International Civil Aviation Organization

Thirty-Sixth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/36)

Bangkok, Thailand, 24 to 26 November 2025

Agenda Item 3: **Performance Framework for Regional Air Navigation Planning and Implementation**

3.4: **CNS**

REVIEW OF OUTCOMES OF CNS SG/29

(Presented by Secretariat)

SUMMARY

This paper presents the outcomes of the Twenty-Ninth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/29) of the APAC Air Navigation Planning and Implementation Regional Group (APANPIRG) for APANPIRG/36 review.

1. INTRODUCTION

1.1. The Twenty-Ninth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/29) of APAC Air Navigation Planning and Implementation Regional Group (APANPIRG) was held at the ICAO APAC Regional Office, Bangkok, Thailand, from *16 to 20 June 2025.*

1.2. The Meeting was joined by **100** participants from **23** States/Administrations, **2** International Organizations and **3** industry partners. Mr M H Hui, Assistant Director-General of Civil Aviation, Civil Aviation Department, Hong Kong China, chaired the Meeting.

1.3. The Meeting considered **35** Working Papers, **14** Information Papers, and **7** Presentations. This paper provides a summary of key outcomes of the Meeting.

1.4. The Meeting Report, papers and other resources can be accessed at https://www.icao.int/APAC/MeetingDocs?fid=561

2. DISCUSSION

Election of Co-Chairs

2.1 Nominated by China and seconded by Australia, Japan, Lao PDR, New Zealand, Singapore, Thailand, and USA, Mr. M H Hui, Assistant Director-General of Civil Aviation, Civil Aviation Department, Hong Kong China, was unanimously elected as a Co-Chair of CNS SG of the APANPIRG.

Various Updates from relevant Working Groups related to CNS

2.2 The Meeting noted verbal updates on the progress of the Asia and Pacific (APAC) Air Navigation Service Provider (ANSP) Committee (AAC) after the CNS SG/28 Meeting and key outcomes from the other relevant technical working groups within APANPIRG, along with global updates presented by ICAO HQ.

Report of the Twelfth Meeting of the Aeronautical Communications Services Implementation Coordination Group (ACSICG/12)

2.3 The CRV Workshop for PSIDS was held from 3-4 March 2025 and the Thirteenth Meeting of the Common aeRonautical Virtual Private Network Operations Group of APANPIRG (CRV OG/13) was held from 5 to 8 March 2025.

2.4 The AMC Workshop and the Twelfth Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/12) were held at the ICAO APAC Regional Office, Bangkok, Thailand, from 25 to 28 March 2025.

2.5 The CNS SG/29 Meeting noted the ***Conclusion CRV OG/13/01***- *Standard Operating Procedures (SOP) for Dispute Resolution on CRV Matters*. It was informed that SOP has been incorporated in CRV OG OM v1.4, adopted by CRV OG/13 by **Decision CRV OG/13/02** - *Publish the updated APAC CRV Operations Manual*. The Meeting also noted the **Decision CRV OG/13/03** - *Update to the CRV Implementation Plan v2.3.*

2.6 The latest updates on the planning and implementation status of CRV are as follows:

a) **Under Operation**

Australia, Bhutan, Cambodia, China, Hong Kong China, Fiji, French Polynesia, India, Indonesia, Japan, Macau China, Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Caledonia, New Zealand, Pakistan, Philippines, PNG, Republic of Korea, Singapore, Sri Lanka, Thailand, USA and Vietnam

b) **Under Provisioning**

Cook Islands, Niue and Tonga

c) **Not Joined Yet**

Afghanistan, DPRK, Kiribati, Marshal Islands, Micronesia, Nauru, Palau, Solomon Islands, Timor Leste, Tuvalu, Vanuatu, Russia, ICAO MID States

2.7 Due to the confidentiality of the CRV contract management process, the report under agenda item 7 was published on the ICAO APAC CRV Secure portal under the CRV group.

2.8 Fiji proposed a CRV SLA Package D+ for PSIDS and small ANSPs in the APAC region for the implementation of CRV. The following Draft Conclusion was adopted by ACSICG/12 for CNS SG/29 and APANPIRG/36 consideration, which was endorsed by CNS SG/29 Meeting for APANPIRG/36 adoption:

<table>
<tr><td colspan="3">Draft Conclusion CNS SG/29/01 (ACSICG/12/02 (CRV OG/13/06)) - Implementation of CRV for small Pacific Island and small ANSP in the region using CRV Solution, CRV SLA Package D+</td></tr>
<tr><td colspan="2">What: That, the CRV OG agreed to the following to assist small Pacific Islands & small ANSPs in APAC in the implementation of CRV:
a) CRV SLA Package D+ is reliable and addresses lead time for acquiring spares and the CRV Service Provider to import licenses and clearance for customer sites
b) Small Pacific Island and small ANSP in the region to consider using CRV SLA package D+ as the CRV solution to implement CRV for the exchange of voice & AMHS services
c) With a target date to implement CRV by 2025, it was recommended that the CRV OG work closely with the small Pacific Islands, small ANSPs in the region and the CRV Service Provider on a cost-effective CRV solution to implement CRV.</td><td>Expected impact:
☐ Political / Global
☐ Inter-regional
☒ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why: To facilitate the implementation of CRV for the small Pacific Islands & small ANSPs in the region</td><td colspan="2">Follow-up: ☒Required from States</td></tr>
<tr><td>When: 26-Nov-25</td><td colspan="2">Status: Draft to be adopted by PIRG</td></tr>
<tr><td colspan="3">Who: ☒Sub groups ☒APAC States ☐ICAO APAC RO ☐ICAO HQ ☐Other: CRV OG</td></tr>
</table>

2.9 The CANSO Standard of Excellence in Cyber Security was adopted by CNS SG/29 with slight changes in the title and body of the conclusion to clarify that the proposed framework is recommended for the CRV network only:

> ***Conclusion CNS SG/29/02 (Draft Conclusion ACSICG/12/03 (CRV OG/13/07))-*** Adopt the CANSO Standard of Excellence in Cyber Security for CRV
> *The CRV OG adopts the CANSO Standard of Excellence in Cyber Security for CRV and recommends that:*
> *a) CRV OG prefers an acceptable maturity level of Target Score 'C.' in carrying out the maturity assessment on the CRV.*
> *b) The CRV Service Provider carries out the maturity assessment.*
> *c) Each participating State/Administration carries out the maturity assessment.*
> *d) CRV OG/Each participating State/Administration creates a plan to address the gaps in the maturity score for the CRV.*

2.10 The ACSICG/12 Meeting reviewed and modified the proposed SOP that CNS SG/29 endorsed and adopted by the following decision:

> ***Decision CNS SG/29/03 (Draft Decision ACSICG/12/04)*** **-** Adoption of SOP to update the AMC AFTN/AMHS Routing Table in the Asia/Pacific Region
> *The proposed Standard Operating Procedures (SOP) for all ICAO Asia/Pacific (APAC) members who operate as CCC Operators (Coordination COM Centres) or External COM Centre Operators to update the AMC AFTN/AMHS Routing Table in the Asia/Pacific Region is adopted.*

2.11 The ACSICG/12 Meeting adopted the draft educational material for COM Centre operators as a living document and endorsed the following draft conclusion for consideration by CNS SG/29, which was adopted by CNS SG/29:

> ***Conclusion CNS SG/29/04 (Draft Conclusion ACSICG/12/05)*** **-** Educational material to manage the distribution of IWXXM information for COMM experts in the event of primary link failure
> *The educational material to support COM/MET experts in managing the distribution of IWXXM in case of primary link failure is adopted as a living document.*

2.12 The ACSICG/12 Meeting reviewed and modified the checklist to facilitate the operational implementation of IWXXM message exchange based on the comments received from the participants. The following Draft Conclusion was adopted by ACSICG/12 for CNS SG/29 consideration, which was adopted by CNS SG/29:

> ***Conclusion CNS SG/29/05 (Draft Conclusion ACSICG/12/06)*** **-** Checklist of steps required to operational IWXXM exchange
> *A checklist to facilitate the operational implementation of the IWXXM message exchange is adopted as a living document.*

2.13 The ACSICG/12 Meeting reviewed and adopted the ATSCG ToR through ***Decision ACSICG/12/07*** *- Terms of Reference for the AMHS to SWIM Transition Correspondence Group*.

Report of the Tenth Meeting of System Wide Information Management Task Force (SWIM TF/10)

2.14 The Tenth Meeting of the System Wide Information Management Task Force (SWIM TF/10) was held from 20 to 23 May 2025 in the ICAO APAC Regional Office, Bangkok, Thailand.

2.15 Prior to SWIM TF/10, the ICAO Asia/Pacific System-Wide Information Management (SWIM) Seminar was held in Bangkok on 19 May 2025. The theme of the Seminar was *Establishing SWIM – A Key Enabler for FF-ICE*. The Seminar emphasised the urgency of SWIM implementation ahead of the 2034 sunset of the 2012 flight plan format, with regional efforts targeting 2032. Key recommendations included forming multidisciplinary teams, harmonising regional SWIM/FF-ICE mandates, and exploring centralised SWIM infrastructure. Minimum SWIM capabilities were defined for airlines (AIXM/IWXXM/FIXM processing, SWIM connectivity, dynamic NOTAM integration) and ATM providers (flight-data connectivity, CRV/Internet access, cybersecurity, governance, and SWIM TI functions).

2.16 The CNS SG/29 Meeting noted that SWIM TF/10 adopted the ***Decision SWIM/TF/10/01-*** *Revised Terms of Reference of the SWIM Implementation Pioneer Ad-hoc Group.*

2.17 It was noted that SWIM TF/10 discussed and adopted the following 4 recommendations on SWIM transition in the APAC region, which were raised by SIPG:

> **Recommendation 1:** Reach out to relevant expert groups that govern the various data types being transmitted on AMHS for their SWIM migration strategy and proposed sunset date. (e.g., AAITF, FF-ICE ad-hoc group, MET/IE, ATFM ad-hoc group, etc.)
>
> **Recommendation 2:** Work closely with the ACSICG AMHS and the SWIM Transition Group to map out a transition plan together. One topic of interest is the need for AMHS to SWIM conversion and how that should be managed.
>
> **Recommendation 3:** Consider the possible use of any other data formats, in addition to AIXM, FIXM, and IWXXM, in the Asia-Pacific SWIM. This is to enable existing data to be quickly onboarded onto SWIM. The ATM Information Reference Model should be used to maintain semantic interoperability.
>
> **Recommendation 4:** Inform the ATM Automation Systems Task Force (ATMAS TF) of the need for ATM automation systems to be SWIM compatible.

2.18 Due to the need for clear guidance to States/Administrations on the proposed first version of Common SWIM Information Services, and the Common SWIM Information Services will involve various domains, such as ATM, CNS and MET etc., under the APANPIRG, the following Draft Decision was adopted by SWIM TF/10 for CNS SG/29 and APANPIRG/36 consideration, which was endorsed by CNS SG/29 Meeting for APANPIRG/36 adoption:

<table>
<tr><td colspan="3">Draft Decision CNS SG/29/06 (SWIM TF/10/02) - Adoption of APAC Common SWIM Information Services, v1.0</td></tr>
<tr><td colspan="2">What: The first version of APAC Common SWIM Information Services, provided in Appendix A, be adopted for immediate use by APAC States/Administrations. The set of APAC Common SWIM Information Services and the associated performance of SWIM Technical Infrastructure underpinning these services are not specified to support the provision of aircraft separation.</td><td>Expected impact:
☐ Political / Global
☐ Inter-regional
☐ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why: To assist APAC States/Administrations in planning and implementing their SWIM information services.</td><td colspan="2">Follow-up: ☐Required from States</td></tr>
<tr><td>When: 26-Nov-25</td><td colspan="2">Status: Draft to be adopted by PIRG</td></tr>
<tr><td colspan="3">Who: ☒Sub groups ☐APAC States ☐ICAO APAC RO ☐ICAO HQ ☐Other: MET SG, ATM SG, AOP SG</td></tr>
</table>

2.19 The SWIM TF/10 Meeting noted that to achieve SWIM implementation by 2030, APAC SWIM architecture needs to consider not only the Publish/Subscribe MEP but also the Request/Reply MEP. Given the current emphasis on the regional SWIM prototype architecture using an EMS being developed by SIPG in the APAC region, the primary issue is to discuss how the Request/Reply MEP should be implemented. The SWIM TF/10 Meeting was recommended to consider that future implementation of the Request/Reply MEP in APAC SWIM architecture should be strategically planned with API GW topology that reflects and complements the architectural direction of GEMS.

2.20 The SWIM TF/10 Meeting was presented with the update on FIXM version 4.3 Extension development, and the following draft conclusion was endorsed by the SWIM TF/10 Meeting for APANPIRG/36 adoption through CNS SG/29 endorsement:

<table>
<tr><td colspan="3">Draft Conclusion CNS SG/29/07 (SWIM/TF/10/03) – Asia/Pacific Regional FIXM version 4.3 Extension</td></tr>
<tr><td colspan="2">What: The FIXM version 4.3 Extension described in SWIM/TF/10/WP30 and provided in Appendix B to the report be:

a) adopted as the Asia/Pacific FIXM version 4.3 Extension;
b) uploaded to the ICAO Asia/Pacific Regional Office website for use by Asia/Pacific Administrations to support cross-border ATFM operation, A-CDM, ATFM/A-CDM integration, and traffic synchronization; and
c) presented to the FIXM CCB for review and publication on the FIXM official website.</td><td>Expected impact:
☐ Political / Global
☒ Inter-regional
☐ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why: To provide the information exchange model necessary to support cross-border ATFM operation, A-CDM, ATFM/A-CDM integration, and traffic synchronization in the Asia/Pacific Region, in line with Conclusion APANPIRG/35/4.</td><td colspan="2">Follow-up: ☐Required from States</td></tr>
<tr><td>When: 26-Nov-25</td><td colspan="2">Status: Draft to be 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>

2.21 The SWIM TF/10 Meeting was presented with the current SWIM TF's ToR, the revised SWIM TF's work plan, and the Action List to reflect the latest work status achieved. To ensure that the objectives set in the ToR can be achieved, the Statement of Work (SOW) of each Task was updated by the Meeting. The SWIM TF/10 Meeting was informed of the current Task leads as follows:

Groups	Task No.	Subject/Task	Task Leads
Implementation Planning	1	Regional implementation philosophy & roadmap	David Leow (Singapore) Amornrat Jirattigalachote (Thailand)
SWIM infrastructure	2	Regional SWIM infrastructure	Xiaodong Lu (Japan), ~~Yasushi Iwasawa (Japan)~~ Yosuke MORO (Japan) Henry Chan (Hong Kong, China)
	3	Security service	Jim Laymon (USA)
Technical Architecture	4	Development and maintenance of regional information exchange models	Amornrat Jirattigalachote (Thailand) Wen Zhu (USA)

Groups	Task No.	Subject/Task	Task Leads
Governance	5	Regional SWIM Governance Framework	Young Jin Ha (ROK) Mark Kaplun (USA), ~~Yasushi Iwasawa (Japan)~~ Yosuke MORO (Japan) Xiaodong Lu (Japan), Honglei Gao (China)
Information Services	6	Information services	Marco Kok (Hong Kong, China) Jeremy Bienkowski (Australia)
Validation & Demonstration	7	SWIM Demonstration	David Leow (Singapore) Amornrat Jirattigalachote (Thailand)
	8	SWIM services and application validation	Yosuke MORO (Japan) Xiaodong Lu (Japan), Honglei Gao (China), Young Jin Ha (ROK)
Coordination and Promotion	9	Monitoring of Panels' work	~~Yasushi Iwasawa (Japan)~~ Yosuke MORO (Japan)
	10	Regional coordination and SWIM-related information sharing	John Moore (IATA)
	11	SWIM implementation education and promotion (New task)	~~Thomas Green (USA)~~ Vacant

Outcomes of WRC-27 Workshop

2.22 The Workshop on ITU World Radiocommunication Conference 2027 (WRC-27 Workshop) was held in the ICAO Asia and Pacific Regional Office, Bangkok, Thailand, from 24 to 25 February 2025.

2.23 Noting strong concerns from different participants on the progress of WRC-27 Agenda item 1.7 and its relevant ITU-R studies, the States/Administrations were urged to follow ICAO Assembly Resolution A41-7 to strongly support both the ICAO frequency spectrum strategy and position at WRCs. Specifically, the States/Administrations were encouraged to communicate with radio regulatory authorities to ensure, to the maximum extent possible, that the ICAO position was accounted for in the development of national positions. It was highly recommended that delegations to regional conferences, ITU study groups and WRC include experts from their civil aviation authorities and other civil aviation stakeholders who are fully prepared to represent aviation interests.

2.24 Concerns were raised about the potential interference from 5G to the radio altimeter. The Workshop was informed of the increasing number of incidents of observed GNSS interference globally and the implications for air navigation safety and security. Serious concerns regarding the impact of GNSS interference on the safety and security of air navigation systems were expressed by the participants of the Workshop and States/Administrations were encouraged to monitor the issues and take into account a comprehensive and well-coordinated approach to address this pressing issue.

2.25 The Meeting acknowledged the significance of the preparatory Workshop for WRC27 and shared appreciation with the ICAO APAC Office. The Meeting advised States/Administrations to follow up on the changes made in the ICAO position over time and take appropriate action.

Report of the Ninth Meeting of the Spectrum Review Working Group (SRWG/9)

2.26 The Ninth Meeting of the Spectrum Review Working Group (SRWG/9) of APANPIRG was held in the ICAO APAC Regional Office, Bangkok, Thailand, from 5 to 7 May 2025.

2.27 The SRWG/9 Meeting noted the status of the implementation of the revised APAC VHF COM Frequency Allotment Plan in the Frequency Finder tool. The Secretariat notified CNSS/ANB to update the FF tool, which was revised in February 2025 and will be released as Frequency Finder 2025.01. ICAO Doc 9718 Volume II is also being updated. States were urged to review/upload frequency data, and the new FF version is expected in Q3 2025.

2.28 The CNS SG/29 Meeting noted recent enhancements to the Frequency Finder (FF) tool, including updated VHF-COM allotments for APAC, new data protection in VHF-COM/NAV and SSR modules, and additional SSR capabilities. The revised FF will be distributed after testing, and States are encouraged to provide feedback.

2.29 The Meeting noted the outcomes of the Seminar on Frequency Use held in Bangkok, Thailand, from 16-18 September 2024, as well as the outcomes of the ICAO APAC Radio Navigation Symposium held in New Delhi, India, from 07-09 April 2025.

2.30 China presented Edition 1.1 of the Asia/Pacific Regional Frequency Management Manual (formerly the Aeronautical Radio Frequency Management Guidance Material), adopted via *Conclusion SRWG/8/6*. Key amendments include updating the title, reducing VDL channel spacing, adding backup frequencies, TIBA provisions, and GBAS/VDB frequency assignment planning. The remaining proposed changes require further review and will be brought to SRWG/10.

2.31 The SRWG/9 Meeting observed that the current ToR of SRWG requires further amendments to include other tasks being taken care of by SRWG, such as working on interference issues, WRC coordination, etc. It was suggested that the ICAO Secretary, along with the chair, revise the ToR and present the draft of the revised ToR in the SRWG/10 meeting for consideration.

2.32 The CNS SG/29 Meeting agreed to defer to the SRWG to study the need for a group under CNS SG to assess and analyze the incidents shared by APAC Member States/Administrations and GNSS and Data Link Disruption Ad-Hoc Group to develop mitigation strategies, considering the global development in this domain.

Outcomes of Survey for assessment of readiness for Amendment 91 to Annex 10, Volume III on Selective Calling (SELCAL) Codes Implementation – Sec

2.33 The Meeting was reminded about the survey on the readiness of APAC States/Administrations' flight plan processing systems handling SELCAL32 in 2024. The objective of the survey was to evaluate the preparedness of ICAO member States for the implementation of Annex 10 Amendment 91 concerning the SELCAL that became applicable on November 3, 2022, and identify any associated challenges.

2.34 The Meeting noted that a total of thirteen responses from Australia, China, Hong Kong China, Macau China, Fiji, French Polynesia, India, Indonesia, Japan, New Zealand, Pakistan, Singapore, and Thailand were received. Based on responses received, it was concluded that most APAC States/Administrations that participated in the survey are ready to implement ICAO provisions Amendment 91 to the International Standards and Recommended Practices, Annex 10 — Aeronautical Telecommunications, Volume III — Communication Systems. However, it was highlighted that only 13 States/Administrations participated in the survey, which makes it difficult for us to assess APAC region readiness. The Meeting requested that APAC States/Administrations that have not responded to the survey share their readiness with the ICAO APAC Office.

Report of the Seventh Meeting of ICAO APAC GBAS/SBAS Implementation Task Force (GBAS/SBAS ITF/7)

2.35 The Seventh Meeting of the ICAO APAC GBAS/SBAS Implementation Task Force (GBAS/SBAS ITF/7) was held in Bangkok from 14 to 16 May 2025.

2.37 Expected Implementation Priority for ASBU NAVS Block 0 Elements within the APAC region in Asia/Pacific Seamless Air Navigation Service (ANS) Plan Version 4.0, adopted by APANPIRG last November 2024, was reviewed.

2.38 The Meeting supported the following proposal:

"Keep priority 2 for NAVS-B0/1 GBAS and NAVS-B0/2 SBAS as some APAC States do not have access to such systems, and to change the priorities of NAVS-B0/3 ABAS and NAVS-B0/4 Nav. MON to Priority 1".

Functional Category	Element	Description	Priority	Responsibility for Review
Technology	NAVS-B0/1	GBAS	2	CNS SG
	NAVS-B0/2	SBAS	2	
	NAVS-B0/3	ABAS	1	
	NAVS- B0/4	Nav. MON	1	

2.39 The Meeting reviewed the final draft of the guidance document for the implementation of SBAS. The following Draft Decision was endorsed by GBAS/SBAS ITF/7 for CNS SG/29 consideration, which was adopted by the CNS SG/29 Meeting:

Decision CNS SG/29/08 *(GBAS-SBAS ITF 07/01)* - Guidance Document for Implementation of SBAS in the Asia/Pacific Region
The draft guidance document for implementation of SBAS in the Asia/Pacific Region, developed by the APAC GBAS/SBAS, is adopted.

2.40 The GBAS/SBAS ITF/7 Meeting noted the updates on the GBAS/SBAS implementation status in the APAC region. It was noted that at present, 57 LPV approaches are in various stages of implementation, while 23 of them have already been published.

Twelfth Meeting of the Performance Based Navigation Implementation Coordination Group (PBNICG/12)

2.41 The Twelfth Meeting of the Performance Based Navigation Implementation Coordination Group (PBNICG/12) is planned in Beijing, China, 16 -18 December 2025. Therefore, the CNS SG/29 Meeting could not review the outcomes of the PBNICG/12 Meeting.

Outcomes of Radio Navigation Symposium

2.42 The ICAO APAC Radio Navigation Symposium was held in New Delhi, India, from 07–09 April 2025. The theme of the Symposium was *GNSS RFI: Collectively Bridging Gaps and Shaping the Path Forward.*

2.43 The Meeting recalled that ICAO, in collaboration with ITU and IMO, has recently issued a joint statement on the protection of the radio navigation satellite service from harmful interference. The ICAO/ITU/IMO statement called for five (5) key actions, which the Symposium reaffirmed and outlined a set of recommended actions and best practices containing six objectives and associated recommendations for all aviation stakeholders.

2.44 The Meeting was informed that, as part of ICAO's engagement with ITU, the existing GNSS RFI reporting procedure between the two agencies has been reviewed to explore potential enhancements. A new account for ICAO will be created on ITU's online tool, the Satellite Interference Reporting and Resolution System (SIRRS), to facilitate reporting and improve the tracking of cases where analysis determines a significant impact on air navigation with an international scope. In such cases, ICAO will promptly transmit the results to ITU. Additionally, the system will facilitate keeping ICAO informed about the progress in applying the procedure outlined in Article 15, Section VI, of the Radio Regulations for cases of harmful interference to GNSS identified by ICAO. ICAO will also be notified as soon as the interference incident is deemed resolved.

2.45 It was informed that two (2) Q-codes and the recommended Item E text have been identified by the ICAO navigation systems panel (NSP) and will be incorporated in relevant ICAO documents. Furthermore, guidance on how pilots should interpret NOTAM is being developed.

2.46 Considering the significance of the list of recommendations presented to the Meeting, the Meeting suggested that ICAO consider publishing them at the global level and sharing them with all States/Administrations officially.

2.47 ICAO APAC Radio Navigation Symposium examined existing and potential mitigation strategies with the objective of identifying gaps and offering insights into actions required to address the evolving challenges posed by GNSS RFI in terms of technological, procedural, and human-centric aspects of mitigation.

2.48 **The Electronic Bulletin (EB2025/20)** was published on 28 July 2025, includes a link to the Symposium's webpage for information and awareness of Member States.

Report of the Tenth Meeting of the Surveillance Implementation Coordination Group (SURICG/10)

2.49 The Tenth Meeting of the Surveillance Implementation Coordination Group (SURICG/10) was held in Bangkok, Thailand, from 21 to 23 April 2025.

2.50 The SURICG/10 Meeting reviewed the proposed initial set of APAC Common SWIM Surveillance Information Services→Surveillance data sharing services. With assistance from Hong Kong China, the list was modified and further consulted with SURSG/4 delegates by email. After incorporating all inputs, the *final list of APAC Common SWIM Surveillance Information Services* was prepared by the SURICG/10 meeting.

2.51 The Meeting reviewed the reports on the Sub-regional ADS-B implementation plan/projects presented by BOB and SEA Ad-Hoc working groups, as well as the updated table on ADS-B Data Sharing Implementation Status.

2.52 The Meeting reviewed the process for States to request and coordinate interrogator codes (IC) for Mode S interrogators. The following Conclusion was adopted by the Meeting:

> ***Conclusion CNS SG/29/09 (****SURICG/10/02)* - Workflow for the request and coordination of IC codes with the ICAO APAC Office
> *Interrogator Codes (IC) of Mode S interrogators in the Asia Pacific region are to be coordinated and assigned through the ICAO APAC Regional Office. States/Administrations requiring ICs should request to the ICAO APAC Regional Office following the approved workflow to facilitate the request.*

2.53 The Meeting noted the ***Decision SURICG/10/03*** – Adoption of Mode S DAPs Implementation and Operation Guidance Document Edition 6.0 was adopted by the SURICG/10 meeting. The Mode S DAPs Implementation and Operation Guidance Document Edition 6.0 was modified to add the general strategy for the assignment of and migration to the SI code.

2.54 The Meeting was informed about the latest work, enhancements, and functionalities brought to the SSR module of the Frequency Finder tool to assist ICAO Regional Offices and States in managing and coordinating SSR Mode S II/SI codes.

ADS-B GNSS Performance Issues in Australia

2.55 Australia shared recent unique ADS-B problems experienced in Australia relating to the interaction between avionics and GNSS, affecting some aircraft, which resulted in ADS-B tracks being dropped from air traffic controller screens.

2.56 The Meeting deliberated on the deficiencies of ADS-B and suggested that such issues must be presented in the SURICG Meeting. It was informed that the ICAO APAC office manages the ADS-B avionics problem reporting database. In addition, the Surveillance Panel (SP) maintains the FAA No Services Aircraft List (NASL), which is the list indicating all aircraft that do not comply with minimum ADS-B requirements. The SURICG Co-Chair informed that SURICG is discussing the need to maintain the proposed databases, and the outcomes will be shared at the CNS SG meeting.

Report of the Sixth Meeting of the APAC Air Traffic Management Automation System Task Force (ATMAS TF/6)

2.57 The Sixth Meeting of the APAC Air Traffic Management Automation System Task Force (APAC ATMAS TF/6) was held in Bangkok, Thailand, from 2 to 4 June 2025.

2.58 The Meeting agreed that the AIDC Implementation and RASMAG Hotspot Chart is useful for a quick overview of AIDC implementation and hotspots. The Meeting noted New Zealand offered to do internal coordination and collate the required information for the future to include the South Pacific States. It was noted that hotspots may not be solely caused by AIDC issues but by other contributing factors. Suggestions included updating the chart regularly or after RASMAG identifies new hotspot trends or ATMAS TF notes major updates. The ICAO Secretariat will coordinate internally and inform the ATMAS TF of any significant changes.

2.59 The ATMAS Implementation and Operations Guidance Document (Edition 1.5) was reviewed and endorsed by the ATMAS TF/6 Meeting, which was adopted by CNS SG/29:

> ***Decision CNS SG/29/10 (ATMAS TF/06/01)*** – Adoption of the Air Traffic Management Automation System Implementation and Operations Guidance Document Edition 1.5

The Air Traffic Management Automation System Implementation and Operations Guidance Document, Edition 1.5, is adopted.

2.60 The Meeting reviewed and adopted the proposed amendments to the AIDC IGD:

Decision CNS SG/29/11 (ATMAS TF/06/02) – Adoption of the AIDC Implementation and Operations Guidance Document (IGD) Edition 2.0
The AIDC Implementation and Operations Guidance Document (IGD) Edition 2.0 is adopted.

2.61 The Meeting noted the latest repository of AIDC Implementation Status in the APAC region and invited States/Administrations to review and continue to update the AIDC implementation status and Focal Point for AIDC Implementation if necessary.

2.62 The Meeting noted that an ad-hoc group consisting of China, Hong Kong China, India, New Zealand, Singapore, Thailand, and the USA was formed to review and modify the ATMAS TF ToR to accommodate the latest needs of ATMAS TF, such as accommodating FF-ICE and SWIM requirements.

APAC Seamless ANS Plan V4.0 Update

2.63 ICAO Secretariat recalled the steps taken in past CNS SG meetings to provide inputs for Seamless ANS Plan v4.0, which was adopted by the Thirty-Fifth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/35) held at the ICAO Asia and Pacific Regional Office in Bangkok, Thailand, from 25 to 27 November 2024 by *Conclusion 35/1*.

2.64 The Meeting was informed that recently, it was observed that the priorities of some CNS ASBUs finalised by CNS-related ASBUs Review Ad-hoc Group for the Next Edition of the Seamless ANS Plan were not correctly reflected in the published Asia/Pacific Seamless ANS Plan Version 4.0. This discrepancy might result from editorial errors during the gathering of voluminous feedback from all sources.

2.65 Recognising that the review of ASBU NAVS falls under the responsibility of the CNS SG, the ICAO Secretariat proactively prepared and submitted a working paper for consideration at the Seventh Meeting of the Asia/Pacific GBAS/SBAS Implementation Task Force (GBAS/SBAS ITF/7, Bangkok, Thailand, 14–16 May 2025). This initiative was undertaken to solicit comments and feedback from navigation experts regarding the appropriate prioritisation of the NAVS Block 0 elements prior to proposing amendments to the CNS SG.

2.66 It was agreed in GBAS/SBAS ITF/7 Meeting that not all ASBU NAVS Module Block 0 elements should be accorded the same level of priority within the Asia/Pacific Region. The ICAO Secretariat proposed the subdivision of these elements from a consolidated 'Thread' into discrete individual elements. This approach was aimed at ensuring that appropriate prioritisation is assigned to each element accordingly. The CNS SG/29 meeting deliberated and agreed on the following proposal:

"Keep priority 2 for NAVS-B0/1 GBAS and NAVS-B0/2 SBAS as some APAC States do not have access to such systems, and to change the priorities of NAVS-B0/3 ABAS and NAVS-B0/4 Nav. MON to Priority 1".

Functional Category	Element	Description	Priority	Responsibility for Review
Technology	NAVS-B0/1	GBAS	2	CNS SG
	NAVS-B0/2	SBAS	2	

Functional Category	Element	Description	Priority	Responsibility for Review
	NAVS-B0/3	ABAS	1	
	NAVS- B0/4	Nav. MON	1	

2.67 It was agreed that the ICAO Secretariat will incorporate **these changes as a corrigendum to the existing Asia/Pacific Seamless ANS Plan Version 4.0,** and submit it to **APANPIRG/36 for endorsement**.

2.68 In addition, States/Administrations were reminded of ***Conclusion APANPIRG/34-1***, which required States/Administrations to report on the progress of the *Asia/Pacific Seamless ANS Plan* implementation via the Seamless ANS Plan Reporting Tool at least once annually, with a submission deadline of 28 February.

2.69 The Meeting noted that the ICAO Asia/Pacific Regional Office is currently working on updating the Seamless ANS Plan Reporting Tool to align with the most recent version of *Asia/Pacific* Seamless ANS Plan Version 4.0, which is expected to be completed by the end of Q2 2025.

2.70 A question was asked about the expectation to submit reporting by States/Administrations once a year or twice, as in the ANS Reporting Tool. Currently, the report period is the first half of the year and the second half of the year. It was informed that ICAO expects States to submit updates up to the end of last year "at least once annually", preferably **before 28 February** of the year. It was added that the report period column would be modified so that States/Administrations could submit updates at least once annually. **ACTION ITEM 29-9**

2.71 As only a few States/Administrations have submitted their information on the reporting tool, it was suggested that all remaining States/Administrations submit their information about 2024 so that the ICAO Secretariat can make further analysis of the 'as-is' status before the ATM SG/13 meeting planned in August 2025. **ACTION ITEM 29-10**

Updates in e-ANP Vol II for CNS Tables

2.72 The need to update information in e-ANP Vol II was shared with different contributory bodies, including CRV OG/13, ACSICG/12, SURICG/10, and SRWG/09, which have endorsed draft Conclusions to update tables under their responsibilities. The proposed update of the CNS Tables of ICAO APAC e-ANP Vol II was reviewed and adopted by the CNS SG/29 Meeting:

> ***Conclusion CNS SG/29/12* (*ACSICG/12/01(CRV OG/13/04)*, *ACSICG/12/08, SURICG/10/01,* SRWG/09/01*)* -** Update the CNS Tables of ICAO APAC e-ANP Vol II
> *The following tables of ICAO APAC e-ANP Vol II are outdated and require immediate updates.*
> *General Regional Requirements*
> *TABLE CNS II-1 AERONAUTICAL FIXED TELECOMMUNICATIONS NETWORK (AFTN) PLAN*
> *TABLE CNS II-2 REQUIRED ATN INFRASTRUCTURE ROUTING PLAN*
> *TABLE CNS II-3 ATS DIRECT SPEECH CIRCUITS PLAN*
> *TABLE CNS II-4 HF NETWORK DESIGNATORS*
> *Specific Regional Requirements*
> *TABLE CNS II-APAC-1 ATS INTER-FACILITY DATA COMMUNICATION (AIDC) IMPLEMENTATION PLAN*
> *TABLE CNS II-APAC-2 RADIO NAVIGATION AIDS*

TABLE CNS II-APAC-3 SURVEILLANCE

2.73 It was informed that the ICAO Secretariat will issue a State Letter to all States/Administrations for necessary action after the CNS SG/29 meeting. States/Administrations are requested to update the required information in ICAO APAC e-ANP Vol II.

Review the Status of CNS Deficiencies

2.74 The Meeting noted that the only outstanding issue was the unreliability of AFS communication between Afghanistan and Pakistan. Last year, it was reported that 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 in the CNS SG/28 Meeting. Pakistan was requested to provide updates on outstanding deficiencies.

2.75 Pakistan informed that the AFS communication link between Pakistan and Afghanistan remains non-operational due to the absence of a functioning AFS system on the Afghanistan side. Pakistan is fully prepared and available to activate the link as soon as Afghanistan establishes the required AFS infrastructure. Afghanistan had not given any tentative timelines. Therefore, it was requested that this deficiency be removed from Pakistan's side. CNS SG/29 supported the request, and it was agreed that the request would be presented to APANPIRG/36 for consideration.

2.76 The current list of Air Navigation Deficiencies in the CNS field was reviewed in CNS SG/29, which is provided in **Appendix C.**

Supervisory and managerial Roles of ATSEP – Proposed- IFATSEA

2.77 IFATSEA presented the work done following its proposal in the CNS SG/28 meeting regarding human factors issues and their countermeasures pertaining to ATSEP while playing supervisory and managerial roles. The Meeting reviewed the proposed chapter and adopted the following decision:

Decision CNS SG/29/13 - Adoption of Regional Guidance Material for Addressing Human Factor Issues of ATSEP v2.0
ICAO APAC Guidance Material for Addressing Human Factor Issues of ATSEP v2.0 is adopted.

Update on Trust Framework Activities

2.78 The Meeting noted that the Aviation Common Certificate Policy (ACCP), establishing baseline PKI interoperability requirements and profiles (including SBAS authentication), is undergoing coordination and targeting the July 2025 publication. The Manual on Aviation Information Security (MAIS Doc 10204) provides risk assessment and security objective guidance; its first edition has been released, with some sections pending further coordination. Development of a Manual on Trust Frameworks has begun, outlining how to form Trust Framework Instances (TFIs) for secure aviation communications, with an editorial group formed.

Need for the Creation of an APAC Contributory Body for the Management and Implementation of ICAO ANS Cybersecurity Provisions

2.79 The Meeting noted it is necessary to establish a new working group or task force to explore the development of a regional federated PKI architecture that ensures secure interoperability across multiple states and regions. Additionally, a technical community was needed to support the implementation of Trust Framework Instances for various applications. Collaboration with the SWIM TF was also considered essential to support the implementation of a Trust Framework Instance for SWIM, enabling secure, interoperable, and resilient aviation information exchange and flight operations.

2.80 The Meeting agreed to initially name the group "ANS Information Assurance Task Force (ANSIA TF)." Australia, China, Japan, Malaysia, New Zealand, Singapore, Thailand and the USA volunteered to join the group. It was agreed that the ANSIA TF would prepare the draft Terms of Reference (ToR), its key deliverables, and plan in close coordination with CRV OG, ACSICG, SWIM TF, TFP Secretary and Information Management Panel Secretary. It was also agreed that the first meeting would be conducted in Q1-2026.

2.81 With the abovementioned, the following draft decision was proposed, which was endorsed and adopted by the CNS SG/29 Meeting:

> ***Decision CNS SG/29/14*** - Creation of ANS Information Assurance Task Force (ANSIA TF)
> *To ensure consistent implementation of the requirements of ANS information security in the APAC region in accordance with the various manuals and guidance documents published by the ICAO and other international organizations, especially Certificates and PKI, a contributory body is proposed to be created under the CNS Sub-group to manage this using personnel experienced in the management and provisioning of ANS cybersecurity.*

Review of ToR and Action Items

2.82 The Meeting agreed to form an Ad-Hoc group composed of members from China, Hong Kong China, Thailand and the USA to review the ToR of CNS SG. The revised ToR will be presented by the ad-hoc group at the next CNS SG meeting.

2.83 The Meeting reviewed and updated the Action Items List for CNS SG/28. A total of 16 action items were identified during the CNS SG/29 Meeting.

CRV II Contract Management Process

2.84 The CNS SG/29 Meeting was informed that, due to the confidentiality of the CRV contract management process, the report under this agenda was published on the ICAO APAC CRV Secure portal under the CRV group.

2.85 The CNS SG/29 Meeting noted that the CRV OG/13 Meeting agreed on the need to organise the Special Session- CRV OG/14 as an In-Person Meeting for 5 days to progress to the next stage of the CRV contract management process from **27 to 31 October 2025** in Tokyo, Japan. The Special Session- CRV OG/14 discussed the way forward for the CRV contract.

2.86 The CNS SG/29 Meeting agreed that the decision will need to be shared with the APANPIRG/36 meeting, planned for November 2025, to ensure the CRV contract management process is completed on time. The CNS SG/29 discussed the way forward to get endorsements of the decision made by CRV OG/14 from ACSICG and the CNS SG. It was agreed that the ICAO Secretariat would share the decision made by CRV OG/14 with delegates of member States/Administrations participating in ACSICG/12 and CNS SG/29 to seek their endorsement on the decision, and feedback/comments, if any, by email.

2.87 After email endorsement of the proposed draft Conclusion, drafted by CRV OG/14, by ACSICG/12 and CNS SG/29 delegates, the **Draft Conclusion CNS SG/29/15** will be presented to **APANPIRG/36** for adoption.

2.88 The draft conclusion was shared with ACSICG/12 and CNS SG/29 on 4 November 2025 and no objections were received for the proposed draft conclusion.

2.89 With the aforementioned following draft conclusion is presented for APANPIRG/36 adoption:

<table>
<tr><td colspan="2">Draft Conclusion CNS SG/29/15 (ACSICG/12/09 (CRV OG/14/01)): Decision of CRV II Contract Management Process</td></tr>
<tr><td>What:
Following the procurement process formulated by CRV OG to choose one of the two options for APAC States/Administrations for the CRV II contract management process, i.e., current CRV contract extension vs initiate the CRV II RFP process:

a) States/Administrations agree to extend the current CRV contract for 5 years, which will be referred to as the CRV II Network. After extension, the CRV II contract date would be from 1 January 2029 with expiry on 31 December 2033
b) The contract extension for the CRV network will include updated legal, commercial, financial and technical requirements of the current service provider and CRV network implementation.
c) Considering internal procurement timelines of APAC States/Administrations, CRV OG should prepare baseline updates required for the CRV network before 1 April 2027;</td><td>Expected impact:
☐ Political / Global
☐ Inter-regional
☒ Economic
☐ Environmental
☒ Ops/Technical</td></tr>
<tr><td>Why:
(1) The current CRV contract expires on 31 December 2028;
(2) Some APAC States/Administrations, including PSIDS, are in the process of joining CRV, while some States have joined CRV within the last 1-2 years;
(3) Transition to the new contract will take at least 1-2 years;
(4) The CRV II contract management process executed by CRV OG resulted in the extension of the CRV contract for 5 years.</td><td>Follow-up: ☒Required from States</td></tr>
<tr><td>When: 31 Oct 2025</td><td>Status: To be adopted by PIRG</td></tr>
</table>

Who: ☒Sub groups ☒APAC States ☒ICAO APAC RO ☐ICAO HQ ☒Other: CRV OG and ACSICG

2.90 Key discussion of CRV OG/14 and the associated **Draft Conclusion CNS SG/29/15** are published on the CRV Secure Portal due to the confidentiality of information.

CNS Meeting Planning for 2026

2.91 The paper shared the following tentative schedule for the CNS contributory bodies' Meetings to be held in 2026 for Meeting information and action. The ICAO Secretariat will inform Member States about the exact dates, mode and venue of the Meeting while issuing invitation letters at least three months before the event.

No.	Name of meeting	Dates (2026)	Location
1.	ANSIA TF/01	28-30 January	Bangkok
2.	SRWG/10	4–6 February	Bangkok
3.	GANP Workshop	04-06 March	Bangkok
4.	SURSG/5	23-24 March	Bangkok
5.	SURICG/11 *(3 days)*	25-27 March	Bangkok
6.	ACSICG/13	20-24 April	Fiji/Bangkok
7.	SBAS/GBAS ITF/ 8	12-14 May	Bangkok
8.	PBNICG/13	May	Bangkok
9.	SWIM TF/11 *(5 days)*	25- 29 May	Bangkok
10.	SIPG WS/3	01-04 June	Bangkok
11.	ATMAS TF /7	02-04 June	Bangkok
12.	CRV OG/15	15-19 June	Bangkok
13.	CNS/SG/30	06-10 July	Bangkok

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

a) note the information contained in this paper;

b) review and adopt the Draft Conclusion/Decision titled:

i) **Draft Conclusion CNS SG/29/01** - Implementation of CRV for small Pacific Islands and small ANSPs in the region using CRV Solution, CRV SLA Package D+; (Refer to section 2.8)

ii) **Draft Decision CNS SG/29/06** - Adoption of APAC Common SWIM Information Services, v1.0; (Refer to section 2.18)

iii) **Draft Conclusion CNS SG/29/07** - Asia/Pacific Regional FIXM version 4.3 Extension; (Refer to section 2.20)

iv) **Draft Conclusion CNS SG/29/15**- Decision on CRV II contract Management Process (Refer to section 2.90)

c) consider **the request submitted by Pakistan** to **remove the deficiency** from the Pakistan side as per the details provided in section 2.75-2.76;

d) note the Conclusion/Decision adopted by CNS SG/29 titled:

i) ***Conclusion CNS SG/29/02*** *- Adopt the CANSO Standard of Excellence in Cyber Security for CRV; (Refer to section 2.9)*

ii) ***Decision CNS SG/29/03*** *- Adoption of SOP to update the AMC AFTN/AMHS Routing Table in the Asia/Pacific Region; (Refer to section 2.10)*

iii) ***Conclusion CNS SG/29/04 -*** *Educational material to manage the distribution of IWXXM information for COMM experts in the event of primary link failure; (Refer to section 2.11)*

iv) ***Conclusion CNS SG/29/05*** *- Checklist of steps required for operational IWXXM exchange; (Refer to section 2.12)*

v) ***Decision CNS SG/29/08 -*** *Guidance Document for Implementation of SBAS in the Asia/Pacific Region; (Refer to section 2.40)*

vi) ***Conclusion CNS SG/29/09*** *- Workflow for the request and coordination of IC codes with the ICAO APAC Office; (Refer to section 2.53)*

vii) ***Decision CNS SG/29/10 -*** *Adoption of the Air Traffic Management Automation System Implementation and Operations Guidance Document Edition 1.5; (Refer to section 2.60)*

viii) ***Decision CNS SG/29/11 -*** *Adoption of the AIDC Implementation and Operations Guidance Document (IGD) Edition 2.0; (Refer to section 2.61)*

ix) ***Conclusion CNS SG/29/12 -*** *Update the CNS Tables of ICAO APAC e-ANP Vol II; (Refer to section 2.73)*

x) ***Decision CNS SG/29/13 -*** *Adoption of Regional Guidance Material for Addressing Human Factor Issues of ATSEP v2.0; (Refer to section 2.78)*

xi) ***Decision CNS SG/29/14 -*** *Creation of ANS Information Assurance Task Force (ANSIA TF); (Refer to section 2.82)*

e) discuss any relevant matters as appropriate.

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Business Functionality of APAC Common SWIM Information Services
(Updated by MET SG/28, FF-ICE/2, MET/IE WG/23, SURICG/10, AAITF/19 and ATFM SG/15)

First Version (May 2025)

(Editorial note – changes arising from MET SG/28, FF-ICE/2, MET/IE WG/23, SURICG/10, AAITF/19 and ATFM SG/15 are indicated with ~~strikethrough~~ and highlighted text.)

Purpose.– This list of APAC Common SWIM Information Services, including associated priorities, provides States/Administrations with guidance on anticipated services to support their planning and implementation of SWIM.

Notes.– Priority of Recommended ~~s~~Services in ~~i~~Initial APAC Common SWIM Information Service (IS) ((1)/(2)/(3)):

- Priority (1): Recommended for region-wide implementation for region-wide benefits
- Priority (2): Recommended for implementation as much as practicable
- Priority (3): Additional information services without common regional requirements and not included as a part of common regional information services

Business functionality of the information service	**Brief description of the service**	**Type of information to be exchanged**	**Information exchange model / Message type**	**Message exchange pattern**	**Priority ~~of Recommended sService in iInitial APAC Common SWIM IS~~ (1) / (2) / (3)**
APAC Common SWIM Aeronautical Information Services					
Airspace management service	Exchanges of airspace status information between ASM Support System and Air Traffic Control (ATC) System. The sharing of airspace availability and airspace structure in real-time will contribute to a more efficient execution of the flight as information impacting the trajectory will be exchanged.	~~Airspace availability,~~ Availability or activation/deactivation or temporarily change of airspace, restricted area, danger area, search and rescue regions	AIXM	Pub/Sub or Req Reply	2

Business functionality of the information service	**Brief description of the service**	**Type of information to be exchanged**	**Information exchange model / Message type**	**Message exchange pattern**	**Priority ~~of~~ ~~Recommended sService in iInitial APAC Common SWIM IS~~ (1) / (2) / (3)**
Airspace feature service	Provides the characteristics of the three-dimensional airspace, described as horizontal projection with vertical limits, and their relevance to air traffic.	FIR/UIR boundaries, waypoints, enroute ATS routes, SIDs and STARs, navaids, procedures, and other airspace not limited to restricted area, prohibited area, danger area, search and rescue regions (Remarks – Other data published in the AIP may be included)	AIXM	Pub/Sub or Req Reply	2
Aerodrome feature service	Provides current and/or planned airport layout features, such as aerodrome mapping data, runway, taxiway, passenger facilities.	Runways, movement areas, aerodrome services, navaids, instrument landing systems, Aerodrome location, communication facilities (frequencies)	AIXM	Pub/Sub or Req Reply	2
Runway Condition Report service	Provides runway surface conditions and contaminants (least to most slippery) that are directly correlated to aircraft take-off and landing performance.	Global Reporting Format (GRF) for runway surface conditions	AIXM	Pub/Sub or Req/Reply	2
Digital NOTAM distribution service	Provides aeronautical information in accordance with the Digital NOTAM Specification, such as runway closure.	Digital NOTAM (e.g. Special activity airspace (SAA) NOTAMs, or other types of NOTAMs)	AIXM	Pub/Sub or Req Reply	2
APAC Common SWIM Flight Information Services					
GUFI service	GUFI (Globally Unique Flight Identifier) generation and provision	GUFI	FIXM	Req/Reply	1
~~ATFM/A-CDM integrated service~~	~~Allows exchanges of flight plans and A-CDM milestone parameters among different stakeholders (such as arrival/departure ATFM units, airlines and~~	~~CLDT, TOBT, CTOT, CTO, TTOT, TSAT, etc.~~	~~FIXM~~	~~Pub/Sub Req/Reply~~	~~1~~

Business functionality of the information service	**Brief description of the service**	**Type of information to be exchanged**	**Information exchange model / Message type**	**Message exchange pattern**	**Priority ~~of~~ ~~Recommended sService in iInitial APAC Common SWIM IS~~ (1) / (2) / (3)**
	~~airport operators) to connect A-CDM process to ATFM operations.~~				
FF-ICE filing service	Provides a means to submit, update or cancel flight plans through a SWIM-based interface using FIXM.	Flight plan for registration, update or cancellation	FIXM	Req/Reply Pub/Sub	1
FF-ICE ~~data~~ publication service	Provides harmonised sharing of flight ~~plan~~ information in a global standard supporting common situation awareness.	Flight ~~plan~~ information for publication	FIXM	Pub/Sub	2
FF-ICE trial service	Allows operators to test the effect of a potential change in a flight plan prior to committing to the change.	Proposed changes in a flight plan	FIXM	Req/Reply	2
FF-ICE flight data request service	Allows an operator to request the current status of a flight plan, or an ANSP can request an operator to submit the latest version of their flight plan.	Current status of a flight plan, a copy of flight plan or supplementary plan	FIXM	Req/Reply	1
FF-ICE notification service	Provides notification of a change in flight state, such as Departure (DEP) and Arrival (ARR) Air Traffic Service (ATS) messages.	ARR, DEP messages	FIXM	Pub/Sub Req/Reply	1
FF-ICE planning service	Allows operators to submit preliminary flight plans for early Air Traffic Flow Management (ATFM) planning and to obtain feedback regarding restrictions/constraints affecting the flight.	Preliminary flight plan for early ATFM planning	FIXM	Req/Reply Pub/Sub	2
Flight-Specific ATFM Measure Service	Supports *notification* of information related to "flight-specific" ATFM measures, i.e. measures whose control mechanisms apply to a single flight. An	CTOT, CTO, CLDT, and fields currently included in APAC	FIXM	Pub/Sub Req/Reply	1

Business functionality of the information service	**Brief description of the service**	**Type of information to be exchanged**	**Information exchange model / Message type**	**Message exchange pattern**	**Priority ~~of~~ ~~Recommended sService in iInitial APAC Common SWIM IS~~ (1) / (2) / (3)**
	example is the Ground Delay Program (GDP), whose control mechanism is a Calculated Take-Off Time (CTOT), or an ATFM measure for airborne flight, whose control mechanism is a Calculated Time Over (CTO). Recipients of this information should take actions to comply with the ATFM measure contained herein.	AFTN/AMHS-Based ICD for ATFM[1]			
ATFM/A-CDM Integration Service	Supports exchanges of flight-specific ATFM measure information and A-CDM milestone parameters among stakeholders, including arrival/departure ATFM units, airspace users, and airport operators, to integrate A-CDM process with ATFM operations.	ATFM measure information: CTOT A-CDM departure planning information: TOBT, TTOT, TSAT	FIXM	Pub/Sub Req/Reply	1
APAC Common SWIM Meteorological Information Services					
FOR AERODROME					
METAR/SPECI ~~information~~ service	Provides ~~of~~ IWXXM-formatted METAR/SPECI product specified in ICAO Annex 3.	Provision of the existing Annex 3 product via an information service ~~in Annex 3. Information service will be enabled through Amendment 81 to Annex 3 as recommended practice with applicability from Nov 2024.~~	IWXXM	Pub/Sub Req/Reply	1
TAF ~~information~~ service	Provides ~~of~~ IWXXM-formatted TAF product specified in ICAO Annex 3.		IWXXM	Pub/Sub Req/Reply	1
Aerodrome Meteorological	Provides continuous observations of weather parameters at an aerodrome. Advanced		IWXXM	Pub/Sub or Req/Reply	2*

[1] Based on the conclusion from ATFM/SG/15, an amendment to this ICD will be proposed in which a more structured use of REGUL and REGCAUSE fields will be introduced. This proposal is expected to be tabled at the upcoming CNS/SG meeting.

* Will become Priority (1) when it is introduced as recommended practice in Annex 3 tentatively in Nov 2030

Business functionality of the information service	**Brief description of the service**	**Type of information to be exchanged**	**Information exchange model / Message type**	**Message exchange pattern**	**Priority ~~of~~ ~~Recommended sService in iInitial APAC Common SWIM IS~~ (1) / (2) / (3)**
Observation Information Service ~~observation information service~~	meteorological SWIM (MET-SWIM) service being developed by MET Panel.	To be introduced as recommended practice in Annex 3 (Amd 8483) in Nov 20302027 tentatively (Note: Level of standardisation needs to be considered, as different aerodrome information services may be required for different use cases.)			
Aerodrome Meteorological Forecast Information Service ~~forecast information service~~	Provides information of the expected meteorological conditions, including probability, at an airport during a specified period. Advanced meteorological SWIM (MET-SWIM) service being developed by MET Panel.		IWXXM	Pub/Sub or Req/Reply	2*
FOR ENROUTE					
SIGMET ~~information~~ service	Provides ~~of~~ IWXXM-formatted SIGMET product specified in ICAO Annex 3.	SIGMETs for thunderstorm, tropical cyclone, turbulence, icing, mountain wave, duststorm, sandstorm, volcanic ash and radioactive cloud	IWXXM	Pub/Sub Req/Reply	1
AIRMET ~~information~~ service	Provides ~~of~~ IWXXM-formatted AIRMET product specified in ICAO Annex 3.	Provision of the existing Annex 3 product via an information service	IWXXM	Pub/Sub Req/Reply	~~1~~2
Tropical Cyclone Advisory ~~information~~ service	Provides ~~of~~ IWXXM-formatted Tropical Cyclone Advisory product specified in ICAO Annex 3. (Designated provider: States with Tropical Cyclone Advisory Centre)		IWXXM	Pub/Sub Req/Reply	1
Volcanic Ash Advisory ~~information~~ service	Provides ~~of~~ IWXXM-formatted Volcanic Ash Advisory product specified in ICAO Annex 3. (Designated provider: States with Volcanic Ash Advisory Centre)		IWXXM	Pub/Sub Req/Reply	1
Space Weather Advisory ~~information~~ service	Provides ~~of~~ IWXXM-formatted Space Weather Advisory product specified in ICAO Annex 3.		IWXXM	Pub/Sub Req/Reply	1

Business functionality of the information service	**Brief description of the service**	**Type of information to be exchanged**	**Information exchange model / Message type**	**Message exchange pattern**	**Priority ~~of~~ ~~Recommended~~ ~~sService in iInitial~~ ~~APAC Common~~ ~~SWIM IS~~ (1) / (2) / (3)**
	(Designated provider: States with Space Weather Advisory Centre)				
Volcano Observatory Notice for Aviation (VONA) ~~information~~ service	Provides ~~of~~ IWXXM-formatted VONA specified in ICAO Annex 3. Provision of VONA ~~will become the~~ is a recommended practice in Annex 3 (Amd 82) ~~in 2025~~. (Designated provider: States with a designated State Volcano Observatory)		IWXXM	Pub/Sub Req/Reply	2
Quantitative volcanic ash ~~(QVA)~~ concentration information (QVA) service	Provides detailed information of significant volcanic ash in the atmosphere, including probabilities of ash concentration thresholds over space and time. Advanced meteorological SWIM (MET-SWIM) service being developed by MET Panel. (Designated provider: States with ~~VAAC~~ Volcanic Ash Advisory Centre (VAAC))	QVA ~~grids grid point~~ gridded forecasts including probabilities~~,~~ and IWXXM QVA objects. ~~To be introduced as~~ A recommended practice for significant ash clouds in Annex 3 (Amd 82) ~~in Nov 2025 tentatively~~ for VAACs in a position to do so from Nov 2025, and for all VAACs from Nov 2026.	Gridded data (e.g. NetCDF), IWXXM	Pub/Sub ~~or~~ Req/Reply	~~1~~2[#]
WAFC (World Area Forecast Centres) gridded ~~grid point~~ forecast service	Provides global gridded weather forecasts. (Designated provider: WAFCs (UK and US))	Global gridded forecasts of CB, icing, turbulence, upper winds, upper-air temperatures and humidity, flight level and temperature of tropopause, and direction, speed and flight level of maximum wind	Gridded data in GRIB2	Pub/Sub ~~or~~ Req/Reply	1

[#] Will become Priority (1) from Nov 2026

Business functionality of the information service	**Brief description of the service**	**Type of information to be exchanged**	**Information exchange model / Message type**	**Message exchange pattern**	**Priority ~~of~~ ~~Recommended sService in iInitial APAC Common SWIM IS~~ (1) / (2) / (3)**
WAFC significant weather (SIGWX) forecast service	Provides global WAFC SIGWX data sets with coverage expressed in polygons. (Designated provider: WAFCs (UK and US))	Significant weather forecast such as tropical cyclone, ~~severe squall lines,~~ turbulence, icing, etc.	IWXXM	Pub/Sub ~~or~~ Req/Reply	1
Satellite image service	Provides satellite observational information.	Satellite derived MET information (e.g. significant convection)	Gridded format (e.g. NetCDF) and image format	Req/Reply	2
Weather radar image service	Provides two- or three-dimensional radar observational information.	Weather radar reflectivity to visualise the intensity of convection	Gridded format (e.g. NetCDF) and image format	Req/Reply	2
APAC Common SWIM Surveillance Information Services					
Surveillance data **only** sharing service	Provides surveillance data of aircraft. ~~Provides three-dimensional position, time and identification of aircraft and other data as appropriate.~~	~~Position~~ latitude, longitude, ~~altitude,~~ flight level, ground speed (optional), ~~track angle,~~ magnetic heading (optional), ~~call sign, Mode S address,~~ target identification, target address, **mode 3/A code** (optional), **date**, time of message reception for position, ~~data quality~~, quality indicators, ~~Mode S DAP~~, **SAC, SIC**	ASTERIX Cat 21 (payload in JSON or RAW format)	Pub/Sub	~~2~~1
Surveillance data with flight plan information sharing service	Provides surveillance data of aircraft with flight plan information.	globally unique flight identifier, aircraft identification, departure aerodrome, destination aerodrome, aircraft type (optional),	ASTERIX Cat 21+FPL (payload in JSON or RAW format)	Pub/Sub	2

Business functionality of the information service	**Brief description of the service**	**Type of information to be exchanged**	**Information exchange model / Message type**	**Message exchange pattern**	**Priority ~~of Recommended sService in iInitial APAC Common SWIM IS~~ (1) / (2) / (3)**
		wake turbulence category **(optional)** latitude, longitude, flight level, ground speed **(optional)**, magnetic heading **(optional)**, target identification, target address, mode 3/A code **(optional)**, date, time of message reception for position, quality indicators, SAC, SIC			

— — — — — — — —

FIXM version 4.3 Core Data Attributes to Support Cross-Border ATFM Information Exchange

Data Attribute	FIXM version 4.3 Core
EOBT (Estimated Off-Block Time)	FlightType.departure.estimatedOffBlockTime = (EOBT)
ETO (Estimated Time Over)	FlightType.routeTrajectoryGroup.desired.element.point4D.time = (ETO) FlightType.routeTrajectoryGroup.desired.element.elementStartPoint = (point at which ETO is specified)
ELDT (Estimated Landing Time)	FlightType.routeTrajectoryGroup.desired.element.point4D.time = (ELDT) FlightType.routeTrajectoryGroup.desired.element.point4D.pointProperty.propertyType = WHEELS_ON FlightType.routeTrajectoryGroup.desired.element.elementStartPoint.aerodromReferencePoint.locationIndicator = FlightType.arrival.destinationAerodrome.locationIndicator
EIBT (Estimated In-Block Time)	FlightType.routeTrajectoryGroup.desired.element.point4D.time = (EIBT) FlightType.routeTrajectoryGroup.desired.element.point4D.pointProperty.propertyType = IN_BLOCKS FlightType.routeTrajectoryGroup.desired.element.elementStartPoint.aerodromReferencePoint.locationIndicator = FlightType.arrival.destinationAerodrome.locationIndicator
CTOT (Calculated Take-Off Time)	FlightType.routeTrajectoryGroup.negotiating.element.constraint.time.timeSpecification.timeValue = (CTOT) FlightType.routeTrajectoryGroup.negotiating.element.point4D.pointProperty.propertyType = WHEELS_OFF FlightType.routeTrajectoryGroup.negotiating.element.elementStartPoint.aerodromReferencePoint.locationIndicator = FlightType.departure.aerodrome.locationIndicator
CTO (Calculated Time Over)	FlightType.routeTrajectoryGroup.negotiating.element.constraint.time.timeSpecification.timeValue = (CTO) FlightType.routeTrajectoryGroup.negotiating.element.elementStartPoint = (point at which CTO is specified)
CLDT (Calculated Landing Time)	FlightType.routeTrajectoryGroup.negotiating.element.constraint.time.timeSpecification.timeValue = (CLDT) FlightType.routeTrajectoryGroup.negotiating.element.point4D.pointProperty.propertyType = WHEELS_ON FlightType.routeTrajectoryGroup.negotiating.element.elementStartPoint.aerodromReferencePoint.locationIndicator = FlightType.arrival.destinationAerodrome.locationIndicator

Appendix B

FIXM version 4.3 Extension Data Attributes

Data Attribute	FIXM version 4.3
EOBT (Estimated Off-Block Time)	Core
ETO (Estimated Time Over)	Core
ELDT (Estimated Landing Time)	Core
EIBT (Estimated In-Block Time)	Core
CTOT (Calculated Take-Off Time)	Core
CTO (Calculated Time Over)	Core
CLDT (Calculated Landing Time)	Core
TOBT (Target Off-Block Time)	Extension
TSAT (Target Start-up Approval Time)	Extension
TTOT (Target Take-Off Time)	Extension
TTO (Target Time Over)	Extension
TIBT (Target In-Block Time)	Extension
AOBT (Actual Off-Block Time)	Extension
ATO (Actual Time Over)	Extension
AIBT (Actual In-Block Time)	Extension
Taxi time*	Extension
REGUL* (designation of the ATFM measure affecting the flight)	Extension
REGCAUSE* (reason for the ATFM measure)	Extension
REASON* (reason to explain an action by ATFM personnel, e.g. rejection, cancellation)	Extension
COMMENT* (additional information for ATFM purpose)	Extension

**For more information, refer to Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0*

Appendix C

APAC XSD Description

Namespace	Description
Apac	FIXM Extension containing data attributes to support cross-border Air Traffic Flow Management (ATFM) operations, the integration between ATFM and Airport-Collaborative Decision Making (A-CDM), and traffic synchronization in accordance with Distributed Multi-Nodal ATFM Network concept and the Airport-Collaborative Decision Making operations in the Asia/Pacific region.

Class	Definition	Reference/Remark
ApacDepartureType	Class containing flight data related to departure aerodrome	This class is to be included in extension field under DepartureType class.
Data Attribute	Definition	Reference/Remark
actualOffBlockTime	A time the aircraft is pushed back / vacates parking position (equivalent to airline/handlers ATD – Actual Time of Departure and ACARS=OUT)	ICAO Doc 9971 Manual on Collaborative ATFM, 3rd Edition, 2018
targetOffBlockTime	A time that an Aircraft Operator or Ground Handler estimates that an aircraft will be ready to receive start-up approval/push-back clearance	ICAO Asia/Pacific Regional Framework for Collaborative ATFM, Version 4, October 2022
targetStartupApprovalTime	A time provided by ATC taking into account TOBT, CTOT, and/or the traffic situation that an aircraft can expect start-up/push back approval	ICAO Asia/Pacific Regional Framework for Collaborative ATFM, Version 4, October 2022
targetedTakeOffTime	A time that an aircraft is targeted to be airborne, taking into account TOBT, TSAT, and other factors such as EXOT, wake turbulence, SID, etc.	● ICAO Asia/Pacific Regional Framework for Collaborative ATFM, Version 4, October 2022 ● EUROCONTROL A-CDM Implementation Manual, Version 5.0, March 2017
taxiTime	The difference in time between the ‘off blocks time’ and the ‘take-off time’. The times referred to could be actual or estimated depending upon the context.	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0

Class	Definition	Reference/Remark

ApacArrivalType	Class containing flight data related to destination aerodrome	This class is to be included in extension field under ArrivalType class.
Data Attribute	Definition	Reference/Remark
actualInBlockTime	The time that an aircraft arrives in-blocks (equivalent to airline/handler ATA – actual time of arrival, ACARS = IN)	ICAO Doc 9971 Manual on Collaborative ATFM, 3rd Edition, 2018
targetInBlockTime	A time, calculated by an automation system, that an aircraft is expected to be at its first parking position	This time value is not EIBT (Estimated In-Block Time) – The estimated time that an aircraft will arrive in blocks (Ref. EUROCONTROL A-CDM Implementation Manual, Version 5.0, March 2017)

Class	Definition	Reference/Remark
ApacRouteTrajectoryElementType	Class containing flight data related to specific element	
Data Attribute	Definition	Reference/Remark
actualTimeOver	An actual time of the aircraft over a fix, waypoint, or particular location	
targetTimeOver	A time, calculated and issued by an ATS unit, that an aircraft is requested to be over a fix, waypoint, or particular location	Use case: a time progressively calculated and issued by arrival management (AMAN) system

Class	Definition	Reference/Remark
ApacRouteTrajectoryGroupContainerType	Class contains actual trajectory information	
Data Attribute	Definition	Reference/Remark
actual	A list of actual trajectory	

Class	Definition	Reference/Remark
ApacAtfmMeasureCodeType	Indication of the cause of the ATFM measure	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0, section 3.2.1.15(a)

Class	Definition	Reference/Remark
ApacAtfmMeasureLocationType	Indication of the constraint location for which the ATFM measure is implemented	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0, section 3.2.1.15(b)
Class	Definition	Reference/Remark
ApacDelayCodeType	Indication of IATA numeric delay code	Asia/Pacific Regional AFTN/AMHS-based Interface

		Control Documents for Air Traffic Flow Management, version 3.0, section 3.2.1.15(d)

Class	Definition	Reference/Remark
ApacRegulationConstraintAreaType	Area of constraint. Format: [A-Z]{4}	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0

Class	Definition	Reference/Remark
ApacRegulationConstraintLocationType	Location of constraint. Format: [A-Z0-9]{1,5}	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0

Class	Definition	Reference/Remark
ApacRegulationCauseType	Class contains the cause of the ATFM measure	This is equivalent to REGCAUSE field in the Slot Allocation Message (SAM) as per Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0
Data Attribute	Definition	Reference/Remark
atfmMeasureCode	Indication of the cause of the ATFM measure	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0, section 3.2.1.15(a)
atfmMeasureLocation	Indication of the constraint location for which the ATFM measure is implemented	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0, section 3.2.1.15(b)
iataDelayCode	Indication of IATA numeric delay code	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0, section 3.2.1.15(d)

Class	Definition	Reference/Remark
ApacRegulationIdType	Class contains the designation of the ATFM measure	This is equivalent to REGUL field in the Slot Allocation

		Message (SAM) as per Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0
Data Attribute	Definition	Reference/Remark
effectiveDate	The date and month when the ATFM measure is effective	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0
version	The version of the designation of the ATFM measure	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0
constraintArea	A constrained area	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0
constraintLocation	A specific constrained location	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0

Class	Definition	Reference/Remark
ApacRouteTrajectoryConstraintType	Class contains the ATFM measure information	
Data Attribute	Definition	Reference/Remark
comment	Additional ATFM measure information	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0
reason	Reason to explain an action by the FMP (e.g. rejection, cancellation, etc.).	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0
regulationCause	The information indicates the reason for the ATFM measure to assist in post-operations analysis.	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic Flow Management, version 3.0
regulationId	The information indicates the designation of the ATFM measure, including the specific location of the	Asia/Pacific Regional AFTN/AMHS-based Interface Control Documents for Air Traffic

	constraint, affecting the flight.	Flow Management, version 3.0

```
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<xs:schema targetNamespace="http://www.fixm.aero/ext/apac/4.3"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:apac="http://www.fixm.aero/ext/apac/4.3"
xmlns:fx="http://www.fixm.aero/flight/4.3" xmlns:fb="http://www.fixm.aero/base/4.3"
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		<xs:documentation>The Apac package contains information used in Asia Pacific
region.</xs:documentation>
	</xs:annotation>
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	<xs:import namespace="http://www.fixm.aero/base/4.3"
schemaLocation="../../core/base/Base.xsd"/>
	<xs:import namespace="http://www.fixm.aero/base/4.3"
schemaLocation="../../core/base/Types.xsd"/>
	<xs:import namespace="http://www.fixm.aero/base/4.3"
schemaLocation="../../core/base/Extension.xsd"/>
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		</xs:annotation>
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	</xs:simpleType>
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measure is implemented, based on APAC AFTN/AMHS-Based ICD for ATFM v3.0, section
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		</xs:annotation>
		<xs:restriction base="xs:string">
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			<xs:enumeration value="D"/>
			<xs:enumeration value="E"/>
		</xs:restriction>
	</xs:simpleType>
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        </xs:simpleType>
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type="apac:ApacAtfmMeasureLocationType" minOccurs="1" maxOccurs="1"/>
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This is equivalent to REGUL field in the Slot Allocation Message (SAM) as per the APAC
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                <xs:sequence>
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                        <xs:element name="version" type="xs:int" minOccurs="1"
maxOccurs="1"/>
```

```
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information</xs:documentation>
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                                        <xs:element name="reason" type="fb:CharacterStringType"
minOccurs="0" maxOccurs="1"/>
                                        <xs:element name="regulationCause"
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class.</xs:documentation>
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type="fb:DateTimeUtcType" minOccurs="0" maxOccurs="1" nillable="true"/>
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```

```
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information</xs:documentation>
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type="fx:RouteTrajectoryGroupType" minOccurs="1" maxOccurs="1"/>
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class</xs:documentation>
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minOccurs="0" maxOccurs="1"/>
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	</xs:complexType>
</xs:schema>
```

REPORTING FORM ON AIR NAVIGATION DEFICIENCIES IN THE CNS FIELDS IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirement	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action**
Reliable ground to ground communication as specified in the regional Air Navigation Plan (Doc.9673) Tables CNS II-1; CNS II-2 & CNS II-3	Afghanistan and Pakistan	Unreliability of AFS communication between Afghanistan and Pakistan was brought to the notice of APANPIRG/21. Lack of reliability in the AFS including data communication between Kabul and Karachi and ATS voice communication between Lahore and Kabul was identified.	September 2010	A follow-up COM coordination meeting held in July 2019 discussed way forward	1. Site visits in Pakistan by expert from the VSAT service provider were made in February and March 2016. Remedial recommendations were provided to CAA. Pakistan. Pakistan requested ICAO to provide assistance in establishing VSAT link in 2022. 2. Both Afghanistan and Pakistan agreed to as first step to recover the VSAT connection by upgrading terminals in Lahore and Karachi. Afghanistan will provide assistance and does the Network Configuration settings; 3. A VPN link was established between Karachi and Kabul through UK. Now the VPN link between UK and Kabul is un-serviceable. 4. Both States also agreed to implement CRV as soon as practical to resolve the existing COM deficiencies. 5.Pakistan has joined CRV and is actively coordinating with Afghanistan to restore the communication link between Afghanistan and Pakistan. Pakistan expected to restore the connection by the end of 2024. 6. The AFS communication link between Pakistan and Afghanistan remains non-operational due to the	CAA. Afghanistan and CAA. Pakistan **For APANPIRG/36 from Pakistan-** Request that this deficiency be removed from Pakistan's side.	End of 2024 No dates can be shared from Pakistan – CNS SG/29 (16-20 June 2025)	A

Identification		Deficiencies			Corrective Action			
Requirement	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date for completion**	**Priority for action**
					absence of a functioning AFS system on the Afghanistan side. Pakistan is fully prepared and available to activate the link as soon as Afghanistan establishes the required AFS infrastructure. Afghanistan had not given any tentative timelines. Therefore, it was requested that this deficiency be removed from Pakistan's side.			