International Civil Aviation Organization

Twentieth Meeting of the ICAO Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/20)

Chitose, Japan, 9 – 13 June 2025

Agenda Item 2: Review Outcomes of Related Meetings

OUTCOMES OF THE APAC COMMON SWIM AERONAUTICAL INFORMATION SERVICES AD HOC GROUP

(Presented by APAC Common SWIM Aeronautical Information Services Ad Hoc Group)

SUMMARY

This paper presents the outcomes of the APAC Common SWIM Aeronautical Information Services Ad Hoc Group, which was established by AAITF/19 to address both the technical and operational aspects of regional SWIM Information Services. Experts from various States and international organisations participated in five meetings, resulting in consensus on the Terms of Reference (TOR) and an initial set of APAC Common SWIM Aeronautical Information Services.

1. INTRODUCTION

1.1 At the Nineteenth meeting of the ICAO Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/19), two Working Papers (WPs) (WP/23 by SWIM TF and WP/24 by IFAIMA) on the APAC Common SWIM Information Services were presented. Realising a need for further discussion, the meeting agreed to form an Ad Hoc Group to discuss both technical and operational aspect of this subject.

Decision AAITF/19-3: Establish APAC Common SWIM Aeronautical Information Services Ad hoc Group

1.2 Subject matter experts from various States, Administrations, and International Organizations were nominated to the Ad Hoc Group, including representatives from Australia, Indonesia, Japan, Singapore, Thailand, the United States, IATA, IFAIMA, and ICAO. Additionally, as the discussions included aerodrome-related information, an expert from India was nominated by the Aerodrome Operations and Planning Sub-Group (AOP/SG) to contribute to the group's work.

1.3 The Ad Hoc Group convened five meetings to review and discuss the message sets proposed by the SWIM/TF. As a result of these discussions, the group reached a consensus on the initial set of APAC Common SWIM Aeronautical Information Services.

2. DISCUSSION

Terms of Reference (TOR)

2.1 As a basis for its work, the Ad Hoc Group commenced by discussing the Terms of Reference (TOR). The group considered the following key elements: the overall objective of the Ad Hoc Group, the expected deliverables to achieve that objective, opportunities for collaboration with other relevant meetings, membership composition, working arrangements, and the process for reviewing and updating the TOR. Following these discussions, the group reached consensus on the TOR, as set out in **Attachment A**.

Common regional version of AIXM

2.2 The Ad Hoc Group meeting discussed and reached consensus on the version of AIXM to be adopted for common use within the APAC region. While AIXM 5.2 introduces several enhancements, it was noted that many current implementations remain based on AIXM 5.1.1, which was published in 2016. AIXM 5.1.1 is fully compatible with AIXM 5.1 and includes minor corrections and improvements. Therefore, the meeting agreed to adopt AIXM 5.1.1 as the common regional version.

Initial set of APAC Common SWIM Aeronautical Information Services

2.3 To facilitate clearer and more focused discussions, the Ad Hoc Group organised the topic into four subject areas: airspace-related information, aerodrome-related information, digital NOTAMs, and ATIS and SAR-related information.

Airspace-related information

2.4 The Ad Hoc Group meeting discussed how prohibited area information should be handled, specifically whether it falls under Airspace management services or Airspace feature services. It was acknowledged that prohibited area information is not always static as published in the Aeronautical Information Publication (AIP). Considering how other States utilise prohibited area data, the meeting recognised that the term “Airspace availability” may lack clarity. As a result, the meeting proposed replacing it with “Availability or activation/deactivation or temporarily change of airspace” to enhance understanding.

2.5 The Ad Hoc Group meeting further proposed expanding the definition of airspace types included in the Airspace feature services. Specifically, it was suggested to add the phrase “and other airspace not limited to restricted areas, prohibited areas, danger areas, and search and rescue regions” to the types of information to be exchanged.

2.6 The Ad Hoc Group meeting also discussed that Airspace management services should be exchanged not only through the Publish/Subscribe pattern but also via the Request/Reply pattern. Consequently, the meeting agreed to include Req/Reply as an additional message exchange pattern for Airspace Management Services.

2.7 Furthermore, the Ad Hoc Group meeting agreed to include a remark referencing the consideration of Free Route Airspace (FRA) and User Preferred Route (UPR) information in future planning.

2.8 The Ad Hoc Group meeting reached a consensus on the proposed changes to the airspace-related information, as highlighted in yellow in **Figure 1**.

Business functionality of the service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Recommended service in initial 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
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

Figure 1: Airspace-related information

Aerodrome-related information

2.9 The Ad Hoc Group discussed the potential removal of Runway Condition Report services, noting possible duplication with information included in SNOWTAMs under Digital NOTAM distribution. In accordance with the Global Reporting Format (GRF), a runway surface is considered "wet" when the water depth is 3 mm or less, while any depth exceeding 3 mm is classified as "standing water" and must be reported via a SNOWTAM. In view of this distinction and the operational importance of accurate runway surface condition reporting, the group agreed on the need to retain the Runway Condition Report services.

2.10 The Ad Hoc Group meeting also discussed that Aerodrome feature services should be exchanged not only through the Pub/Sub pattern but also via the Request/Reply pattern. As a result, the meeting agreed to include Req/Reply as an additional message exchange pattern for Aerodrome Feature Services.

2.11 The Ad Hoc Group meeting reached a consensus on the proposed changes to the aerodrome-related information, as highlighted in yellow in **Figure 2.**

Business functionality of the service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Recommended service in initial APAC Common SWIM IS (1) / (2) / (3)
APAC Common SWIM Aeronautical Information Services					
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

Figure 2: Aerodrome-related Services

Digital NOTAM

2.12 The Ad Hoc Group meeting discussed that Digital NOTAM distribution services should support both the Pub/Sub and Request/Reply message exchange patterns, noting that the SWIM service implemented by EUROCONTROL includes both Digital NOTAM Subscription and Request capabilities. As a result, the group agreed to include Req/Reply as an additional message exchange pattern for Digital NOTAM distribution services.

2.13 The Ad Hoc Group meeting reached a consensus on the proposed changes to the digital NOTAM, as highlighted in yellow in **Figure 3**.

Business functionality of the service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Recommended service in initial APAC Common SWIM IS (1) / (2) / (3)
APAC Common SWIM Aeronautical Information Services					
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

Figure 3: Digital NOTAM distribution services

ATIS and SAR related information

2.14 The Ad Hoc Group meeting discussed and agreed that both ATIS Distribution Services and Search and Rescue Services should be considered for implementation in a future phase, as the information exchange model and message types are yet to be defined and are currently marked as 'TBD'.

2.15 The Ad Hoc Group meeting reached a consensus on the proposed changes to the ATIS and SAR related information, as highlighted in yellow in **Figure 4**.

Business functionality of the service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Recommended service in initial APAC Common SWIM IS (1) / (2) / (3)
APAC Common SWIM Aeronautical Information Services					
ATIS distribution service	Provides continuous and automated broadcast of recorded aeronautical information in airport and terminal areas.	Current weather conditions, runway in use, available approaches, and other data relevant to arriving and departing aircraft, specific ATC procedures, and any airport construction activity that could affect taxi planning	TBD	Pub/Sub	~~2~~ 3
Search and rescue service	Allows Rescue Coordination Centres (RCCs) to exchange information with neighbouring RCCs and ATS units for coordination during SAR operations.	Search and rescue regions, Registered aircraft operator details and contacts, ICAO Autonomous Distress Tracking (ADT) data, Location of Aircraft in Distress Repository (LADR) data, ICAO OPS CTRL database contact information, SAR Unit (SRU) location and capability data	TBD	Pub/Sub	3

Figure 4: ATIS and SAR related information

2.16 However, matters relating to the Search and Rescue (SAR) service were to be discussed at the Asia and Pacific Search and Rescue Working Group (APSAR/WG) meeting, scheduled for 27–30 May 2025. The Ad Hoc Group submitted a working paper to the APSAR/WG/10.

Report to the relevant meetings

2.17 In view of the meeting schedules, the initial set of outcomes developed by the Ad Hoc Group was submitted in advance to the tenth meeting of the SWIM Task Force (SWIM/TF/10), scheduled for 20-23 May 2025, as a working paper, in order to ensure timely input and alignment with their ongoing work. It is recognised, however, that further discussions and inputs during AAITF/20 may result in revisions or refinements to the content. Should any such changes arise, the meeting will ensure that the SWIM/TF is informed in a timely and transparent manner, and that any necessary updates to the working paper are communicated appropriately. This approach aims to maintain consistency across related groups and to ensure that interdependent activities continue to progress in a coordinated and effective manner.

2.18 The SWIM/TF/10 reviewed the proposed initial set of APAC Common SWIM Information Services, as reviewed and updated by the:

a) Twenty-eighth Meeting of the Meteorology Sub-group (MET SG/28, Bangkok, Thailand, 8 – 12 July 2024) of the APAC Air Navigation Planning and Implementation Regional Group (APANPIRG);

b) Second Asia/Pacific FF-ICE Ad hoc Group Meeting (FF-ICE/2, Bangkok, Thailand, 18 – 20 March 2025);

c) Twenty-Third Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/23, Bangkok, Thailand, 25 – 28 March 2025);

d) Tenth Meeting of the Surveillance Implementation Coordination Group (SURICG/10, Bangkok, Thailand, 21 – 23 April 2025); and

e) APAC Common SWIM Aeronautical Information Services Ad Hoc Group.

2.19 The SWIM/TF extensively discussed whether to include services with incomplete fields. After considering various options, it was agreed that the first version of the APAC Common SWIM Information Services list would include only services with complete information. Entries containing "TBD" would be excluded from publication but retained in a working draft for further refinement and future review by the SWIM TF, in coordination with relevant expert groups.

2.20 As noted in the meeting report of SWIM/TF/10, message sets related to ATIS distribution and SAR were to be discussed once further clarification had been provided. In this context, it was considered advisable for APSAR/WG to have actively engaged with the Ad Hoc Group and SWIM/TF from an early stage.

2.21 On the other hand, APSAR/WG/10 requested the ICAO Secretariat to consider conducting a SWIM seminar focused on AIXM, in conjunction with APSAR/WG/11 in 2026. The seminar should include the application of AIXM to SAR services, with the aim of improving understanding of how SAR-related information will be managed within the SWIM environment. In this regard, support from the SWIM/TF and the APAC Common SWIM Aeronautical Information Services Ad Hoc Group would be greatly appreciated.

2.22 The outcomes of the discussions held by the APAC Common SWIM Aeronautical Information Services Ad Hoc Group and AAITF/20 will be reported to relevant meetings, including AOP/SG/19, and ATM/SG/13.

Continuation and Activities of the Ad Hoc Group

2.23 The Ad Hoc Group acknowledged that continued technical discussions are necessary, particularly in relation to SWIM and AIXM. In light of this, the group agreed that its work should not conclude with the completion of the current task. Instead, it should remain active, with meetings to be convened on an as-needed basis to support ongoing coordination and further development in these areas.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;

b) discuss and agree to the proposed Terms of Reference (TOR);

c) discuss and agree to the proposed initial set of APAC Common SWIM Aeronautical Information Services (**Attachment B**);

d) discuss the continuation and activities of the Ad Hoc Group; and

e) discuss any relevant matters as appropriate.

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Terms of Reference of APAC Common SWIM Aeronautical Information Services Ad hoc Group

The objectives of the Ad hoc Group are to:

1) review and discuss the proposed business functionality of the APAC Common SWIM Aeronautical Information Services;

2) facilitate regional harmonisation and standardisation of Aeronautical Information Services in a SWIM environment;

3) provide recommendations to relevant stakeholders for the effective implementation of SWIM-based Aeronautical Information Services.

Deliverables to meet the Objectives:

1) Review and Discuss Business Functionality
   - Evaluate the proposed business functionality of the APAC Common SWIM Aeronautical Information Services as proposed by the SWIM Task Force (SWIM TF), including but not limited to:
     - Business functionality of the service;
     - Brief description of the service;
     - Type of information to be exchanged;
     - Information exchange model / Message type;
     - Message exchange pattern; and
     - Recommended service in the initial APAC Common SWIM Information Service (IS).

2) Coordinate and Collaborate
   - Engage and collaborate with:
     - APAC SWIM TF,
     - Air Traffic Management Sub-Group (ATM/SG) and its subsidiary groups, including APSAR/WG, and
     - Aerodrome Operations and Planning Sub-Group (AOP/SG).
   - Review the development of Aeronautical Information Exchange Model (AIXM) revisions.
   - Review the Information exchange model/Message type for ATIS distribution service and Search and rescue service.
   - Propose AIXM extensions for regional adoption when necessary.

3) Undertake Additional Tasks
    - Address any other tasks related to the APAC Common SWIM Aeronautical Information Services implementation that may arise in the future.

Membership

The Ad hoc Group will comprise experts from:

- Civil Aviation Authorities (CAA),
- Air Navigation Service Providers (ANSP),
- Industry stakeholders, and
- Relevant international and regional organisations.

Reporting

The Ad hoc Group will report its progress, findings, and recommendations to the AAITF and APSAR/WG. Regular updates will also be provided to ATM/SG, AOP/SG, and APAC SWIM TF.

Working Arrangements

- The Ad hoc Group will convene meetings as required, primarily through virtual platforms.
- Coordination and collaboration will be facilitated through emails, teleconferences, and shared documentation platforms.
- Decisions will be made based on consensus among members.

Review of Terms of Reference

The Terms of Reference will be reviewed periodically by the AAITF and updated as necessary to reflect evolving requirements and developments in Aeronautical Information Services within the APAC region.

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– END –