International Civil Aviation Organization

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

Bangkok, Thailand, 20 – 23 May 2025

Agenda Item 4: Outstanding SWIM TF/7, SWIM TF/8 and SWIM TF/9 Action Items Review

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

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

SUMMARY

This paper presents the outcomes of the discussions held by the APAC Common SWIM Aeronautical Information Services Ad Hoc Group. Experts from several States and international organisations, including IATA, IFAIMA, and ICAO, actively participated. Additionally, India contributed an aerodrome expert through the Aerodrome Operations and Planning Sub-Group (AOP/SG). The group convened five meetings, during which it reached consensus on an initial set of 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

2.1 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.

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.

Airspace-related information

2.3 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.

2.4 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.

2.5 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.

2.6 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.

2.7 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

2.8 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.

2.9 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.

2.10 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 Feature Services

Digital NOTAM

2.11 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 meeting agreed to include Req/Reply as an additional message exchange pattern for Digital NOTAM distribution services.

2.12 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

2.13 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'.

2.14 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

2.15 However, matters relating to the Search and Rescue (SAR) service are to be discussed at the Asia and Pacific Search and Rescue Working Group (APSAR/WG) meeting, scheduled for 27–30 May 2025. The ICAO Secretariat will inform the SWIM/TF of any proposed changes arising from the APSAR/WG discussions.

Report to the relevant meetings

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

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;

b) discuss the proposed initial set of APAC Common SWIM Aeronautical Information Services; and

c) discuss any relevant matter as appropriate

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