessions, ICAO's complete work programme in the technical, economic, and legal cooperation fields was reviewed in detail. Assembly outcomes provided to the other bodies of ICAO and its Members to guide their continuing and future work. Documentation about this Assembly is available at: <https://www.icao.int/Meetings/A40/Pages/documentation.aspx>

1.2 APANPIRG/30 meeting was held from 4-6 November 2019 at ICAO APAC Office, Bangkok, Thailand. The meeting reviewed the outcomes of CNS SG/23 meeting held from 2 to 6 September 2019. The main outcome of CNS SG/23 meeting was consolidated in the Report of APANPIRG/30 Meeting which is posted at:

<https://www.icao.int/APAC/Meetings/Pages/2019-APANPIRG30.aspx>

2. DISCUSSION
Outcome of ICAO 40th Assembly

2.1 There was no outstanding issue on CNS in Assembly 40, however, some of the Assembly Resolutions were relevant to CNS area with reference to *Resolutions adopted by the Assembly* (Provisional Edition October 2019), including:

A40-4: Consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation;

A40-7: New entrants

A40-27: Innovation in aviation;

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A40-28: Consolidated statement of continuing ICAO policies in the legal field (Appendix F).

2.2 Under Agenda Item 30: *Other issues to be considered by the Technical Commission*, various topics were discussed, and the Technical Commission Report of 40th Assembly (Doc10137) incorporated some paragraphs relevant to CNS, including 30.14, 30.15, 30.16, 30.62, 30.68, and the Resolve 3 of Appendix G. The original text of aforementioned paragraphs is provided in **Attachment A** to this paper for reference.

2.3 Paragraph 30.68 reiterated the AN-Conf/13 Recommendation 2.2/1 as *Subject to existing priorities funded through the 2020-2022 Budget and the availability of extra-budgetary resources, Commission agreed that as recommended by AN-Conf/13 Recommendation 2.2/1, ICAO should launch a multidisciplinary “study to evolve the required CNS and frequency spectrum access strategy and systems roadmap in the short, medium and long term...”*.

2.4 The integrated communications, navigation, surveillance and spectrum Task Force (ICNSS-TF) was established in April 2020 to deal with difficult challenges posed by two relevant streams of ICAO activities: “Innovation in aviation” and “Long-term evolution of CNS systems and frequency spectrum access”. Aeronautical communications, navigation and surveillance (CNS) have traditionally been considered to be three separate functions, however, these three functions all rely on a scarce natural resource – continued and interference-free access to frequency spectrum. Various sectors of the industry compete for access to this resource to expand their services. As the pressure on the resource increases, it becomes evident that aviation needs to find ways to keep abreast of the rapid pace of technology advancement.

2.5 The ICNSS project focusses on an overall action plan of technology development (in the form of Roadmaps), as well as the streamlining of the CNS Standards making framework itself, including SARPs and detailed standards/specifications.

Outcome of APANPIRG/30 meeting

2.6 APANPIRG/30 reviewed the outcomes of the Twenty Third Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/23) of APANPIRG through WP/12. The meeting noted with appreciation the work done and achievements by the SG and the contributory bodies reporting to APANPIRG through the SG. The meeting discussed CNS related matters and took following actions on the report of CNS SG/23 meeting and other papers presented under AI 3.4.

2.7 The meeting noted that CNS SG/23 meeting reviewed the outcome of a number of meetings of APANPIRG contributory bodies, adopted following 9 Conclusions and 4 Decisions on technical and operational matters:

- | | | |
|--|---|---|
| Conclusion CNS SG/23/1 (<i>ACSICG/6/1</i>) | - | AFTN/AMHS-Based Interface Control Document for ATFM |
| Conclusion CNS SG/23/3
(<i>ACSICG/6/3-CRV OG/5/2</i>) | - | CRV Implementation Plan amendment (Version 2) |
| Conclusion CNS SG/23/4 (<i>SWIMTF/3/1</i>) | - | The philosophy and roadmap for APAC SWIM implementation |

- Conclusion CNS SG/23/5 (*SWIMTF/3/3*) - Interoperable Registry Model for SWIM Registry in APAC Region
- Conclusion CNS SG/23/10 (*SURICG/4/1*) - ADS-B and Flow Management
- Conclusion CNS SG/23/11 (*SURICG/4/2*) - UAS Cooperative Surveillance Equipage
- Conclusion CNS SG23/12 (*SURICG/4/3*) - Adoption of Mode S DAPs Implementation and Operations Guidance Document
- Conclusion CNS SG/23/15 (*SURICG/4/7*) - Revised ADS-B Implementation and Operations Guidance Document (AIGD)
- Conclusion CNS SG/23/17 - Adoption of Guidance for Procurement and Certification of CNS/ATM Services and Systems
- Decision CNS SG/23/2 (*ACSICG/6/2 - CRV OG/5/1*) - Revised Terms of Reference of CRV OG
- Decision CNS SG/ 23/9 - Establishment of the Asia/Pacific Ground-based Augmentation System (GBAS)/Satellite-based Augmentation System (SBAS) Implementation Task Force (APAC GBAS/SBAS ITF)
- Decision CNS SG/23/13 (*SURICG/4/5*) - Establishment of the Asia/Pacific ATM Automation System Task Force (ATMAS/TF)
- Decision CNS SG/23/18 - Need for Study Human Factor Issues of Air Traffic Safety Electronics Personnel (ATSEP)

2.8 The CNS SG/23 meeting also endorsed 4 draft Conclusions which were then reviewed and adopted by APANPIRG/30 meeting:

Conclusion APANPIRG/30/12 (CNS SG/23/6-SWIM TF/3/4) - Asia/Pacific Regional FIXM Extension for ATFM	
<p>What: That, noting:</p> <ol style="list-style-type: none"> 1. the need for interoperable system-to-system information exchange to support the implementation and automation of cross-border ATFM in the Asia/Pacific Region; and 2. the data attributes included in the Asia/Pacific FIXM version 4.1 Extension were endorsed by ATFM/SG. <p>The Asia/Pacific FIXM version 4.1 Extension described and provided in Appendix A to the Report on agenda item 3.4 be adopted and uploaded to the ICAO APAC Regional Office website for immediate use by Asia/Pacific Administrations, where the capability to do so exists, for cross-border ATFM information exchange.</p>	<p>Expected impact:</p> <ul style="list-style-type: none"> <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
<p>Why: To provide the information exchange model necessary to support cross-border ATFM in the Asia/Pacific Region, in order to support the implementation of the performance objectives of the Asia/Pacific Regional Framework for Collaborative ATFM.</p>	<p>Follow-up: <input checked="" type="checkbox"/> Required from States</p>

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When: 6-Nov-19	Status: adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other	

Conclusion APANPIRG/30/13 (CNS SG/23/7-ACSICG/6/4) - Direct controller-pilot communication SATVOICE Trials	
What: That, States who are interested in direct controller-pilot communication (DCPC) SATVOICE services are encouraged to conduct DCPC SATVOICE trials to verify its performance.	Expected impact: <input checked="" 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: SATVOICE is a potential DCPC over remote/oceanic airspace.	Follow-up: <input type="checkbox"/> Required from States
When: 6-Nov-19	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 checked="" type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX	

Conclusion APANPIRG/30/14 (CNS SG/23/8-PBNICG/6/1) - Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP	
What: Considering ICAO provided a guidance and template on transition planning for RNP approach chart identification, That, <ul style="list-style-type: none"> a) The Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP in Appendix B to the Report on agenda item 3.4 be adopted as a regional plan for RNP APCH chart identification transition; b) ICAO Regional Office coordinate with ICAO PBN Programme Office for the inclusion of the plan in the Global Dashboard for the progress monitoring; c) ICAO PBN Program Office to confirm that a global contingency plan has been developed and coordinated with all Regional Offices and with the major data houses; d) ICAO PBN Programme Office to provide an updated version of the Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP to ICAO Regional Office; e) ICAO Regional Office to publish the plan on the ICAO Regional Office website; and f) States develop their transition plan and implement the chart identification transition according to their designated slots. 	Expected impact: <input checked="" 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 minimize the exposure to the mixed operational environment of RNAV and RNP chart identification, and to reduce confusion between them by air traffic controllers and pilots, the regional transition of RNP APCH chart identification should be progressed in orderly manner based on Asia/Pacific Regional Transition Plan.	Follow-up: <input checked="" type="checkbox"/> Required from States

When: 6-Nov-19	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 checked="" type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: ICAO APAC RSO	

Conclusion APANPIRG/30/15 (CNS SG/23/14-SURICG/4/6) - Revised Surveillance Strategy for the APAC Region	
What: That, the Revised Surveillance Strategy for the APAC Region provided in Appendix D to the Report on 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 ANC13 and the latest development of surveillance technology.	Follow-up: <input checked="" type="checkbox"/> Required from States
When: 6-Nov-19	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:	

2.9 The meeting also discussed *Significance of Harmonization Toward Realization of TBO Over SWIM* (WP/19) presented by Japan, *AIDC Implementation in Singapore and Adjacent States* (WP/21) and the following information papers provided by States/Administrations and International Organizations:

- IP/07 – CRV and FTI Implementation Status provided by India;
- IP/08 – Detrimental Behavior of Ionosphere and GBAS Implementation;
- IP/09 – Implementation of Space Based ADS-B Data Services over Oceanic Region of Indian FIRs;
- IP/16 – Outcomes of a SIP Seminar on Flight Inspection and procedure Validation (official action on the Seminar outcome would be taken by CNS SG/24 meeting); and
- IP/18 - Ensuring Preparedness for the U.S. 2020 ADS-B Equipage Mandate.

2.10 Updated progress on Summary Table of APANPIRG/30 Conclusions and Decisions Action Plan and APANPIRG/28 Outstanding Conclusions/Decisions Action Plan is placed in **Attachments B** and **C** respectively to this paper. The results of APANPIRG/30 Conclusions review by ICAO HQ are contained in AN-WP/9399 provided in **Attachment D** to this paper.

2.11 States/Administrations were notified through State Letter on the AFTN/AMHS based Interface Control Document for Air Traffic Flow Management, CRV Implementation Plan Version 2, the philosophy and roadmap for APAC SWIM implementation for the APAC Region, Mode S DAPs Implementation and Operation Guidance Document, the Revised ADS-B Implementation and Operations Guidance Document (AIGD Version 12), Asia/Pacific Regional Transition Plan for RNP APCH Chart Identification from RNAV to RNP, Revised Surveillance Strategy for the APAC Region, Asia/Pacific Regional FIXM Version 4.1 Extension, Direct Controller-Pilot Communication SATVOICE Trials.

2.12 The next APANPIRG meeting (APANPIRG/31) is scheduled for 14 to 16 December 2020 via Video Teleconference (VTC) using Microsoft Teams platform.

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3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) note the information contained in this Paper, including the follow-up actions taken by ICAO APAC Office, ICAO HQ and the States on the APANPIRG Decisions/Conclusions as shown in **Attachment B** and **D**;
- b) note the outstanding APANPIRG Conclusion 28/19 in **Attachment C** and take appropriate action;
- c) identify any follow-up actions resulted from this Paper; and
- d) discuss any relevant matters as appropriate.
